


Psychological Applications and trends 2023



**Edited by
Clara Pracana
Michael Wang**



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2023

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&

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Edited by:

- Prof. Clara Pracana, Full and Training Member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal,

- Prof. Michael Wang, Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom

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BRIEF CONTENTS

Foreword	v
Organizing and Scientific Committee	vii
Sponsor	x
Keynote Lecture	xi
Special Talk	xiii
Index of Contents	xv

FOREWORD

Dear Participants,

This book contains a compilation of papers presented at the International Psychological Applications Conference and Trends (InPACT) 2023, organized by the World Institute for Advanced Research and Science (WIARS), held in International Psychological Applications Conference and Trends (InPACT) 2023, held in Lisbon, Portugal, from 22 to 24 of April 2023. This conference serves as a platform for scholars, researchers, practitioners, and students to come together and share their latest findings, ideas, and insights in the field of psychology.

Over the next few days, we will be exploring some of the most cutting-edge research and theories in psychology. We have a diverse range of topics and speakers lined up for you, covering themes and sub-themes. The conference proceedings and program include six main broad-ranging categories that cover diversified interest areas:

- **CLINICAL PSYCHOLOGY:** Emotions and related psychological processes; Assessment; Psychotherapy and counseling; Addictive behaviors; Eating disorders; Personality disorders; Quality of life and mental health; Communication within relationships; Services of mental health; and Psychopathology.
- **EDUCATIONAL PSYCHOLOGY:** Language and cognitive processes; School environment and childhood disorders; Parenting and parenting related processes; Learning and technology; Psychology in schools; Intelligence and creativity; Motivation in classroom; Perspectives on teaching; Assessment and evaluation; and Individual differences in learning.
- **SOCIAL PSYCHOLOGY:** Cross-cultural dimensions of mental disorders; Employment issues and training; Organizational psychology; Psychology in politics and international issues; Social factors in adolescence and its development; Social anxiety and self-esteem; Immigration and social policy; Self-efficacy and identity development; Parenting and social support; Addiction and stigmatization; and Psychological and social impact of virtual networks.
- **LEGAL PSYCHOLOGY:** Violence and trauma; Mass-media and aggression; Intra-familial violence; Juvenile delinquency; Aggressive behavior in childhood; Internet offending; Working with crime perpetrators; Forensic psychology; Violent risk assessment; and Law enforcement and stress.
- **COGNITIVE AND EXPERIMENTAL PSYCHOLOGY:** Perception, memory, and attention; Decision making and problem-solving; Concept formation, reasoning, and judgment; Language processing; Learning skills and education; Cognitive Neuroscience; Computer analogies and information processing (Artificial Intelligence and computer simulations); Social and cultural factors in the cognitive approach; Experimental methods, research and statistics; and Biopsychology.
- **PSYCHOANALYSIS AND PSYCHOANALYTICAL PSYCHOTHERAPY:** Psychoanalysis and psychology; The unconscious; The Oedipus complex; Psychoanalysis of children; Pathological mourning; Addictive personalities; Borderline organizations; Narcissistic personalities; Anxiety and phobias; Psychosis; Neuropsychoanalysis.

InPACT 2023 received 548 submissions, from more than 39 different countries all over the world, reviewed by a double-blind process. Submissions were prepared to take the form of Oral Presentations, Posters, Virtual Presentations and Workshops. 192 submissions (overall, 35% acceptance rate) were accepted for presentation at the conference.

As we all know, psychology is a vast and complex field that encompasses a wide range of topics, from the study of human behaviour to the workings of the brain. It is a field that has made enormous strides in recent years, and it continues to evolve at a rapid pace. At this conference, we hope to not only share the latest research and developments in psychology but also to foster a sense of community and collaboration among attendees. We believe that by working together, we can continue to advance the field of psychology and make important contributions to our understanding of the human mind and behaviour.

We would like to express our sincere gratitude to all of our speakers, sponsors, and attendees for making this conference possible. This book includes an extensive variety of contributors and presenters that are hereby sharing with us their different personal, academic, and cultural experiences.

The conference also includes:

- One keynote presentation by Prof. Dr. Shulamith Kreitler, Professor of Psychology, Tel-Aviv University, School of Psychological Sciences; Head of Psychooncology Research Center, Sheba Medical Center, Tel-Hashomer, Israel.
- One Special Talk by Prof. Dr. Michael Wang (Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom).

This volume is composed with the full content of the accepted submissions of the International Psychological Applications Conference and Trends (InPACT 2023). We hope that this book of proceedings will be a valuable resource for those in attendance, as well as for those who could not join us. Thank you for your participation, and we look forward to a productive and stimulating event!

Lastly, we would like to thank all the authors and participants, the members of the academic scientific committee, and, of course, the organizing and administration team for making and putting this conference together.

Looking forward to continuing our collaboration in the future,

Prof. Clara Pracana

*Full and Training Member of the Portuguese Association of Psychoanalysis and Psychoanalytic Psychotherapy, Portugal
Conference and Program Co-Chair*

Prof. Michael Wang

*Emeritus Professor of Clinical Psychology, University of Leicester, United Kingdom
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KEYNOTE LECTURE

THE MANY FACES OF CONSCIOUSNESS

Prof. Dr. Shulamith Kreitler

*Professor of Psychology, Tel-Aviv University, School of Psychological Sciences;
Head of Psychooncology Research Center, Sheba Medical Center, Tel-Hashomer (Israel)*

Abstract

It is generally assumed that there are only two kinds of consciousness: the normal regular one and the so-called subconscious one. However, this seems to be a limited conception that does not do justice to the multi-faceted nature of consciousness.

A new conception of consciousness and altered states of consciousness will be presented. It is grounded in the empirically tested theory of meaning (Kreitler & Kreitler) which considers cognition as a meaning-dependent and meaning-generating system. Meaning is defined as an input-centered pattern of contents, characterized in terms of five kinds of meaning variables. Specific clusters of meaning variables may become prominent at different times, due to factors intrinsic or extrinsic to the system of meaning. Hence, the functioning of the cognitive system depends on the kinds of meaning variables prominent at a given time which dominate its structure and modulate the kinds of information available at that time, how they are organized and used, and what the cognitive outputs will be. These cognitive contents and processes affect also perception of reality, the sense of self, emotions, and indirectly behavior too.

Accordingly, a state of consciousness can be defined as the state of the cognitive system as a whole functioning in a way determined by the relative salience of specific meaning variables. Thus, many different states of consciousness exist and many more are possible. To some extent they are accessible to manipulation by experimental means of different kinds. Examples will be provided of studies describing changes in cognitive and emotional functioning when the cognitive system is dominated by different clusters of meaning variables, such as those representing personal-subjective meaning, or interpersonally-shared meaning or the concrete approach.

Biography

Shulamith Kreitler was born in Tel-Aviv, has studied psychology, philosophy and psychopathology in Israel, Switzerland and the USA. She got her PhD in Bern Switzerland. Has worked as a professor of psychology in Harvard, Princeton and Yale in the USA, as well as in Argentina and Vienna, Austria. She has lectured in Moscow University, The University of Brno, The University of Frankfurt, Beigin University, and other universities. She has been a professor of psychology at Tel-Aviv University since 1986. She is a certified clinical and health psychologist. Currently she teaches psychology at Tel-Aviv University and is the head of the psychooncology research center at Sheba Medical Center. Has published about 250 papers and 23 books in motivation, cognition, psychopathology and health psychology. She has created the theory of meaning, and the cognitive orientation theory of behavior, health and wellness. Some of her publications: *The Psychology of Art* (1972) (together with Hans Kreitler), *Cognitive Orientation and Behavior* (1976), *The Cognitive Foundations of Personality Traits* (1990), *Handbook of Chronic Pain* (2007), *Pediatric Psycho-Oncology: Psychosocial Aspects and Clinical Interventions* (2004, 2012 2nd Edition By Blackwell/Wiley), *Systems of Logic and the construction of Order* (with Fleck, Ropolyi and Eigner, 2012), *Cognition and motivation* (Cambridge University Press) *Consciousness: Its nature and functions* (together with Oded Maimon), *Conceptions of meaning* (together with Tomas Urbanek), *The construct of Meaning* (Nova, 2022), *Spheres of Meaning* (Nova, 2022), *New Frontiers in Creativity* (Nova, 2020) and *New Horizons in Creativity* (Nova, 2022).

She has been married with Hans Kreitler (1916-1993), has one son Ron Kreitler, and two grandchildren Jonatan and Tamara.

SPECIAL TALK

THE CLIMATE EMERGENCY: WHAT CAN PSYCHOLOGISTS DO?

Prof. Dr. Michael Wang

Emeritus Professor of Clinical Psychology, University of Leicester (United Kingdom)

Abstract

There is now overwhelming evidence that man-made planetary warming is having devastating effects on our climate(1). Just in the past year we have seen fatal flooding in Pakistan, Germany, Belgium and the UK; excessive temperatures in Europe, America and Australia causing wildfires and loss of life; for the first time in living memory summer temperatures have exceeded 40 degrees centigrade in the UK(2). These extremes are only set to get worse. Moreover, it is the poor and vulnerable who are most at risk from these effects. Climate change is also causing worsening physical and mental health in vulnerable populations(3): most medical organisations including WHO are openly concerned and are arguing for change in the lifestyles and use of fossil fuels in the interests of the world population's future wellbeing(4).

Do psychologists have a role to play here? Should we be involved in raising awareness and speaking out about these issues? To what extent can our discipline contribute to attitude, behaviour and lifestyle change? The speaker will be summarising actions taken in the UK as an example of what can be done(5).

References/links

1. <https://climate.nasa.gov/evidence/>
 2. <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2022/red-extreme-heat-warning-ud>
 3. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)02028-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)02028-1/fulltext)
 4. https://www.who.int/health-topics/climate-change#tab=tab_1
 5. <https://www.bps.org.uk/psychologist/action-climate-change>
-

Biography

Prof. Michael Wang, BSc(Hons), MSc(Clin.Psy), PhD, C. Psychol., FBPsS, is Emeritus Professor of Clinical Psychology in the Clinical Psychology Unit, Centre for Medicine, University of Leicester, and former Director of the National Health Service-funded Doctoral Postgraduate Clinical Psychology Training Course (2005-2014). He is a former Chair of the Division of Clinical Psychology of the British Psychological Society. Prof. Wang is also a full practitioner member of the BPS Division of Neuropsychology and a member of the BPS Division of Health Psychology. He is Chair of the Association of Clinical Psychologists UK. He has worked as a clinical psychologist for 40 years. Prior to his appointment in Leicester he was Director of the 6-year, integrated Doctoral Clinical Psychology Training Course at the University of Hull. Throughout his academic career he has maintained an Honorary Consultant role in the NHS, treating patients with anxiety disorders, depression and obsessional compulsive disorder. He has more than 20 years' experience of examining patients with traumatic brain injury for the UK courts. He obtained his three degrees from the University of Manchester: following graduating with a BSc in Psychology in 1978 he began his professional postgraduate training in Clinical Psychology in the Faculty of Medicine. Subsequently he completed a research PhD in 1990 which investigated learning and memory in alcoholics. Over recent years Prof Wang has gained an international reputation for his research on cognitive and memory function during general anaesthesia. In 2004 he organized the 6th International Symposium on Memory and Awareness in Anaesthesia and Intensive Care (in Hull) – the foremost international forum for clinical research in this particular field. He has held appointments on a number of prominent committees in the British Psychological Society including the professional accrediting body for

clinical psychology training, and a committee that is in the process of determining national standards for competence in the use of neuropsychological tests. He has served as an expert advisor on a NICE (UK) Committee in relation to the monitoring of depth of anaesthesia and also as an expert member of the Royal College of Anaesthesia's National Audit Project 5 (a national audit of anaesthetic awareness reports). In 1999 he was made Fellow of the British Psychological Society and is also a Fellow of the Royal Society of Medicine. In 2015 he was awarded the Humphry Davy Medal by the Royal College of Anaesthetists for his contribution to the understanding of accidental awareness during general anaesthesia. Prof. Wang has published more than 60 papers in peer-reviewed journals, and numerous book chapters. He has been an invited speaker at international conferences on more than 30 occasions. In collaboration with colleagues he has won more than £1.2 million in research funding. He has supervised more than 40 doctoral research projects over the past 25 years. He has been a regular contributor and session chair at recent InFACT conferences, and recently joined the conference team as a co-organiser.

INDEX OF CONTENTS

ORAL PRESENTATIONS

Clinical Psychology

- Couple therapy through dance & movement: Disclosing multiple truths in the relationship** 3
Einat Shuper Engelhard
- The affective functioning forms of the adult museum visitor** 6
Colette Dufresne-Tassé, & Anne St-Louis
- Assessment of personality and psychopathology in the clinical-forensic context: Contribution of the MMPI-2-RF** 11
Bárbara Gonzalez, Rosa Novo, & Maria João Afonso
- The darker side: Personality and motivations of clinical and counselling psychologists** 16
Greta Darmanin Kissaun, & Gottfried Catania
- Trauma-sensitive yoga in public psychiatric services: Innovative clinical model for veterans with PTSD** 21
Maitri Shacham, & Michal Yarkoni
- Is there banality in evil? Re-reading Hannah Arendt's *Eichmann in Jerusalem* in view of Yariv Mozer's film "The devil's confession on the lost Eichmann tapes"** 26
Aner Govrin
- Defensive coping in women with eating disorders** 30
Angelika Kleszczewska-Albińska
- Online and offline art therapy based interventions in pandemic times** 35
Zsuzsanna Geréb Valachiné, Adél Dancsik, Michelle M. Fitos, Balázs Simon, & Renata Cserjési
- The effects of problem-solving skills on perceived discrimination and relationship satisfaction of interracial Black-White couples** 40
Emel Genç
- The role of public and internalized stigma on seeking psychological help: A study targeting Albanian youth** 45
Arilda Dushaj
- Social anxiety connection with individual characteristics: Theory of Mind, verbal irony comprehension, and personal traits** 50
Anano Tenieshvili, & Teona Lodia
- External shame, coping competence and social support as predictors of quality of life in infertile women during IVF** 55
Milica Mitrović, Marina Hadži Pešić, & Miljana Spasić Šnele
- Emotional disturbances in Urbach-Wiethe disease without visible amygdala damage** 60
Hans J. Markowitsch, & Angelica Staniloiu

Affect-related changes in patients with dissociative amnesia <i>Angelica Staniloiu, & Hans J. Markowitsch</i>	65
Maternal workload, maternal guilt and the coping strategies of working mothers <i>Nur Başer Baykal</i>	70
Self-differentiation, resilience, dissociation, and depression as predictors of different family roles <i>Miljana Spasić Šnele, Ivana Janković, & Milica Mitrović</i>	75
Health-related goals and goals obstacles in emerging adulthood <i>Monika Hricová, & Natália Sabolová</i>	80
The mediatory role of self-compassion in the relationship between social anxiety and loneliness <i>Merve Er, İbrahim Gökşin Başer, & Gaye Saltukoğlu</i>	83
Cyberbullying perpetration in adolescence in terms of exposure to cyberbullying levels <i>Zeynep Aliye Vatansever, Melek Astar, İtir Tari Cömert, & İbrahim Gökşin Başer</i>	88
Examination of the relationship between depression, anxiety, stress and sports in Türkiye: Cross-sectional study <i>Arkun Tatar, & Gaye Saltukoğlu</i>	92
Let's talk about more than sex: Intimacy, mental health, and psychological flexibility after cancer <i>Cecile J. Proctor, Anthony J. Reiman, & Lisa A. Best</i>	96
Turkish adaptation of the perceived stigma scale after Covid-19 <i>Gülşen Karaman, Nureşşan Yumuşak, Nevin Kılıç, & Gaye Saltukoğlu</i>	101
Life satisfaction after traumatic spinal cord injury: A comparison of life satisfaction in people living with paraplegia and tetraplegia to the general Canadian population <i>Derek J. Gaudet, Lisa A. Best, & Najmedden Attabib</i>	106
Positivity effect in an Ethiopian sample: Insights from the dot-probe task <i>Raissa de Oliveira Negrão, Shidon Hassen Tahir, & Renata Cserjési</i>	111
An examination of 2SLGBTQIA+ psychological wellbeing in Canada and the United States <i>Patrick Hickey, Lisa Best, & David Speed</i>	116
Mental health symptoms, anxiety and depression levels of physicians and dentists from Turkey during the Covid-19 pandemic: The importance of pre-pandemic psychopathology <i>İtir Tari Cömert, Haşim Ercan Özmen, & Zeynep Yıldız</i>	121
“I gained something but I have lost more” – Behind the scenes of ambiguous loss <i>Lili Khechushvili, Mariam Odilavadze, & Mariam Gogichaishvili</i>	126
Race and gender in the experience of anger in the psychotherapeutic of socio-historical psychology <i>Edna Maria Severino Peters Kahhale, Leonardo Mendes Alves, Maria Irene Ferreira Lima Neta, Beatriz Brambila, Júlia Pagano Costa, & Margoth Mandes da Cruz</i>	131
Predictors of well-being in emerging adulthood: Role of goals and emerging adulthood transition dimensions <i>Miroslava Köverová</i>	136

Personality and cued associations influence alcohol and cannabis use in adolescents (aged 13 – 17) <i>Marvin D. Krank</i>	141
The expanded socio-historical psychology clinic of sexuality: Reasoning and management in individual and group care <i>Edna Maria Severino Peters Kahhale, Beatriz Brambilla, Júlia Pagano Costa, Margoth Mandes da Cruz, Juliano Baltazar Pereira, & Jamille Koury</i>	146
Basic emotions and their vicissitudes: Assessing subcortical activation patterns with the MCMI-IV <i>Thomas Guyer</i>	150
Saffron spice of life for mental health <i>Ellie Wright</i>	155
<u>Educational Psychology</u>	
Young children’s spontaneous emotion vocabulary during an emotional valence rating task <i>Johanne Belmon, Magali Noyer-Martin, & Sandra Jhean-Larose</i>	158
What does one child do for another in post-pandemic times? Results of a survey <i>Maria Cristina Kupfer, Izabella Barros, & Larissa Cagnani</i>	163
An interdisciplinary approach to the construction of facial composites in the Mexican population: AI, Anthropology and Psychology <i>Katya Rodríguez, Luis Fernando Cuevas, Sergio Padilla, Arodi Farrera, Germán Palafox, & Gustavo Ortiz</i>	168
Comparative study of environmental moral judgment with specific teaching on sustainable development <i>Amélie Lesenecal, & Annamaria Lammel</i>	173
Anxiety, depression, coping and needing help among Israeli higher education students during Omicron/Covid-19 wave <i>Miriam Schiff, Ruth Pat-Horenczyk, & Rami Benbenishty</i>	176
Teachers’ life satisfaction: The role of calling and job characteristics <i>Lana Jurčec, Tajana Ljubin Golub, & Majda Rijavec</i>	181
Well-being and academic achievement of students: The role of mindfulness <i>Martina Gajšek, Tajana Ljubin Golub, & Lana Jurčec</i>	186
Students’ anxiety about the changing work environment and future trends <i>Ruhul Amin Noel, & Gabriele M. Murry</i>	191
Flipped classroom trends: A survey of college faculty in Europe <i>István Zsigmond, Piedade Vaz-Rebelo, Anita Tóth-Bakos, Eleonora Papaleontiou-Louca, Veselina Zecheva, Constantina Demetriou, & András Szilágyi</i>	196
School psychology practice as conflictual collaboration <i>Christoffer Granhøj Borring, & Dorte Kousholt</i>	201

The impact of a nature-based retreat on the self-care and peer support intentions of students enrolled on post graduate training in educational and child psychology in Ireland: A pilot study	206
<i>Therese Brophy</i>	
Promoting the development of teachers' and students' metacognitive and Theory of Mind (ToM) skills	211
<i>Eleonora Papaleontiou-Louca</i>	
<u>Social Psychology</u>	
Professional reduction and emotional exhaustion predict intention to leave	216
<i>Nino Javakhishvili, & Tamar Bokuchava</i>	
Will boys be boys? Attitudes towards masculinity and effeminacy in men	221
<i>Andrea Catania, Gottfried Catania, & Mary Anne Lauri</i>	
Secularism won't save us from sexism: Atheists in romantic dyads demonstrate non-egalitarian chore division	226
<i>David Speed, Allyson Lamont, Jordan MacDonald, Catherine Hall, & Erin Smith</i>	
To evaluate training impact in healthcare: An action-research project oriented to a sustainable model	231
<i>Sara Cervai, Gabriele Blasutig, Marianna Ginocchi, & Antonella Bologna</i>	
Georgian students' perceived vitality, competence and behavioral intention to German-speaking out-group	236
<i>Nino Javakhishvili, Nino Butashvili, Anna Gogibedashvili, & Irina Vardanashvili</i>	
From commitment to organizational performance: What about the issue of employee retention?	240
<i>Jean-François Tremblay, Carole Gagnon, Eric Gosselin, & John Dallas</i>	
Strategic career behaviors in flexible working patterns: A mediation analysis	245
<i>Kiall Hildred, & Joana Carneiro Pinto</i>	
The promotion of external explanations: The case of sanctions distributed in the family field	250
<i>Bernard Gangloff, & Amine Rezrazi</i>	
Navigating transitions through tertiary education: The influence of the family	255
<i>Carmen Mangion</i>	
Pre-messianic cognitive dissonance Hareuveni in Lisbon	260
<i>Michael Katz</i>	
Assessment of candidate efficiency based on personality traits on reskilling programs in the IT sector	265
<i>Ivana Kužet, Ivana Kovačević, Gordana Savić, Mateja Manojlović, & Ivona Živković</i>	
Predicting self-esteem of employees by job performance, job satisfaction and subjective well-being: The mediating role of subjective well-being	270
<i>Nevin Kılıç, Arkun Tatar, & Berra Bekiroğlu</i>	

The relationship between risky and delinquent behavior, self-esteem and depression in adolescents	275
<i>Andrijana Cvetković, Jelisaveta Todorović, & Ivana Janković</i>	
Comparison of parenting styles, social competences and conflict management strategies of youths in Italy and Serbia	280
<i>Tamara Dzamonja Ignjatovic, Danijela S. Petrovic, Ankica Kosic, & Jana Dimoski</i>	
Parenting styles and script injunction as predictors of anxiety in students	285
<i>Jelisaveta Todorović, Marina Hadži Pešić, & Miljana Nikolić</i>	
Posttraumatic stress and posttraumatic growth in the Black community	290
<i>Devin Noel-Harrison</i>	
Differences in perceived social support, life satisfaction and psychological well-being in parents and “Childfree” individuals	295
<i>Ērika Bores Bárcena, Susana Corral, Leire Iriarte Elejalde, & Leire Gordo Cenizo</i>	
<u>Legal Psychology</u>	
Tracking the incidence of US hate crimes by key legislative markers (1991-2020)	300
<i>Kenneth M. Cramer, & Denise DeBlock</i>	
Experiences of dominating and jealous tactics, impact on mental health and acceptability of violence	305
<i>Susana Corral, & Raquel Fernández Quindós</i>	
<u>Cognitive and Experimental Psychology</u>	
Cognitive biases: Do they impact instant decision-making based on ethnic similarity?	310
<i>Md Jawadur Rahman, & Gabriele M. Murry</i>	
Do deficits in specific domains in executive function predict the relation between theory of mind and syntax understanding in children with Autism?	315
<i>Michael Luc Andre, & Célia Maintenant</i>	
Review of the effects of cognitive training intervention on sleep quality in older adults with insomnia	320
<i>Iris Haimov</i>	
Simulation of developmental transitions below and above formal reasoning in a neural network model	323
<i>Sofia Leite, Bruno Mota, António Ramos-Silva, Patrice Marie Miller, Michael Lamport Commons, & Pedro Pereira Rodrigues</i>	
<u>Psychoanalysis and Psychoanalytical Psychotherapy</u>	
Extreme experience and heightened creativity: Four hypotheses on their correlation	328
<i>Jibu Mathew George</i>	

Genes and gender: Why they not always match	333
<i>Olga Oliveira Cunha, & Susana I. Sá</i>	
From impasse to dialogue in psychotherapy: Trainee perspectives on using psychoanalytic thinking in tertiary psychiatric settings	338
<i>Himani Kashyap, Jyothsna Chandur, Malika Verma, George Felix, Chetan Sastry Vijaykumar, & Prabha S. Chandra</i>	
The experience of grief in a child orphaned by the pandemic of COVID-19	343
<i>Daniela Ponciano Oliveira, & Izabella Barros</i>	

POSTERS

Clinical Psychology

- Vigorous physical activity as stress buffer in adolescents and young adults from the general population** 351
Katja Beesdo-Baum, Catharina Voss, Frank Rückert, & Hanna Kische
- PTSD, social support and resilience among children in child protection in Haiti** 354
Nephtalie Eva Joseph, & Daniel Derivois
- Cognitive functions and health status in previously hospitalized versus non-hospitalized post-covid patients: A pilot study** 357
Kinga Nedda Pete, Zsuzsanna Geréb Valachiné, Orsolya Göbel, Cecilia Sik-Lanyi, János Tamás Varga, Veronika Müller, & Renáta Cserjési
- Mindfulness, somatic and cognitive symptoms of anxiety, and self-esteem: A randomized controlled trial** 360
Fleura Shkëmbi
- Reflexivity and emotions in qualitative fieldwork with heroin users** 363
Martha Romero-Mendoza, & Patricio Nava-José
- Therapeutic interventions addressing PTSD, substance use, and sexual risk for native Americans in the U.S.A.** 366
Cynthia Pearson, Rebeca Marín, David Huh, Denise Walker, Michele Bedard-Gilligan, & Debra Kaysen
- A comparison of authoritarian and permissive approaches of hypnosis for anxiety treatment** 369
Fleura Shkëmbi, & Valbona Treska
- Negative impacts of gestational depression on quality of life** 372
Humberto Correa, & Luiz De Marco

Educational Psychology

- Cross-cultural validation of the resilience scale for adults in the Quebec University population** 375
Karolane Côté, & Nathalie Parent
- Is this text light? When weight of a text influences its comprehension for elementary pupils** 378
Julie Lecerf, Alain Guerrien, & Guillaume Gimenes
- School adjustment of teenagers: The relationship between bullying, victimization and resilience factors** 381
Nathalie Parent, & Safaa Moustadraf

Social Psychology

- An empirical study of independent variables of nurses' followership** 384
Minoru Nishinobo
- Kaleidoscope career model: Impact of personal, family, organizational and social variables** 387
Kiall Hildred, & Joana Carneiro Pinto
- Are HR managers ready for remote workers professional development?** 390
Sara Cervai, Martina Martinis, Maria Margarida Croca Piteira, Kiall Hildred, Claudia Marcela Möller Rcondo, & Joana Carneiro Pinto
- Stereotypes against singles: A study of the need for social approval and self-construals** 393
Kübra Meltem Karaoğlu, & Burçak Sönmez
- The role of markers of adulthood in the experience of adulthood in young adults** 396
Beáta Ráczová, & Pavol Kačmár
- Perceived external resources of resilience and their role in life satisfaction** 399
Lenka Abrinková, Olga Orosová, & Viera Čurová
- Validity and reliability of the human capital sustainability leadership scale – Japanese version** 402
Akira Tsuda, Sora Hashimoto, Naoki Miyata, Ayumi Fusejima, Kanae Tani, & Katsuyo Ishibashi

Cognitive and Experimental Psychology

- Visuospatial processing in the resolution of the Corsi test in bilinguals and monolinguals children** 405
Samira Bouayed, Annamaria Lammel, & Louise Goyet
- Using cognitive tasks for non-responsive assessment of loneliness** 408
Eyal Rosenstreich
- Overconfidence bias on investment decision making: A study of the Bangladesh security market** 410
Tahmina Khanam, & Gabriele M. Murry
- Pro-resilient effects of environmental enrichment on GABAergic and GR activity in dorsal hippocampus: An analysis in Wistar adult rats** 413
Azucena Begega, Claudia Jove, & Matías López
- Cognitive demand in the DEM test from the perspective of fixation duration analysis** 416
Evita Serpa, Elizabete Ozola, Madara Alecka, Asnate Berzina, Viktorija Goliskina, Evita Kassaliete, Anete Klavinska, Marija Koleda, Rita Mikelsone, Tomass Ruza, Aiga Svede, Daniela Toloka, Sofija Vasiljeva, Liva Volberga, Ilze Ceple, & Gunta Krumina
- Decision-making and problematic goal attainment** 419
Simona Ďurbisová

VIRTUAL PRESENTATIONS

Clinical Psychology

- Psychosocial pressures of having beta-thalassemia** 425
Anita Udabor
- A model for predicting school readiness using data mining techniques** 430
Iyad Suleiman
- Mindfulness and eating disorders: The mediation role of dysmorphic concerns** 435
Nadia Barberis, Danilo Calaresi, Marco Cannavò, & Teresa Iona
- The role of social support in seeking mental health consultations in people with mood disorders** 440
Madison Herrington, David Speed & Lilly E. Both
- Social support and anxiety in parental burnout of Bulgarian mothers** 445
Camellia Hancheva, & Vessela Aravena
- The psychological impact of living in a contaminated site: Trajectory of interventions** 450
Isabella Giulia Franzoi, Maria Domenica Sauta, Alessandra De Luca, Francesca Barbagli, & Antonella Granieri
- Body dissatisfaction and body weight control strategies among depressed and non-depressed adolescents** 454
Lucia Barbierik, Maria Bacikova-Sleskova, & Anna Janovska
- A psychological consultation model for cancer patients and their caregivers** 459
Marco Gonella, Monica Agnesone, Carola Grimaldi, Maria Domenica Sauta, Antonella Granieri, & Isabella Giulia Franzoi
- The effect of defense styles on dark triad personality traits according to the levels of emotion regulation difficulties in a non-clinical adult sample** 464
İbrahim Gökşin Başer, & Melek Astar
- Sexual abuse / rape in female prisoners and its link with suicide attempt / depression** 469
Patricio Nava-José, Martha Romero-Mendoza, & Gabriela Josefina Saldívar Hernández
- The characteristics of the future orientation of Arab adolescents with intellectual disabilities** 474
Maha Arslan
- Personal resources that help in coping with distress: What has the Covid-19 pandemic revealed to us?** 479
Carlotta Tagliaferro, Georgia Marunic, Francesco Bruno, & Francesca Chiesi

Educational Psychology

- School engagement and educational outcomes of Slovak adolescents in the context of social media use** 484
Vladimír Poliach, & Lenka Ďuricová
- Motivational strategies in classroom of second language teaching** 489
Shiyang Liu

Attitudes towards change among transformative leaders in education	494
<i>Lucia Paskova</i>	
Effectiveness of intervention arranging assignments in high school physics	499
<i>Kotaro Takahashi</i>	
Comparing online and virtual reality moral dilemma discussion	502
<i>Aya Fujisawa</i>	
The interplay between math performances, spatial abilities and affective factors: The role of task and sex	507
<i>Sarit Ashkenazi</i>	
Families of children with special educational needs: Perceptions of social support and parental well-being	512
<i>Sara Felizardo, Rosina Fernandes, Emília Martins, Esperança Ribeiro, & Francisco Mendes</i>	
Virtual education system: A respite for out-group teen students	517
<i>Sheel Chakraborty</i>	
“Bullying and cyberbullying at school”: An action research project at a lower secondary school	522
<i>Marco di Furia, Martina Rossi, Guendalina Peconio, & Giusi Antonia Toto</i>	
The relationship between pre-departure risk-related indicators and post-pandemic emigration plans among adolescents	527
<i>Olga Orosová, Beáta Gajdošová, Jozef Benka, & Viera Čurová</i>	
Using multiple strategies to address neuromyths in preservice teachers	532
<i>Susie Morrissey, & Katharine Northcutt</i>	
What a teacher says and what a student understands	537
<i>Gorjana Popovic, Ozgul Kartal, & Susie Morrissey</i>	
Detained university students: An exploratory survey on the academic success factors	542
<i>Teresa Traversa, & Maria Elena Magrin</i>	
Sensitivity as a fidelity indicator of unplugged in relation to alcohol use	547
<i>Marcela Majdanová, & Olga Orosová</i>	
Semiotic basis of pedagogical communication	552
<i>Veska Guviyska, & Mirela Kyuchukova</i>	
Implementation of pre-board inhouse review and management practices of the academic heads as correlates of LET performances	556
<i>Edward Andrecio, Elenita Tiamzon, & Erico Habijan</i>	
 <u>Social Psychology</u>	
Investigating the social networks - Social support among singles and partnered individuals during the Covid-19 pandemic	561
<i>Ewelina Kusaj, Monika Frydrychowicz, Dawid Bojarski, & Patryk Burdun</i>	
Connection between cognitive biases in managers and the management style of the organization	566
<i>Pavel Mariani, & Katarína Kohútová</i>	

Social media use in the context of parental acceptance among Slovak adolescents <i>Lenka Ďuricová, & Vladimír Poliach</i>	571
Vocational school dropouts' perspective of dropout risk and protective factors <i>Kristi Kõiv, & Liis Leilop</i>	576
The impact of perceived social support on work engagement: The mediating role of workplace loneliness <i>Dan Florin Stănescu, & Marius Constantin Romaşcanu</i>	581
The relationship between the need for cognitive closure, emotive control and conflict resolution strategies among adolescents <i>Ankica Kotic, Danijela S. Petrovic, & Tamara Dzamonja Ignjatovic</i>	586
General and technology self-efficacy among university students – Preliminary findings <i>Tatiana Pethö, & Miroslava Bozogánová</i>	591
Social comparison, body appreciation and social media use: An explorative study <i>Benedetta Ragni, Guendalina Peconio, Francesca Finestrone, Giusi Antonia Toto, & Pierpaolo Limone</i>	596
Exploring the development of a cross-cultural flexibility scale: A preliminary study <i>Yoshitaka Yamazaki, & Michiko Toyama</i>	601
Ukrainians studying in Slovakia. How do they perceive the attitudes of Slovaks towards migrants? <i>Marianna Berinšterová, Miroslava Bozogánová, & Tatiana Pethö</i>	606
Self-esteem, aggression and violence: What the inconsistencies in results tell us <i>Alexandra Apesland</i>	611
A sustainable performance management system implementation in a global organization: A participatory action research <i>Sebastiano Rapisarda, Irene Carraro, Irene Cibir, Danilo Greco, & Laura Dal Corso</i>	616
Exhaustion in Italian funeral directing services during the Covid-19 pandemic: The role of psychological job demands and supervisor support <i>Annalisa Grandi, Marco Rizzo, & Lara Colombo</i>	621
VR-based mindfulness intervention for women returning to work after maternity. Does virtual reality improve their experience? <i>Diletta Mora, Alessandro De Carlo, & Laura Dal Corso</i>	626
Personal optimism, self-efficacy, and resilience among nurses in a private medical center amidst Covid-19 pandemic <i>Hazel S. Martinez, & Marilyn M. Obod</i>	631
 <u>Legal Psychology</u>	
Innovate to strengthen multidisciplinary work in child abuse: The contribution of an integrated information system <i>Roxane Belanger, Annick St-Amand, Danielle Nadeau, Marc Alain, Rosalie Parent, & Marion Adamiste</i>	636
The efforts of receiving psychological support among women survivors of domestic violence <i>Zeynep Turhan, Emel Genç, Nur Başer Baykal, & Mustafa Toran</i>	641

The emergence of science in English courts and the impact on the “ultimate issue rule” <i>Janet Brewer, & Alison Seeder</i>	646
---	------------

Cognitive and Experimental Psychology

The effect of cognitive load, age and driving experience on processing time in an experimental traffic task <i>Svetlana Borojević, Milana Damjanić, & Dejan Kantar</i>	651
--	------------

Study on the relationship between creativity and boredom <i>Yusuke Yamazaki</i>	656
---	------------

Relationship between apathy and cognitive functions in Parkinson’s disease <i>Zeynep Yıldız, Ali Behram Salar, Tuğçe Kahraman, Muzaffer Arıkan, Lütfü Hanoğlu, & Süleyman Yıldırım</i>	661
--	------------

Non-biased cFACS measurement tool: From idea to software application <i>Mikhail Baev, Alexey Gusev, & Alexander Kremlev</i>	666
---	------------

Consumer decision-making and psycho-social well-being: Exploring the association in the South African urban context <i>Neoline Le Roux, Daleen van der Merwe, & Marié Wissing</i>	671
---	------------

Psychoanalysis and Psychoanalytical Psychotherapy

Aggressiveness and assertive behaviour <i>Valerijs Makarevičs, & Dzintra Iliško</i>	675
---	------------

Mental health difficulties and related personal factors (according to people during Covid-19 pandemic) <i>Nino Mgebrishvili, & Luiza Arutinova</i>	680
--	------------

WORKSHOP

Clinical Psychology

Kidstime and mindful schools: Social interventions for children and adolescents from families affected by parental mental problems <i>Henner Spierling, & Miguel Cárdenas</i>	687
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<u>AUTHOR INDEX</u>	691
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The background features a vibrant, abstract design with wavy, organic shapes in shades of red, blue, and white. The red is at the top, transitioning into blue and white below. The overall effect is dynamic and modern.

ORAL PRESENTATIONS

COUPLE THERAPY THROUGH DANCE & MOVEMENT: DISCLOSING MULTIPLE TRUTHS IN THE RELATIONSHIP

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Abstract

Body and Movement-integrated couple therapy aims to embody seminal issues in the couple relationship through joint dance, and to offer a somatic translation of issues like power relations, leadership and dependency. These issues, expressed in and through movement, are processed symbolically and verbally in the course of the analytic session. This study aimed at understanding the couples' perception of the significant moments within therapy. Nine couples participated in 12 couple therapy sessions. They were interviewed and responded to questionnaires both before and after the sessions. The findings show that diverse experiences in movement introduced the couple to misconceptions about their relationship and elicited individual subjective truths of each partner alongside significant shared truths, which were all somatically embodied and expressed. The "here and now" encounter with emotional contents through the body created a safe space for acceptance and internalization of unconscious roles and needs, which only came to the fore through the couple's movement. Based on the results of the study, I will present how the combination of verbal discourse and movement allows the partners to get acquainted with latent knowledge that resides in the body and cannot be consciously reached through language alone.

Keywords: *Couple therapy, dance movement therapy, embodied relationship.*

1. Introduction

In Dance movement therapy for couples, we use dance and movement for getting acquainted with contents that are inaccessible through verbal language, primary issues which were experienced in the body, but have not yet been verbally processed or expressed. The importance of integrating body and movement in couple therapy has gained recognition in recent years, as evidenced in case studies involving a combination of movement experiences during the couple therapy session (Wagner & Hurst, 2018). Thus, for example, sex therapy sometimes uses mindfulness techniques to increase the couple's awareness of their bodily experiences and of the somatic origins of emotional processes (Kimmese et al., 2015), and the Imago approach integrates deep breathing exercises and techniques as well as eye contact experiences for assisting couples in attaining greater relaxation and a better regulation in situations of conflict (Hendrix, 1988).

Research shows that the integration of ballroom dancing into therapy can facilitate numerous therapeutic issues of relating such as elements of leadership, trust, boundaries and dependency (Hawkes, 2003). Moreover, experiences of expressive movement, synchronization, and mutual attunement through movement produce a positive impact on the perceived couple relationship, increase kinesthetic empathy and improve individuals' ability to emotionally attune in relation to their partners (Kim et al., 2013). Recent qualitative research with couples diagnosed with borderline personality disorders has indicated that the imitation of a personal choreography, movement synchronization and collaboration in resolving incidents of non-synchronization of movement have resulted in greater marital satisfaction, more secure attachment and increased empathy in the relationship (Pietrzak et al., 2017).

These developments notwithstanding, research literature on couple therapy has mostly examined measurable outcomes of the process, and most studies involve only small samples and cover singular or few sessions, whereas this type of therapeutic process involves a significant time period in order to evolve. Moreover, only few studies have so far focused on the developments and changes that occur within the therapeutic process itself as a result of clinical interventions. With this in mind, the study presented in this

chapter aims to address the way in which movement can highlight the significance of explicit behaviours, whose origins and meaning are not fully understood by the partners themselves.

2. Dance movement therapy for couples – a comprehensive qualitative research

In order to examine the meaning of nonverbal expressions and movement within the couple relationship, I conducted a large-scale qualitative study (Shuper Engelhard, 2018; 2019a-c). The participants in the research were nine heterosexual couples, who have been living together and sharing the same household for at least three years, and who come from a variety of backgrounds in terms of religious affiliation and country of origin. They all took part in twelve sessions of couple therapy, combining body-movement work.

The sessions were all similarly structured (Shuper Engelhard, 2019): Each session begins with an invitation to attend to the somatic, physical experience with which each of the partners arrived at the meeting. The objective of this part is relaxation and release from daily experience, attaining availability for the therapeutic process, practicing the somatic listening technique, and deepening the awareness of feelings associated with the sensory experience. Following this, the therapy session continues by working through dynamic contents of the relationship through movement and dance. The couple is invited to attend to their individual and interpersonal experiences that arise from different qualities of movement. They are asked to take note of the sensations, emotions, images, memories and associations that come up during movement.

3. Dance movement therapy for couples: objectives, uniqueness and innovation

In the course of the project, I have found that diverse experiences in movement introduced the couples to misconceptions about their relationships and elicited individual subjective truths of each partner alongside significant shared truths, which were all somatically embodied and expressed

The experience of moving together and the knowledge that resides in the body influences and facilitates the relationship. Movement experience in couple therapy serves as a tool for increased creativity, playfulness and intimacy in the relationship. It seems that the benefit of working through bodily movement enables an encounter not only with issues of exhaustion and detachment, but also with the strengths of the relationship.

The participants felt that movement was a means by which emotional experience can be expressed in a deeper and clearer way, as if the language of movement enables emotional “suspension” better than verbal language. This study indicates that when verbal communication between the partners is already charged with negative feelings, the communication through movement allowed them to feel closer to each other even in conflictual situations. Couple therapy through movement offers additional ways of coping with “forbidden” aspects or difficult areas in the relationship, and legitimizing them without hurting or damaging the relationship.

The verbalization of “embodied stories” was key in the therapeutic process. It became apparent that without the verbal/symbolic processing of the body-movement experience, the bodily materials could easily dissolve and disappear, or remain incomprehensible, unknown, and meaningless for the participants. The emotional contents that emerged through movement required both verbal processing and meaning-making in order to be understood and internalized. In this sense, the concrete experience of in-session movement serves as a bridge to an emotional experience as it illustrates different aspects in the relationship, and reveals issues that were only accessible through the body.

To conclude, Movement-integrated couple therapy enables an encounter with the strengths and joys of the relationship, as well as an understanding of conflicts and discrepancies which emerge from the experience of movement. It offers a framework for exploring and attaining insights into intimacy and communication, allowing these aspects to become accessible to the partners following verbal processing.

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THE AFFECTIVE FUNCTIONING FORMS OF THE ADULT MUSEUM VISITOR

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Abstract

The piece of research presented here on the forms of the affective functioning observed during a museum visit identifies nine of them, while most of the authors who are part of the "affective curatorship" trend maintain that there is only one, emotion.

Keywords: *Museums, adult visitors, affective functioning, meaning making.*

1. Introduction

For the past twenty years, the museum community has been interested in emotion as a factor that would greatly contribute to the pleasant and educational character of an exhibition visit (Ahmed, 2004; Bagnal, 2003; Bodenstein, 2011*)¹. Recently, this interest has given rise to a movement, the "affective curatorship", which attempts, through various museographic means, to arouse emotion in visitors (Boyd and Hughes, 2020; Varutti, 2020*). Moreover, a careful reading of the authors who promote this movement reveals that emotion corresponds to the affective functioning in its entirety. Such an equivalence is astonishing, because the first adult who comes along will say after two hours of visiting that he feels tired, but happy all the same, because he has seen things that interested him. In the museum, the affective functioning therefore includes at least sensations in addition to emotions. This simple observation gave rise to the question that guided the research presented here: What forms does an adult's affective functioning take during a visit to a museum exhibition?

Broadly speaking, the strategy adopted to answer this question is threefold: 1) Developing a definition of affective functioning based on the work of neuroscience and the affective sciences; 2) Drawing up a list of the forms of affective functioning identified in fields that have points in common with the museum visit, namely tourism and advertising produced for the cultural milieu; 3) Confronting this list with several successive samples of adult visitors.

2. The affective functioning, its definition

The definition offered here draws on publications from the neuroscience stream (Damasio, 2003; 2012; Hellman, 2000; Thagard and Aubie, 2008*) and the affective sciences stream (Clore and Ortony, 2013; Feldman Barrett, 2017; Moors, Ellsworth, Scherer and Frijda, 2013*). It reads as follows: Affective functioning is expressed in four ways: *reactions* to the environment in which people find themselves or that they evoke, but also reactions to themselves as they are or perceive themselves; *sensations*, i.e. awareness of changes in their body or mind; *states* that are more or less prolonged, and *dispositions* to act.

3. Forms of the affective functioning identified in fields close to museology

Two fields, tourism (Escobar Rivera, Casadesus, Simon Villar, 2019*) and cultural production advertising (Wang, Close Scheinbaum, Li, Krischen, 2021*) provided the following list: emotions, sensations, feelings, sentiments, attitudes, interpersonal stances, dispositions, and passions.

¹ References marked with an (*) are only examples as the subject matter has been treated in many other publications

4. Confrontation of a list of affective functioning forms with the meaning making of successive samples of visitors

As far as meaning making is concerned, it is obtained using the Thinking Aloud Technique (Ericsson and Simon, 1993), which involves asking an adult visitor arriving at the museum to go through the visit at her/his leisure, but saying as she/he goes on what is on her/his mind; what she/he is thinking, imagining or feeling. What is said is audio recorded by a researcher accompanying the visitor. When visit is over, the recording is entered into a computer so that it can be analyzed in written form.

Regarding the successive confrontations with the previous list of affective forms, it goes as follows:

1) The list is first checked with the meaning making produced by 10 adults in three exhibitions presented respectively in three types of museums: history, fine arts and natural history. The analysis of the recordings led to the elimination of two forms of the affective functioning: sentiments and passions as irrelevant to the situation of an adult visiting alone.

2) The resulting list is checked against the meaning making of 50 adults aged 20 to 65 years of age (same number of men and women, with three different degrees of education and three visiting habits levels). The resulting list includes: emotion, sensation, mood, disposition (taste, preference), empathy, self-projection, desire, laughter and pleasure.

3) A further check with 10 people visiting different exhibitions from the previous ones confirmed the previous list.

The following is a definition of each selected form of affective functioning, as well as its main characteristics.

Notes: a) Each definition is obtained inductively from the analysis of the meaning making provided by the visitors of the successive samples; b) Each definition takes into account the definitions offered in several specialized dictionaries of psychology, philosophy, aesthetics and the French language; c) Each definition is "watertight", i.e., does not suffer from any overlap with another.

5. Definition of the nine identified forms of affective functioning

5.1. Emotion ²

Direct reaction to what holds the visitor's attention and stimulates him, reaches him, touches him
 The visitor judges, appreciates, gives his/her opinion
 Reaction is triggered quickly and is short-lived
 Its valence can be positive, negative or indeterminate ³
 Example (positive valence) : "It's beautiful"
 Example (negative valence): "It is insignificant"
 Example (indeterminate valence): "It is curious"

5.2. Feeling (feeling or felt meaning) ⁴

Awareness of what is going on within oneself in response to an external or internal stimulation
 What is felt is psychophysical. For example, fatigue has an affective connotation, while frustration is accompanied by physical or physiological feelings
 The visitor describes what he or she feels, senses, or the impression he/she has
 The valence can be positive, negative or indeterminate
 The visitor presents what he/she feels in one of the following three forms:
 Example (predominance of the physical component): "I feel tired".
 Example (predominance of the affective component): "I feel frustrated"
 Example (predominance of the cognitive component): "I feel like I've been looking at it for a long time."

5.3. Mood⁵

A transient state (disposition), like sensation, but which lasts longer, and which is not necessarily caused by a particular stimulus, as is the case with sensation

² Synthesis of the parts applicable to the museum situation of the definitions offered by Lalande (2002), Larivey (1998) and Rey (2005)

³ As we observed, Antonin Broi (2020) considers that the valence of emotions can be indeterminate as well as positive or negative

⁴ Synthesis of the parts applicable to the museum situation of the definitions offered by the American Psychological Association (2009), Gendlin (1962), Lalande (2002), Rey (2005) and Sander and Scherer (2009)

⁵ Synthesis of the parts applicable to the museum situation of the definitions offered by Frijda (1993), Sander and Scherer (2009)

Example: "I feel nervous today"

Note: Mood can influence other forms of affective functioning and some aspects of cognitive functioning.

5.4. Tastes and personal characteristics⁶

Inclination to act in a particular way because of personal preferences or inclinations

Taste and personal characteristic have more permanence than emotion or mood

Valence can be positive, negative or indeterminate

The intensity of what the visitor describes is more or less important

Example (what the visitor likes or dislikes): "I don't like baroque art; it's too complicated for me"

Example (what the visitor likes or dislikes): "Noisy groups like that are not acceptable!"

Example (what the visitor is or is not): "I'm not patient. I have to practice a lot so I don't get upset!"

5.5. Desire⁷

Reaction of attraction towards something that the visitor considers enviable

It can take the form of a wish, a vow, but also of wanting something to come true or to outline a project

In the museum, desire is usually expressed with a positive valence and has an imaginary dimension

Example (wish) "I would like to go and see the other exhibition, but I don't have time today"

Example (project): "On my way out, I'm going to buy a catalog because I found it interesting"

5.6. Empathy⁸

Identification or description of a feeling or reaction experienced by another person

The visitor evokes what someone else is feeling or doing

Valence can be positive, negative or indeterminate

What the visitor says always appeals to the imagination

Example (what the other person feels): "When the Mississippi explorers traveled great distances, their arms must have been tired from rowing all day"

Example (other's reaction): "A man who feels guilty, he must not want to go home at night and see his wife and children"

5.7. Self-projection⁹

Identification or description of affective reactions, sensations or states experienced by the visitor elsewhere than in the room where he/she is or at a time other than that of the visit

The visitor is transported in space or time and experiences something

The valence can be positive, negative or indeterminate

What the visitor says appeals to the imagination

Example (something experienced elsewhere): "I visited Easter Island with a group, I was afraid of what they said about their large stone statues"

Example (something experienced in another time period than the present one): "Like in the painting, I crossed the river in winter with my grandfather. We followed the other sleds and then we talked quietly"

5.8. Laughing¹⁰

Reaction to external or internal stimulation characterized by moments of aspiration and expiration in rapid succession

The meaning of laughter at a particular moment often eludes the researcher, for laughter can express a wide variety of reactions: depreciation, irony, embarrassment, nervousness, relief, relaxation, surprise, joy, approval, and even just good, happy vitality!

⁶ Synthesis of the parts applicable to the museum situation of the definitions offered by Rey (2005) and Souriau (2004)

⁷ Synthesis of the parts applicable to the museum situation of the definitions offered by Damasio (2003), Lalande (2002) and Rey (2005)

⁸ Synthesis of the parts applicable to the museum situation of the definitions offered by the American Psychological Association (2009), Piéron (2005) and Rey (2005)

⁹ The definitions found, except for Rey's, consider self-projection in the psychoanalytical sense of projecting one's own problems onto others, which is not relevant here. For Rey (2005), self-projection is the external localization of felt impressions or the projection of oneself into the future

¹⁰ Synthesis of the parts applicable to the museum situation of the definitions offered by Sander and Scherer (2009) and Souriau (2004)

5.9. Pleasure ¹¹

Pleasant sensation (feeling) aroused by a physical, intellectual, affective, aesthetic stimulation

If it is prolonged, the sensation is easily transformed into a state

In terms of intensity, the sensation or state can vary from the primordial sensation (Damasio, 2012), i.e. from something barely perceptible to a very strong enjoyment

Our data confirm what most psychologists and philosophers think: pleasure is an affective phenomenon that most of the time accompanies others, like a continuo accompanies a melodic line.

When pleasure surfaces, it appears in the form of exclamations such as: "This is really, really nice!" , "This is so good!" , "This is so great, you can't tell!"

6. Synthesis and perspectives

In light of the above, it seems that we should not establish an equivalence between emotion and affective functioning, at least in a situation such as that an adult visiting a museum exhibition. Indeed, emotion appears as only one of the nine forms that the affective functioning can take in this context. Moreover, emotion is only a reaction that is quickly triggered and does not last long.

Does this mean that the role of emotion in the visitor's production of meaning, that is, in what he thinks, imagines or feels, is negligible? In other words, that its weight in what the visitor takes away from his visit to the museum is insignificant? Before making a judgement, one should at least examine the dynamics of emotion by asking, for example, would it by chance play a role as a *trigger*, as an incentive to observe an object at length, such as a portolan, and to grasp its beauty or importance? Or would it be the *result* of a patient deciphering of an object, like Picasso's *Guernica* or Veronese's *Wedding at Cana*?

These two questions could also be asked of the eight other forms of affective functioning identified here, so that the present research leads to the study of the dynamics of this functioning as it occurs in the context of a museum visit. In other words, in the context of one of the main offers of a museum to the society in which it is embedded.

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¹¹ Synthesis of the museum-applicable portions of the definitions offered by Bramble (2013), Clore and Orthony, 2000), Damasio (2012) and Rey (2005)

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ASSESSMENT OF PERSONALITY AND PSYCHOPATHOLOGY IN THE CLINICAL-FORENSIC CONTEXT: CONTRIBUTION OF THE MMPI-2-RF

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Abstract

The clinical-forensic context requires broad instruments for personality and psychopathology assessment, due to the seriousness of decision making in this context. It is of utmost importance to ground those decisions in accurate knowledge of psychological features, enabling a broad characterization of the individuals' level of functioning and adaptation. The Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF) is among the most used instruments in this setting, as it is a broad inventory with several substantive scales, also including a set of validity scales aiming to identify response attitude. Within this context, some common psychological and behavioural features may exist that characterize the involved samples, but also a number of relevant differences, depending on the diversity of situations. This diversity includes criminal context individuals, serving a sentence or accused of crimes; individuals assessed following judicial requests for parenting skills and competence assessment; and individuals involved in court processes of litigation, related to compensation requests for work accidents, or domestic violence victimization. Thus, our main goal was to compare these specific forensic areas on the substantive and validity scales, and identify psychological characteristics more directly linked to the behavioural patterns of individuals in each sample.

A total of 377 participants, grouped in three samples – Criminal ($n = 163$; $M_{age} 39.09$, $SD 11.30$), Parenting skills ($n = 133$; $M_{age} 41.45$, $SD 9.09$) and Civil ($n = 81$; $M_{age} 44.01$, $SD 11.87$) – were assessed with the MMPI-2-RF and the results on the validity and substantive scales (i.e., higher order, restructured clinical, specific problems, and personality psychopathology) were considered. Multivariate analysis of covariance was used to assess the significant differences between the samples. Globally, both validity and substantive scales identify relevant characteristics of each sample. The criminal sample displayed the highest values in externalizing dysfunction, antisocial behaviour, hypomaniac activation; juvenile conduct problems, substance abuse, instrumental and intentional aggressiveness, and under-controlled behaviour. The parenting skills sample reached higher values in the validity scales that denote an inconsistent response attitude characterized by high social desirability. Finally, the civil sample showed clinically elevated profiles, indicating significant clinical issues. These results point out relevant psychological features characterizing different kinds of clinical-forensic areas, something that must be taken into account in psychological assessment in this field, and also as validation evidence supporting the use and interpretation of the validity scales.

Keywords: *Personality, psychopathology, MMPI-2-RF, clinical-forensic context.*

1. Introduction

Psychological assessment in the clinical-forensic context is of great importance, as it is a high stake context, in which resulting decisions have a serious impact on the individuals future, in different areas of their lives, i.e., personal, family, professional and social. Within this context, beyond the psychological features that the involved people may share, there is a diversity of situations, which may presumably be associated with relevant differences, at the psychological and behavioural levels. This diversity includes criminal context individuals, serving a sentence or accused of crimes; individuals assessed following judicial requests for parenting skills and competence assessment; individuals involved in litigation processes, in which a compensation request related to a work conflict or accident is made, or a family situation involving domestic violence. The MMPI-2 is the most extensively used worldwide psychometric instrument for psychological assessment in the forensic context (Farina et al., 2017). Most

studies in this field, both with MMPI-2 and its updated version, MMPI-2-RF, however, focus on the validity scales only, as ways of detecting the under-reporting and/or the over-reporting response attitudes (e.g., Chmielewski et al., 2017; Farina et al., 2017; Tylicki et al., 2020), and on one specific type of sample.

2. Objectives

Thus, this exploratory quantitative study aims at comparing three clinical-forensic samples, whose specific context may be characterized by differences in response attitudes, personality and psychopathology features, in order to identify psychological characteristics more distinctive of individuals in each sample. The dependent variables are the validity scales results, and the substantive scales results, which include a broad set of clinical and specific problems measures.

3. Methods

3.1. Participants

Participants of a clinical-forensic context ($N = 377$), with age ≥ 18 years, and valid protocols, were grouped in three samples – Criminal ($n = 163$; 91% masculine; $M_{age} = 39.09$, $SD = 11.30$), including participants incarcerated and assessed within the scope of pre or post-sentence processes; Parenting skills ($n = 133$; 56% feminine; $M_{age} = 41.45$, $SD = 9.09$), including participants assessed within the scope of child promotion and protection processes, or of parental responsibilities regulation processes; and Civil ($n = 81$; 91% feminine; $M_{age} = 44.01$, $SD = 11.87$), including participants assessed within the scope of court processes related with work conflicts, compensation requests and domestic violence victimization.

3.2. Instrument

The MMPI-2-RF (Ben-Porath & Tellegen, 2011) is an inventory assessing personality and psychopathology. The Portuguese version of this instrument (Novo et al., in press) was used. This study made use of the following scales: Validity scales; Higher-Order scales; Restructured Clinical scales; Specific Problems scales (Somatic/Cognitive, Internalizing, Externalizing, and Interpersonal); and Personality Psychopathology Five scales. The results are converted into normalized T-scores for the Validity scales, and uniform T-scores for all substantive scales and, in general terms, $T > 64$ are considered clinically significant values for the substantive scales.

3.3. Procedure

The instrument was administered individually by clinical and forensic psychologists, in accordance with the test standardized guidelines and scientific research norms. Participants signed an informed consent and privacy was in conformity with the international principles for psychological research. The research was approved by two Ethic Committees.

4. Results

Descriptive statistics of the three samples' results in the MMPI-2-RF scales are presented in Table 1. MANCOVA of the composite of different sets of scales, with age, schooling years, and sex as covariates, showed significant differences between the samples:

Validity scales: $F(14, 728) = 6.114$, $p < .001$, Wilks' Lambda = .801, partial $\eta^2 = .105$;
Higher-Order scales: $F(6, 736) = 16.349$, $p < .001$, Wilks' Lambda = .779, partial $\eta^2 = .118$;
Clinical scales: $F(18, 724) = 7.360$, $p < .001$, Wilks' Lambda = .715, partial $\eta^2 = .155$;
Somatic Scales: $F(10, 732) = 9.729$, $p < .001$, Wilks' Lambda = .779, partial $\eta^2 = .117$;
Internalizing scales: $F(18, 724) = 5.043$, $p < .001$, Wilks' Lambda = .790, partial $\eta^2 = .111$;
Externalizing scales: $F(8, 734) = 6.442$, $p < .001$, Wilks' Lambda = .873, partial $\eta^2 = .066$;
Interpersonal scales: $F(10, 732) = 3.861$, $p < .001$, Wilks' Lambda = .884, partial $\eta^2 = .061$;
Personality Psychopathology scales: $F(10, 732) = 7.770$, $p < .001$, Wilks' Lambda = .817, partial $\eta^2 = .096$.

Table 1. Descriptive Statistic for the MMPI-2-RF Scales.

	Criminal sample (n = 163)				Parenting skills sample (n = 133)				Civil sample (n = 81)			
	M	DP	95% CI		M	DP	95% CI		M	DP	95% CI	
			LL	UL			LL	UL			LL	UL
Validity Scales												
F-r	56.29	12.78	54.82	58.27	48.86	6.92	46.67	50.04	65.53	16.59	61.86	69.20
Fp-r	53.75	13.04	51.73	55.77	49.03	10.18	47.28	50.78	62.37	14.36	59.19	65.55
Fs	53.08	11.90	51.39	54.76	49.35	7.47	48.07	50.63	62.31	15.36	58.91	65.71
FBS-r	52.10	9.88	50.57	53.63	49.92	7.90	48.56	51.27	62.46	12.78	59.63	65.28
RBS	51.32	10.99	49.62	53.02	49.08	8.03	47.17	50.46	63.09	15.61	59.64	66.54
L-r	53.42	8.25	52.14	54.69	56.11	9.67	54.45	57.77	52.73	7.99	50.96	54.50
K-r	47.50	7.99	46.26	48.73	52.15	8.12	50.76	53.54	42.49	7.96	40.73	44.25
Higher-Order Scales												
EID	52.53	8.06	51.28	53.77	48.32	6.33	47.23	49.40	60.33	10.71	57.96	62.70
THD	58.39	11.44	56.62	60.16	54.28	9.36	52.67	55.88	63.86	13.18	60.95	66.78
BXD	59.96	12.57	58.01	61.90	47.95	9.01	46.41	49.50	52.04	9.23	50.00	54.08
Restructured Clinical Scales												
RCd	53.91	8.89	52.54	55.29	48.57	7.13	47.35	49.79	61.49	11.30	59.00	63.99
RC1	51.33	7.78	50.13	52.53	49.54	7.57	48.24	50.84	61.67	10.30	59.39	63.94
RC2	49.12	7.59	47.95	50.30	47.75	8.09	46.36	49.14	57.52	10.71	55.15	59.89
RC3	53.33	10.68	51.67	54.98	49.34	8.71	47.84	50.83	58.44	11.71	55.86	61.03
RC4	60.72	12.03	58.86	62.58	49.89	8.01	48.52	51.27	55.49	8.94	53.52	57.47
RC6	60.52	12.76	58.55	62.50	55.42	10.82	53.57	57.28	65.04	13.58	62.04	68.04
RC7	53.42	9.85	51.90	54.95	48.96	7.85	47.62	50.31	60.46	10.77	58.07	62.84
RC8	54.91	10.90	53.22	56.59	50.92	8.16	49.53	52.32	60.15	12.72	57.34	62.96
RC9	54.17	9.99	52.62	55.71	47.26	9.35	45.65	48.86	51.85	8.47	49.98	53.72
Somatic Scales												
MLS	50.33	6.95	49.25	51.40	48.31	8.19	46.90	49.71	59.49	10.98	57.07	61.92
GIC	51.96	10.40	50.35	53.57	48.65	7.27	47.41	49.90	60.36	14.58	57.14	63.58
HPC	49.98	9.41	48.52	51.43	47.93	8.52	46.47	49.39	60.28	11.78	57.68	62.89
NUC	50.49	9.01	49.10	51.88	48.89	8.14	47.49	50.28	59.28	11.28	56.79	61.78
COG	51.66	9.60	50.17	53.14	46.47	6.90	45.29	47.66	59.63	11.41	57.11	62.15
Internalizing Scales												
SUI	53.18	13.61	51.07	55.28	49.20	7.23	47.96	50.44	59.99	19.31	55.72	64.26
HLP	52.55	9.01	51.16	53.95	47.04	8.24	45.62	48.45	56.88	10.12	54.64	59.11
SFD	50.31	10.10	48.75	51.88	46.72	7.04	45.51	47.93	58.19	12.33	55.46	60.91
NFC	52.04	8.94	50.65	53.42	48.00	8.21	46.59	49.41	59.04	10.76	56.66	61.42
STW	53.79	9.40	52.33	55.24	47.71	7.27	46.47	48.96	57.40	11.25	54.91	59.88
AXY	52.15	11.32	50.40	53.90	48.08	8.47	46.63	49.54	61.42	14.65	58.18	64.66
ANP	52.32	9.63	50.83	53.81	46.83	8.25	45.41	48.24	57.94	10.70	55.57	60.30
BRF	52.55	7.88	51.33	53.77	49.89	7.67	48.58	51.21	59.91	12.99	57.04	62.79
MSF	49.33	8.00	48.09	50.56	50.35	9.20	48.77	51.93	57.04	10.17	54.79	59.29
Externalizing Scales												
JCP	60.53	13.60	58.43	62.64	49.84	10.14	48.10	51.58	53.15	10.67	50.79	55.51
SUB	57.06	13.47	54.98	59.14	46.35	5.97	45.32	47.37	49.99	9.07	47.98	51.99
AGG	52.90	11.34	51.15	54.65	48.02	8.46	46.56	49.47	51.94	9.72	49.79	54.09
ACT	51.28	9.62	49.79	52.77	48.93	9.19	47.36	50.51	53.44	8.92	53.44	55.42
Interpersonal Scales												
FML	50.88	9.70	49.38	52.38	48.53	8.88	47.01	50.06	58.74	11.90	56.11	61.37
IPP	48.31	9.29	46.87	49.74	48.93	8.43	47.49	50.38	52.48	11.15	50.02	54.95
SAV	48.55	8.84	47.18	49.91	50.13	9.41	48.51	51.74	53.22	11.62	50.65	55.79
SHY	51.13	8.92	49.75	52.51	48.56	8.10	47.18	49.95	53.78	9.18	51.75	55.81
DSF	52.99	12.05	51.12	54.85	50.85	10.80	49.00	52.70	59.49	15.31	56.11	62.88
Personality Psychopathology Five Scales												
AGGR-r	53.79	11.50	52.01	55.56	50.29	8.93	48.76	51.83	48.83	10.50	46.50	51.15
PSYC-r	56.73	11.44	54.96	58.50	52.54	9.44	50.92	54.16	61.99	13.40	59.02	64.95
DISC-r	59.43	12.31	57.53	61.33	47.37	8.86	45.85	48.89	47.73	8.94	45.75	49.71
NEGE-r	53.63	8.74	52.28	54.98	49.02	6.77	47.86	50.18	59.65	11.15	57.19	62.12
INIR-r	48.58	8.58	47.26	50.31	49.97	9.60	48.32	51.62	56.07	10.94	53.66	58.49

Note. CI = confidence interval; LL = lower limit; UL = upper limit.

Validity Scales: Under-report – L-r = Uncommon Virtues and K-r = Adjustment Validity; Over-report – F-r = Infrequent Responses; Fp-r = Infrequent Psychopathology Responses; Fs-r = Infrequent Somatic Responses; FBS-r = Symptom Validity; and RBS = Response Bias Scale. **Higher-Order Scales:** EID = Emotional/Internalizing Dysfunction; THD = Thought Dysfunction; BXD = Behavioral/Externalizing Dysfunction. **Restructured Clinical Scales:** RCd = Demoralization; RC1 = Somatic Complaints; RC2 = Low Positive Emotions; RC3 = Cynicism; RC4 = Antisocial Behavior; RC6 = Ideas of Persecution; RC7 = Dysfunctional Negative Emotions; RC8 = Aberrant Experiences; RC9 = Hypomanic Activation.

Somatic Scales: MLS = Malaise; GIC = Gastrointestinal Complaints; HPC = Head Pain Complaints; NUC = Neurological Complaints; COG = Cognitive Complaints. **Internalizing Scales:** SUI = Suicidal/Death Ideation; HLP = Helplessness/Hopelessness; SFD = Self-Doubt; NFC = Inefficacy; STW = Stress/worry; AXY = Anxiety; ANP = Anger Proneness; BRF = Behavior-Restricting Fears; MSF = Multiple Specific Fears. **Externalizing Scales:** JCP = Juvenile Conduct Problems; SUB = Substance Abuse; AGG = Aggression; ACT = Activation. **Interpersonal Scales:** FML = Family Problems; IPP = Interpersonal Passivity; SAV = Social Avoidance; SHY = Shyness; DSF = Disaffiliativeness. **Personality Psychopathology Five Scales:** AGRR-r = Aggressiveness-revised; PSYC-r = Psychoticism-revised; DISC-r = Disconstraint-revised; NEGE-r = Negative Emotionality/Neuroticism-revised; INTR-r = Introversion/Low Positive Emotionality-revised.

5. Discussion

All the samples have participants with high levels of emotional difficulties and pathological personality features, but their mean values are not clinically significant, with the exception of Ideas of Persecution (RC6), which reached significance ($T > 64$) in the Civil sample.

The Parenting Skills sample has higher values in the under-report validity scales, both defensiveness and social desirability and, accordingly, it shows significantly lower values in all substantive scales. This is in line with the results of studies comparing this type of sample with a normative sample (e.g., Mazza et al., 2019), or with an university students' sample (e.g., Sellbom & Bagby, 2008), and with a meta-analysis of studies using the previous MMPI-2 (Farina et al., 2017), which stated the same tendency. The values in our sample, although not indicative of under-reporting, point a cautious response attitude tendency, possibly related to the worries that a full disclosure could bring negative consequences in processes involving children rights. The low standard deviation this sample presents, in comparison with the other two, reveals its higher homogeneity in response attitude.

In our Parenting skills sample, the higher scale was RC6, which is in accordance with Archer et al. (2012), Mazza et al. (2019) and Kauffman et al. (2015), who stated that moderate T scores in this scale are common in child custody litigants, displaying elevated levels of suspiciousness, when compared to the normative sample. Considering that this sample participants show a tendency to minimize minor faults and present themselves in a socially desirable manner, it seems that these individuals may be more prone to endorse items that reflect their feelings of negativity and mistrust toward the litigation process and/or their ex-partner (Kauffman et al., 2015). It seems relevant that the tendency to minimize personal difficulties is reflected even in the somatic problems scales, at the level of body symptoms and preoccupations with somatic and cognitive health and disease.

Our Civil sample has significantly higher values in the over-reporting validity scales, and in most of the substantive scales. In general, this sample results are lower than the ones found in other studies with a comparable sample (e.g., Chmielewsky et al., 2017; Tylicki et al., 2020) and are closer to the values found by Wygant et al., (2009) in a sample with medical injury, and personal injury/disability groups. The clinically significant score in the Ideas of Persecution (RC6) scale is relevant, reflecting how worried and distrustful of the judicial system these individuals may be. With regard to the personality psychopathology dimensions, representing more stable and enduring characteristics, the higher mean values of this sample in some dimensions excel, while compared with the other samples. The higher neuroticism and negative emotionally, lower positive emotionally, disconnection from reality and alienation from others, are also relevant results, as they indicate that several participants were experiencing more psychological distress, and difficulties in adapting to life contexts.

Finally, the Criminal sample stands out for the highest values in scales related to externalizing dysfunction and antisocial behavior, namely problems associated with under-controlled behavior, rule breaking and irresponsible behavior, over-activation, impulsivity, grandiosity, physical and instrumental aggression. In addition, Juvenile Conduct Problems and Substance Abuse, pertaining to current and past misuse of alcohol and drugs, which are the most associated to violence scales (Ben-Porath & Tellegen, 2008/2011), are also higher in this sample. It seems relevant that, in our Criminal sample, the second higher personality psychopathology scale, even higher than Aggressiveness, is Psychoticism, which in moderate levels is not associated with psychoticism *per se*, but with an unstable working history, unemployment, and with the instability that characterizes the life path of many individuals in this type of samples (Wise, 2009).

Although these results must be taken into account as validation evidence supporting the use and interpretation of MMPI-2-RF in the forensic context, there is remarkable heterogeneity within each sample (i.e., the Parenting skills sample comprises parents disputing child custody and parents accused of parenting negligence; the Civil sample includes individuals litigating in the work and family fields, and the Criminal sample has individuals accused of crimes involving different levels of violent behaviour). This is a limitation, and further specific analysis within each sample may bring additional important features.

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THE DARKER SIDE: PERSONALITY AND MOTIVATIONS OF CLINICAL AND COUNSELLING PSYCHOLOGISTS

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Abstract

Clinical and counselling psychologists have traditionally been perceived as being helpful to others, empathic, caring, kind, trustworthy, independent, insightful, and introspective. They have also been found to possess analytical, interpersonal, observational, and problem-solving skills; patience and integrity. Research on the personality and motivations of clinical and counselling psychologists has therefore mostly focused on strengths and positive attitudes and motivations. Although theories regarding the negative traits and less desirable motivations of psychologists exist, few researchers have attempted to validate them empirically, especially in the Maltese context. The aim of the current study is to explore the personality traits and motivations of Maltese clinical and counselling psychologists, from the perspectives of their colleagues. Five clinical and five counselling psychologists were interviewed by means of the repertory grid technique, based on the tenets of Kelly's construct theory. Data was analysed following a procedure adapted from Lemke et al. (2011). Findings suggest that besides altruistic motives to pursue the profession, psychologists are also driven by "darker" motivators which have been under-researched so far. These include power, financial gain and the need for self-affirmation. Additionally, results underscore the existence of traits which could potentially interfere with the outcome of psychotherapy, such as unethical attitudes and behaviours, an inflated sense of self, and difficulties with empathy. These findings have pragmatic value in that they can inform understanding of determinants underlying clinical and counselling psychologists' choice of career. This could prove useful both when prospective psychologists are considering entry into the profession, and to inform the personal psychotherapy and supervision of existing psychologists. The results therefore have implications for the selection, training and supervision of clinical and counselling psychologists.

Keywords: *Personality, motivations, clinical and counselling psychologists, repertory grid technique.*

1. Introduction

The aim of the current study is to explore the personality traits and motivations of Maltese clinical and counselling psychologists, from the perspectives of their colleagues. It builds on a previous study, presented at the conference entitled "Breaking Barriers", held at the University of Malta (Catania & Darmanin Kissaun, 2018).

Wampold et al. (2011) listed qualities and actions of effective therapists which included verbal fluency, interpersonal perception, affective modulation and expressiveness, warmth and acceptance, empathy, and focus on others. Other authors however have pointed out that excessive emphasis on the positive aspects of psychologists' personalities has resulted in a neglect of less positive qualities that probably led, at least in part, to the common perception of psychologists as intellectually, spiritually and morally superior (Maroda, 2005). Although psychologists regularly claim that their primary motivation in choosing their profession is to help people, there is a body of knowledge which evidences that the choice of career as a helping professional is determined by multiple factors that are complex, intertwined, only partially conscious, and often not well-understood until late in the psychologist's career (Maroda, 2005; Norcross & Farber, 2005; Sussman, 2007). This indicates that perhaps psychologists might not be as aware of their "darker side" as they would like to think. Norcross and Farber (2005) also asserted that the neurotic motive for healing the self is usually balanced by the less-neurotic motive of altruism, and that unconscious motives can be restrained and could even prove helpful to psychologists as long as they are aware of them.

The personality of psychologists is considered to be fundamentally important since it influences the outcome of treatment. In a number of studies, the differences between types of treatment were found

to be negligible when compared to the differences amongst therapists in determining the effectiveness of psychotherapy (e.g. Lutz et al. 2007; Wampold, 2006). It appears, therefore, that psychologists, far more than other professionals, depend on their personhood to provide a good service to clients, rendering self-awareness of paramount importance. Although theories regarding the negative traits of psychologists exist (e.g. Sussman, 2007), few researchers have attempted to validate them empirically. Moreover, the research in the area is relatively dated and mostly focused on strengths and values. Additionally, most of the studies we encountered have taken an etic perspective, that is they studied determinants of clinical and counselling psychologist's career choice from an outsider's perspective (Luna & Forquer Gupta, 2001). We propose that etic and emic perspectives can be considered two sides of the same coin, and both are important to obtain a more holistic understanding of phenomena. We therefore deemed it necessary to provide a complementary emic perspective, which sheds light on the 'inside' perspectives of psychologists themselves.

2. Method

We deemed the repertory grid technique (Kelly, 1969), with its idiographic emphasis, to be the ideal method for this study as it is designed to help understand the nuanced differences in the manner in which psychologists view their colleagues and has also been shown to be useful in eliciting tacit knowledge (Polanyi, 1958). Clinical and counselling psychologists' perceptions of their colleagues could possibly shed light on what they consider to be ideal qualities that they aspire to. Traits which are perceived to be negative or undesirable to participants, and consequently repressed or denied in themselves, can also more easily be elicited by attributing them to others. Conscious thought is therefore bypassed by means of projection (Freud, 1893). Ten Maltese clinical/counselling psychologists who practice psychotherapy were recruited by means of convenience sampling. The duration of the interviews was between 60 and 90 minutes. Saturation was deemed to have been reached after the tenth interview, at the point when all the constructs which emerged had already been generated in previous interviews. Both authors coded the 50 unique constructs that emerged into categories individually, subsequently discussed them and finally generated an integrated classification. The constructs were classified into five main categories, with self-awareness (or the lack of it) being an underlying thread permeating all constructs. The final classification of categories is presented, together with their respective salient constructs, in the table hereunder.

3. Findings and discussion

Table 1. Categories and sample constructs.

Categories	Sample Constructs	
Motivations	<ul style="list-style-type: none"> • Driven by financial gain • Puts self before clients • Inflated sense of self • Power issues, manipulative • Violates boundaries 	<ul style="list-style-type: none"> • Driven by a wish to make the world a better place • Puts clients' wellbeing first • Insecure • Aware of power issues, not manipulative • Keeps adequate boundaries
Ethical attitudes and behavior	<ul style="list-style-type: none"> • Not ethical, not mindful of professional boundaries • Unethically detached 	<ul style="list-style-type: none"> • Ethically responsible both in theory and in practice • Ethically attached
Self-care and work-life balance	<ul style="list-style-type: none"> • Stagnant and unable to regenerate • Workaholic 	<ul style="list-style-type: none"> • Able to regenerate and care for themselves. • Good work life balance – tends towards "life" rather than "work"
Congruence and authenticity	<ul style="list-style-type: none"> • Incongruent – personal and professional lives do not match • Shady and shifty 	<ul style="list-style-type: none"> • Congruent in their personal and professional lives • Genuine and authentic

3.1. Motivations

In line with the research regarding the motivators for choice of profession (Hill et al., 2013; Wampold et al., 2011), altruistic motives, such as a genuine interest in helping people, a wish to make the world a better place, and a generous disposition, were noted as possible motivators in some instances. However, participants also described "darker" motivators, such as a need for self-affirmation from others, which have been considered less frequently in the literature. This is in line with Sussman's (2007)

proposal that psychologists possess unconscious motives stemming from narcissistic needs. Other motivators included the quest for power, prestige and financial gain, consonant with Ng et al.'s (2011) study that found that persons with narcissistic tendencies possessed an attitude towards money characterised by the need for social power. It has been postulated that, given that narcissistic individuals develop a heightened sensitivity to narcissistic injury and emotional disturbance in others, they tend to gravitate to caring professions as a choice of career (Luchner et al., 2008; Miller, 1981). Some psychotherapists possess personality characteristics associated mostly with the vulnerable/covert narcissistic type that may contribute to high levels of empathy and a capacity for attunement (Glickauf-Hughes & Melhman, 1995). The main constructs elicited from our participants included psychologists' ability to be "genuinely empathic, versus self-absorbed/seen as making space for the other, but in the service of the self". However, empathy was also construed by participants as "...sometimes excessive, to the extent of enmeshment and loss of self in the psychologists". Luchner et al. (2008) list a number of consequences of this, among which are boundary violations and absence of the therapeutic frame, issues that are in line with the constructs elicited by the participants in this study.

3.2. Ethical attitudes and behaviour

Participants perceived some of their peers as not being respectful of boundaries, and breaching confidentiality. Both these situations can be considered to be serious ethical breaches in their own right, according to most professional codes of ethics. However, they are possibly even more serious in the local context, given the small size of Malta and the closely-knit communities that characterise it (Abela & Sammut Scerri, 2010). This makes maintaining boundaries much more crucial, as dual relationships abound and psychologists are likely to come across clients or their relatives on a regular basis. Additionally, participants pointed out that some psychologists remain "unethically detached" from their clients during therapy. This would have implications for the conscious regulation of attachment patterns in accordance with the particular client's needs, a skill that Mallinckrodt (2010) proposed to be essential. The relationship between the Maltese culture and the propensity to engage in unethical behaviour has been noted in previous studies (e.g. Catania, 2014).

3.3. Congruence and authenticity

Participants mentioned genuineness, authenticity and congruence as factors affecting the therapeutic relationship, in line with a number of authors who demonstrated that therapist characteristics are important determinants of effectiveness of short and long-term psychotherapy (Heinonen et al., 2012, 2020). Contrarily, some clinical and counselling psychologists were described as shady, shifty, scheming and backstabbing, as well as demonstrating discrepancies between their personal and their professional personas. Some psychologists were also seen as being keen to share their weaknesses, knowledge and expertise with their colleagues, whilst others were construed as being more guarded. Therapists' personal attributes such as honesty, respect, trustworthiness, warmth, and openness were found to contribute positively to their relationships with clients and colleagues (Heinonen et al., 2020) whereas a lack of congruence and authenticity was considered by Rogers (1961) and, more recently, by Geller and Greenberg (2023), as an obstacle to building trust and openness in the therapeutic dyad.

3.4. Self-care and work-life balance

Research findings suggest that mental health professionals are particularly at risk for developing stress-related difficulties and burnout due to the inherently stressful nature of their role (Pakenham & Stafford-Brown, 2012). There is evidence that excessive stress may negatively impact both personal and professional functioning of psychologists. In this regard, more than one third of the clinical psychologists in Guy et al.'s (1989) study reported that their own distress negatively affected the quality of care they gave their clients. Other studies strongly emphasised the need for psychologists to recognise the importance of self-care, which can be defined as the implementation of practices aimed at advancing one's own health and well-being (Bickley, 1998). Indeed, another category of constructs emerging from the participants' statements referred to self-care and work-life balance. In fact, Posluns and Gall (2020) claim that the learning of self-care and stress-management skills is of paramount importance if psychologists are to counteract the adverse effects of stress and burnout that they are likely to experience throughout their career.

4. Implications for the training and clinical supervision of psychologists: Reflective practice as a means of promoting self-awareness and self-care

Participants mentioned the use of a variety of defence mechanisms, as opposed to being "free and open", as well as "...the possibility of acting out due to lack of reflexivity and self-awareness".

Grosch & Olsen (1994) exhort against the perils of unawareness and claim that these can lead to burnout, withdrawal, job dissatisfaction, and overworking. Other consequences of unawareness cited by these authors are ethical charges from clients and colleagues, malpractice suits, loss of licensure, an inability to practice psychotherapy, and criminal or civil litigation. Participants stated that the degree of investment in the psychologists' own therapy and supervision was important, since these increase psychologists' self-awareness and reflective skills. Reflective practice, defined as "practice conducted with personal and professional self-awareness and reflection; with awareness of competencies; with appropriate self-care" (Fouad et al., 2009, p. 10) has increasingly been recognised as an important aspect of numerous clinical and counselling psychology graduate programmes in various countries (Cooper & Wieckowski, 2017; Gates & Senediak, 2017; Knoetze & McCulloch, 2017). In order to counter the inherent difficulties involved in practicing the profession, Jordaan, et al. (2007) proposed coping programmes for psychologists and encouraged them to practice emotional self-care by means of psychotherapy and support groups. Barnett and Cooper (2009) claim that self-care should be emphasised at every stage of a psychologist's career, while Pakenham and Stafford-Brown (2012) and Theriault and Gazzola (2006) recommend that self-care is specifically integrated into psychologists' training programmes from their inception. Furthermore, Christopher et al. (2006) affirm that self-care is usually not an essential part of graduate programmes of study, and that trainees are usually expected to practice self-care on their own initiative.

5. Conclusion

This research sheds light on motivations and personality traits of clinical and counselling psychologists which have been neglected in the literature. These include the need for self-affirmation, power, and financial gain, among others. When compounded by a lack of awareness, these could lead to unethical attitudes and behaviour, boundary violations, the breaching of the therapeutic frame, and an inability to exercise self-care. Additionally, the results of this study underscore the relevance of promoting awareness and reflective practice in psychologists' own psychotherapy and supervision. This could shed light on their motivations to exercise the profession, and on the manner in which their own personal issues can negatively impact the outcome of psychotherapy. The findings also emphasise the importance of integrating the teaching of self-care into professional training programmes.

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TRAUMA-SENSITIVE YOGA IN PUBLIC PSYCHIATRIC SERVICES: INNOVATIVE CLINICAL MODEL FOR VETERANS WITH PTSD

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Abstract

Many veterans with PTSD fail to gain significant improvement through trauma-focused therapies or other cognitive evidence-based therapies that are offered in public psychiatrist services. As a result, many veterans who are in the care of the public psychiatric system do not enjoy a sufficient improvement in their condition. This situation leaves both the patients and professionals in distress and creates a major load on the public psychiatric systems. One of the reasons for veterans' difficulty to benefit from treatments is an unregulated and overstimulated nerve system, that cannot tolerate the cognitive and emotional efforts demanded by these treatments. At the same time, there is an increasing body of knowledge on body-mind interventions for PTSD that address the hyper arousal of the sympathetic nerve system (SNS) and support regulation. However, these interventions are yet to be recognized by mainstream therapists and the public services, either as standalone interventions or as supporting therapy, enabling the more "traditional" therapies. This study will present an innovative therapeutic intervention that consist of short-term group of trauma-sensitive yoga (TSY) for veterans with PTSD, that took place between 2020-2022 in public psychiatric outpatient clinic in general hospital in Israel. Preliminary findings of this qualitative study show 6 main themes among participants: 1. Improved regulation of the sympathetic nerve system. 2. Acquirement of practical tools for stress-release. 3. Reconnection to supportive resources and using them in daily life. 4. Improvement in quality of life and daily functioning (e.g., sleep, memory, concentration). 5. Strengthening bodily awareness, hence consolidating sense of self-agency. 6. Improving illness management and treatment adherence. These findings demonstrate that TSY can be a promising supplementary intervention within public service that promote improvement in the client condition hence his ability to benefit from other treatments offered him. This study demonstrates the possible efficacy of using body-mind interventions with PTSD veterans who are clients of public services. Combining novel approaches within standardized care can increase the effectiveness of the latter, in clinical situations where success rates are limited and need to be better address.

Keywords: *Veterans, trauma, trauma sensitive yoga, PTSD, psychiatry services.*

1. Introduction

Evidence-based therapies are suggested for veterans dealing with Post Traumatic Stress Disorder (PTSD) in public services, yet many avoid therapeutic opportunities or drop out without any improvement (Steenkamp, Litz, Hoge, & Marmar, 2015). As a result, many veterans who are in the care of the public psychiatric system do not enjoy a sufficient improvement in their condition. This situation leaves them in distress and creates a major load on these services. Hence, it is necessary to develop new therapeutic approaches that can better serve this population's needs (van Der-Kolk, 2014). Mind-body interventions (e.g., meditation, yoga) are receiving increasing research attention and support as alternative interventions in this field (Cramer, Anheyer, Saha & Dobos, 2018). However, these interventions are yet to be explored and recognized by mainstream therapists and the public services.

Within large body of evidence examining yoga as an adjunctive therapy for PTSD, a smaller number of studies focus on trauma-sensitive yoga (TSY) (Kelly, Evans, Baker, & Taylor, 2018). In these studies, TSY has been shown to have therapeutic effects on PTSD symptoms, mainly regulation of neuropsychological and emotional functioning (Kelly et al., 2018). Recent meta-analyses of TSY studies indicate that results for TSY are promising, in some cases with effect sizes comparable to psychotherapeutic and psychopharmacologic approaches (Zaccari et. all, 2020).

However, TSY-based interventions are not yet acknowledged by public psychiatric services. The purpose of this work is to present an innovative clinical model for veterans diagnosed with PTSD, operated within public psychiatric settings in Israel. The main driver for creating this model was to promote improvement in clients' conditions in the micro-level and improve efficacy of the public services in the macro-level.

2. Trauma sensitive yoga for veterans with PTSD

Yoga is an ancient body-mind practice, originally aimed towards spiritual transcendence. The meaning of the word yoga is "merging" or "union". The practice of yoga is an exploration of connections and relationships of mind and body as well as a path to experiencing other means of connection (e.g., connection to one's own body, connection between different body parts, connection between body to gravity and space etc.) (Desikachar, 1995).

This direct somatic experience of union has the potential to support the experience of bringing together varied aspects of the mental, emotional, and spiritual self. These domains become significantly damaged by trauma and therefore make Trauma Sensitive Yoga a viable approach to supporting those who suffer from PTSD. (Stoller, 2019; Tucker, 2021)

Trauma Sensitive Yoga (TSY) integrates "top down" and "bottom up" processes (van der Kolk, 2014). "Top-down" relates to the ways thoughts and beliefs influence sensorimotor experiences and autonomic functioning (e.g., observing the breath in meditation). "Bottom up" relates to the ways sensorimotor activities can influence and generate emotions and cognitive processes. (e.g., slowing down the breath and noticing its effect on ruminative thoughts).

Whereas traditional talk therapies use mostly cognitive and emotional interventions, yoga offers somatic based interventions (e.g., breathing, movement, vocalization, touch) as well as cognitive interventions (e.g., concentration, mindfulness, meditation). These two directional pathways - the somatic and the cognitive components - are relevant especially with symptoms of PTSD which are mainly intrusion, avoidance, alterations in cognition and mood and alterations in arousal and reactivity (Taylor, Goeheler, Galper, Innes & Bourguignon, 2010).

TSY has several guiding principles: 1. cultivating a sense of safety, 2. regulating the neuroendocrine system and 3. re-establishing a sense of agency and choice. (Cramer et al., 2018). The first principle is Safety. People with PTSD are often experiencing the world as unsafe. The practice of TSY is focused on creating a sense of safety in several aspects: A. The setting of the practice (clean and neutral physical space, predictable and structured process of training); B. Relationship with the teacher, who is a qualified and experienced TSY teacher; C. Safe group environment (practicing within "sangha"- a yogic term meaning a community of people sharing a mutual path); D. Safety in the body: During TSY classes participants are guided repeatedly to consciously pay attention to sensations of stability, support, safety and ease in their body. The practice of yoga allows the participants to experience their strength, flexibility, coordination, and their balance, which effect their perception of safety van der Kolk, 2014). Guided imagery of safe place to return to as well as identifying postures and breathing techniques that provide the experience of a safe place within their bodies are explored (Stoller, 2019).

The second principle is regulating the autonomic nervous system (ANS): "Trauma survivors chronically respond to both ordinary and extraordinary challenges with defensive behaviors that interrupt the functioning of the cortical and subcortical circuits responsible for self-regulation, maintaining a coherent sense of self, and connecting with others...Common expressions of this dysregulation include irritable or aggressive behavior, reckless or self-destructive behavior, hypervigilance, exaggerated startle response, problems with concentration, and sleep disturbance" (Moore & Libby, 2018, pp. 109). Varied aspects of the practice of yoga are associated with regulating and balancing the ANS. The most direct impact on the ANS is through breathing practices ('pranayama'). Others are movement combined with breath, (asana) the pendulation between active and passive postures, relaxation, chanting, meditation, and social interaction. Yoga practice may support a more adaptive use of the ANS and may also support a faster recovery from a defensive response- coming back to a baseline more quickly after triggering stimulation. (Moore & Libby, 2018).

Re-establishing a sense of agency is the third principle of TSY. "Agency starts with what scientists call interoception, our awareness of our subtle sensory, body-based feelings: the greater that awareness, the greater our potential to control our lives. Knowing *what* we feel is the first step to knowing *why* we feel that way. If we are aware of the constant changes in our inner and outer environment, we can mobilize to manage them... This is why mindfulness practice is a cornerstone of recovery from trauma" (van der Kolk, 2014, pp. 97).

Yoga is a mindfulness-based practice which encourages a non-reactive awareness to internal and external stimuli. The gradual ability to contain unpleasant sensation is expanding the "window of tolerance", builds resiliency and regulates the ANS, as well as cultivating their sense of agency.

To sum up, trauma sensitive yoga can promote rehabilitation and coping with PTSD (Kelly et al., 2018; Zaccari et. all, 2020), however it is not yet integrated into mental health public services. This work will present a clinical model for group intervention within psychiatric outpatient clinic in Israel.

3. Method

As this study focuses on pioneer field of combining TSY with psychiatric and psychotherapeutic treatments in public service, its research paradigm was chosen to be qualitative. In this preliminary study 35 Israeli male veterans, diagnosed with PTSD, participated in a short-term TSY group in a public psychiatric outpatient clinic in general hospital between 2020-2022 (across 6 groups). Each group consisted of 8 weekly meetings, 1 hour-long each. The meetings included guided and structured TSY practice led by professional yoga therapist and assistance (there was no open group sharing). All participants were under psychiatric care and most of them had another therapeutic treatment (individual, group, couple etc.). Qualitative data was collected individually during and after group meetings in which participants reflected on their personal therapeutic process within the group and in their daily life. Another source of data was the participants' therapists and psychiatrists, who documented their patients' condition before, during and after the TSY group.

4. Findings

Participants' experiences and their therapists reports were categorized and conceptualized into 6 main themes.

4.1. Improved regulation of the sympathetic nerve system

Participants shared a significant sense of calmness and ease during the TSY practice. They described it their own words: "an experience I have no access to, unless practicing yoga", "a reminder to a quality within me that I almost forgot was there". After a relaxation a participant reflected: "I didn't want the relaxation to end... For few moments I felt as if everything is ok and there's nothing wrong with me". Some participants reported shorter episodes of flashback and quicker recovery. A Psychiatrist from the outpatient clinic reported: "Almost all the patients who were in the yoga group said that it really helps them to relax... It has a strong effect for several hours after."

4.2. Acquirement of practical tools for stress-release

Participants reported they use practical tools for stress-release and self-regulation they were given during the practice on a regular basis (e.g., breathing technics, guided relaxation recordings, specific body postures). Many participants use audio guided relaxation (recorded by the group facilitator whom her voice is familiar) before going to sleep. Some of them use yogic breathing techniques during times of anxiety and unease such as when waking up at nights or while driving. One participant shared a shift in his anxiety attacks while driving. Now he can recognize his physiological arousal, and instead of calling an ambulance he puts his hands in specific posture ("home base" position), slow down his breathing until he was calm again and able to get back to driving. Another participant reported using tapping on his body and using a vigorous standing posture before going into a job interview. A Psychiatrist described: "Those clients from the TSY group, who managed to practice in a daily routine, use it in moments of distress. It helps them to move on."

4.3. Reconnection to supportive resources

Participants reconnected to various of supportive resources (Levine, 1997) e.g., grounding, gratitude. At the end of a session that focused on feet and grounding through different postures, a participant shared: "I feel surprisingly good... I was never guided to bring attention to my feet... now I can perceive stability through my legs". This direct somatic experience continued to be part of his everyday life. Another form of resources was introduced through a repeated practice of gratitude at the end of each session. Participants were guided to think of one thing they feel grateful for, e.g., a person, a place, a quality of themselves. After working with this image many of them reported a sensation of relaxation, calmness, and easeful breathing.

4.4. Improvement in quality of life and daily functioning

Participants reported a positive effect on physical and mental functioning, e.g., their ability to fall asleep, especially those who deliberately practiced breathing and relaxation techniques prior to their bedtime. One participant reported that better sleep made him more concentrated and regulated at work, and as a result he got promoted.

4.5. Strengthening bodily awareness, hence consolidating sense of self-agency

Participants in the TSY group reported that becoming aware of their body is very significant experience. They describe it as a shift from "not knowing where my body is" to "feeling my body presence". This bodily awareness supports their sense of being grounded, safe and attuned to their own needs. These abilities enhance their sense of self and self-worth. They experienced "empowerment" and "a sense of having control on my life". Few of them reported decreasing of using sedatives and medical cannabis, as they can now better tolerate their sensations and physiological activation.

4.6. Improving illness management and treatment adherence

TSY group participants showed improvement in their adherence to other therapies and mainly their individual psychotherapy. They shared their yoga experiences with their therapist. A psychologist shared his client's experience from the TSY group: "In his psychological treatment Dan struggled with difficult feelings of anxiety and rage that attacked his possibility of a meaningful human connection and a sense of meaning in his life... Within a yoga therapy group, he found moments of calmness and peace, which he described as precious and rare in his life. The Yoga therapy have evolved new experiences of calmness, security, and hope, that he has not felt for so many years. Then we have started to look for these experiences together within his psyche, within his life".

A therapist shared that since her patient has started participating TSY group, he started to show up more continuously to his individual therapy, with less cancellations and less rage and emotional eruptions. This change was noticeable and last long.

Other findings include participant who reported being able to gradually reduce the dose of sleeping pills up to a point he did not use them at all. Another participant was gradually able to postpone taking his SOS medication by using yogic and somatic self-regulation tools. In addition, participants reported improvement of symptoms as chronic pain, orthopedic issues, and balance issues.

A psychiatrist in the clinic shared her experience from monitoring her clients who participated in the TSY group: "For me it's like medication. It provides a solid base for regulating and grounding...and a catalyst for treatment. It provides some sort of platform on which a more in-depth process of dealing with traumatic content can be done. This is what I see in practice".

5. Conclusions

This preliminary work demonstrates that integrating short-term trauma-sensitive yoga (TSY) group in public psychiatric settings for veterans dealing with PTSD can be a platform for enhancing self-regulation and improving quality of life. It was also found as promoting illness management, treatment adherence and better engagement of veterans as clients in psychiatrists' public services. Hence, the model has shown its efficiency in both the micro and macro levels. It is a promising modality that enhances other therapeutic and rehabilitation efforts either as standalone treatment or as supplementary treatment within public services. Future studies should empirically examine the effectiveness of this clinical model with various measures and quantitative means. Another area for research is the applicability of this approach for other psychiatric fields (e.g., sexual trauma, anxiety, depression).

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**IS THERE BANALITY IN EVIL?
RE-READING HANNAH ARENDT'S *EICHMANN IN JERUSALEM* IN VIEW
OF YARIV MOZER'S FILM "THE DEVIL'S CONFESSION ON THE LOST
EICHMANN TAPES"**

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Abstract

In 1957, some years before Eichmann's Willem Sassen a Dutch Nazi journalist, conducted a series of interviews with Eichmann in Buenos Aires. The resulting tape recordings were recently made public for the first time in the documentary "The Devil's Confession : The Lost Eichmann Tapes" (2022). This is the occasion for a rereading of Arendt's *Eichmann in Jerusalem*. Arendt, reporting Eichmann's trial in Jerusalem for the *New Yorker*, argued that rather than a bloodthirsty murderer motivated by anti-Semitic ideology, Eichmann showed himself to be a mediocre but ambitious civil servant whose evil can be described as "banal". I look at a hitherto neglected aspect in the discussion of her book: the psychology of attribution of evil. The Sassen interviews bear out that Eichmann, no less than Himmler, was a radical anti-Semite. Eichmann relates how he himself took the initiative to kill as many Jews as possible and felt sorry for not having managed more. Arendt was misled by Eichmann's cliché riddled testimony during his trial. Referring to a new theory of moral judgment (Govrin, 2014) this lecture shows how the local public outrage against Arendt's analysis is related to the fact that it broke each of the four criteria of the perception of evil. She questioned the asymmetry between victim and perpetrator; accepted at face value the perpetrator's denial of his hatred of the victim; entered the perpetrator's mind and presumed he showed a degree of guilt. This undermined the public perception of the evil of the Nazis which was largely based in identification with the victims and profound shock with their actions. That said, Arendt's analysis was a contribution to our understanding of evil by pointing at a structural gap between the observer's perception of the perpetrator and that of the perpetrator himself. Recognizing this will allow us to take due note of aspects of evil whose origins are in banality.

Keywords: *Evil, moral psychology, Arendt Hannah, victimhood, antisemitism.*

1. Introduction

In 1957, some years before Eichmann's Willem Sassen a Dutch Nazi journalist conducted a series of interviews with Eichmann in Buenos Aires. The resulting tape recordings were recently made public for the first time in the documentary "The Devil's Confession : The Lost Eichmann Tapes" (2022). This is the occasion for a rereading of Arendt's *Eichmann in Jerusalem*. Arendt, reporting Eichmann's trial in Jerusalem for the *New Yorker*, argued that rather than a bloodthirsty murderer motivated by anti-Semitic ideology, Eichmann showed himself to be a mediocre but ambitious civil servant whose evil can be described as "banal". I look at a hitherto neglected aspect in the discussion of her book: the psychology of attribution of evil. The Sassen interviews bear out that Eichmann, no less than Himmler, was a radical anti-Semite. Eichmann relates how he himself took the initiative to kill as many Jews as possible and felt sorry for not having managed more. Arendt was misled by Eichmann's cliché riddled testimony during his trial. Referring to a new theory of moral judgment (Govrin, 2014) this lecture shows how the local public outrage against Arendt's analysis is related to the fact that it broke each of the four criteria of the perception of evil. She questioned the asymmetry between victim and perpetrator, accepted at face value the perpetrator's denial of his hatred of the victim; entered the perpetrator's mind and presumed he showed a degree of guilt. This undermined the public perception of the evil of the Nazis which was largely based in identification with the victims and profound shock by their actions. That said, Arendt's analysis was a contribution to our understanding of evil by pointing at a structural gap between the observer's perception of the perpetrator and that of the perpetrator himself. Recognizing this will allow us to take due note of aspects of evil whose origins are in banality.

2. Arendt's perception of Eichmann

Arendt saw Eichmann as a mediocre but ambitious civil servant who sought his superiors' approval and to gain power. He neither had a special hatred of Jews nor was he driven by Nazi ideology. Unable to think autonomously, he was only capable of producing banal clichés. But the tapes leave no room for doubt: there was nothing banal about Eichmann's evil. He was a high ranking Nazi officer whose hatred of Jews was no less intense than Himmler's, Heydrich's or Hitler's. Eichmann told Sassen, for instance, that he violated Himmler's order to stop the transports of Jews to extermination camps when the end of the war was in sight, in order to make sure more Jews would be killed. The clichés which became Eichmann's trademark after the Jerusalem trial turn out to have been no more than a clever ruse he used in his defense.

It is not immediately obvious why Arendt's report so deeply antagonized her critics. All she did was describe Eichmann as a bureaucrat who was eager to please his superiors and to advance along a road in which the obedient carrying out of an order was considered more important than any other moral imperative. As said, she did not perceive ideological-antisemitic motives in Eichmann's career. Is banal evil somehow less grave than its ideologically motivated, and hate-filled counterpart? In Arendt's opinion the former type of evil was actually worse than the latter: "" (23).

These questions require a psychological discussion about something that has so far been absent from the debate: The psychology of the observer who attributes evil and grave moral failure. If we don't understand the psychic-experiential response triggered by the word "evil", and the serious emotional charge of the term "self-hating Jews" it is hard to understand the outrage and controversy Arendt's book brought about. A new theoretical model of "evil" which I presented in previous publication (2016, 2017, 2018) will cast a light on this and will re-direct the discussion, away from Arendt's book itself, focusing instead on that book's effect on us, the readers. My theory holds that the word evil refers to a cluster of cognitions and emotions unique to some especially horrific moral failures, which only emerge under certain circumstances. Rather than a particular act, what horrifies is determined by an entire relational texture between perpetrator and victim.

3. Four criteria for the perception of evil

In my research on evil and moral judgment I have shown that for an observer to make this judgment, four conditions must simultaneously obtain. What the Nazis inflicted on the Jews is commonly seen as the ultimate evil because it fully meets these four criteria. But the criteria of evil can also be observed in other crimes like rape, pedophilia, or other forms of brutal violence.

What Arendt's book does by presenting Eichmann and his victims in an unusual way is that these four criteria come into question, creating intolerable tension in readers' minds.

3.1. Extreme asymmetry of force

In the conventional attribution of evil, observers first need to identify a radically asymmetric power relation between perpetrator and victim, as for instance in the relations between rapist-victim, pedophile-child, a blind person and the person who intentionally trips them up. This criterion was conspicuously in place in the Nazis-Jews constellation. The power relations between the Nazis with their huge military machine and the vulnerable, defenseless Jews were extremely unequal.

While painstakingly describing all this, and not sparing her readers any of his crimes, Arendt's narrative frequently punctures the perception of the perpetrator's unlimited power by pointing out some of his vulnerable personality traits. She describes Eichmann for instance as "a leaf in the whirlwind of time" (32) and as having suffered from a "mild case of aphasia" from childhood, as having had a somewhat hard time in school; moreover "His own mother had died when he was ten" (15). In Argentina, she wrote, he had been "leading the unhappy existence of a refugee" (16) while in Jerusalem " (25). On the whole she presents him as less formidable than Hausner tried to make him out: He wasn't Hitler, after all, nor was he nearly as important as Heydrich or Himmler (67). She was amused by the protocols of his police interrogations: "The horrible can be not only ludicrous but outright funny" (66).

But the most glaring rupture in the expected victim-perpetrator relations Arendt produced where she discussed the role of the Jewish Councils, for whom she reserved her most scathing words: "Wherever Jews lived, there were recognized Jewish leaders, and this leadership, almost without exception, cooperated in one way or another, for one reason or another, with the Nazis" (34). She believed that without this collaboration "The total number of victims would hardly have been between four and a half and six million people"(83). This view about the role of the Jewish Councils was shared by many Israelis and others, especially in the first years after the war. While the perpetrator has parts that speak to victimhood, the victims show murderous elements. Arendt tried to defend herself when she was

blamed of suggesting the Jews had been their own murderers, by calling it a "monstrously implausible lie" (67).

Arendt drew an extremely limited picture of the role of the Jewish Councils who were forced to make moral decisions under extreme duress. She did not mention many influential Jews' refusal to lend a hand to the Nazis, on the one hand, as well as the severe threats and punishments to which those who refused to collaborate were exposed. The *Holocaust Encyclopedia* of the US Holocaust Museum in Washington provides the relevant information, and another valuable source is Isaiah Trunk's excellent *Judenrat* (1996).

3.2. The perpetrator's perceived attitude toward the victim

Arendt also flew in the face of the second condition of the common perception of evil, namely that the observer attributes a certain attitude to the victim's dependency or vulnerability on the part of the perpetrator. The observer determines that even though the perpetrator understands that they are facing an innocent person or group (or maybe exactly because of it), the former decides to injure the latter without feeling either pity or compassion. This proves perpetrators' monstrosity. Perpetrators harm their victim because they are weak and vulnerable. When evil is attributed, observers perceive the pleasure victims' suffering give to perpetrators. Research shows that when someone expresses deriving pleasure from the other's suffering, this will lead research participants to judge that person evil, even if the latter wasn't directly involved in causing this suffering.

Arendt (like Eichmann himself) makes a special effort to show that his motivation was not of this kind: "' His [behavior] was obviously also no case of insane hatred of Jews, of fanatical anti-Semitism or indoctrination of any kind" (33). She even accepts his lie that he actually tried to save Jews (26). She is willing to believe his ridiculous claim that he felt relieved when, later in the process of extermination, Jews were put into gaschambers rather than being shot, since for him:

the unforgivable sin was not to kill people but to cause unnecessary pain.

Rather grotesquely, Arendt thus finds signs of compassion and pity for the victim's suffering within evil.

3.3. The inaccessible mind of the perpetrator

The third condition for attributions of evil is that the observer feels unable to enter the perpetrator's perspective: observers can simply not make sense of perpetrators or imagine themselves in their place. To observers, perpetrators seem to have lost their mind. No longer guided by the usual codes – for instance, to avoid injuring the weak and helpless – perpetrators become inhuman. Observers thus disconnect from perpetrators' humanity. Maybe they can form some intellectual understanding of perpetrators' motives, but they absolutely cannot take perpetrators' perspective, because that would require a degree of empathy and recognition.

Arendt punctures this third condition on almost each and every page of her book. She offers readers an exhaustive and "intimate" description of Eichmann's motives, desires and needs, thus associating him with regular human ways and weaknesses. It turns out that there is a very broad common ground with Eichmann: Who doesn't want to excel at their job? Climb the professional ladder? Prove themselves? All these are normal human drives, and quite remote from cruelty. "(...) we have a common humanity with those whom we accuse and judge and condemn", she concludes (53).

3.4. The perpetrator's lack of remorse

A fourth condition in our perception of evil is related to the Latin expression *mea culpa* – the admission of guilt. The observer looks hard at the perpetrator, keenly awaiting their response. When perpetrators are sincerely willing to accept responsibility and express shock at their own actions, observers' emotional response can to some extent cohere with that of the perpetrators. Sometimes, when observers are in the position to feel that perpetrators' regret is sincere and true, they may feel a certain alleviation, as if social order was restored. When perpetrators avoid taking responsibility, when they voice excuses, explanations or even justifications, then observers' feel shocked all over again, sometimes even worse than before. Eichmann does not make any gesture of *mea culpa* (such a gesture, it seems, would have clashed with the defense argument he adopted).

Arendt mentions and seems to believe Eichmann's claim that he fully cooperated with his Israeli abductors because he felt guilty. He also proposed he would publicly hang himself. Though Arendt calls this "empty talk" (27), she immediately adds: "There was some truth behind the empty talk" (33).

4. Conclusions

It is therefore clear what aroused Arendt's critics ire and it bears a direct relation to the uncompromising nature of the psychology of observers' perception of evil: it is her lack of empathy and compassion for the victims, along with her attempt to understand what moved Eichmann. In addition she reduced the importance of Eichmann's role in the extermination project and denied that Eichmann acted from hatred of his victims. All these factors together ruptured the necessary conditions for perceptions of evil and altered the proportions of the polarity between Nazi and Jew into something less horrific and monstrous.

But even though Arendt bitterly failed to understand Eichmann and the survivor's reading of her account her analysis can still be considered a contribution to our understanding of evil. As long as the above mentioned criteria generally obtain in our perception of evil, we are bound to ignore other forms of evil with different motivational trajectories.

In addition, observers' disinclination to see evil and banality in the same brackets suggests the gap between observers and perpetrators in these situations and the former's inability and/or unwillingness to take the latter's point of view. In my research I have shown that attributions of evil to perpetrators originate in observers' perceptual error. Observers and perpetrators have in mind extremely different objects. While observers tend to think of the victim as vulnerable and unprotected, perpetrators' perception will be of the victim's threat and violence, so that to themselves their actions feel like self-defense. Behind the perpetrator, there is always a story of human weakness, threatened existence or a strong sense of persecution.

Without the gap between observers and perpetrators we would not be outraged by atrocities, we would not call them evil, and without it we would not put murderers, rapists, pedophiles and Nazi criminals to trial.

We hear, in the documentary, how Eichmann tells Sassen he would have felt he'd completed his job only if he knew he had managed to exterminate ten million Jews. That we feel shocked by this is what makes us human.

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DEFENSIVE COPING IN WOMEN WITH EATING DISORDERS

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Abstract

Eating disorders are highly prevalent problems observed across world populations, especially among women. Current analyses lead to the conclusion that with time the issue becomes more serious and it affects more people. It is underlined that people with eating disorders have problems with adequate emotion regulation that leads to emotion suppression in patients with anorexia nervosa. The results for persons suffering bulimia nervosa are ambiguous, whereas no data is given for people with binge eating disorders. One of the approaches to studies concerning coping with difficult emotions states that people differ according to their level of anxiety and defensiveness. Based on those two measures it is possible to identify four independent groups of people: repressors (low level of anxiety, high level of defensiveness), low anxious (low scores of anxiety, and defensiveness), high anxious (high level of anxiety and low level of defensiveness), and sensitizers (high on both anxiety and defensiveness). So far, there were no studies dedicated to verification of defensive coping strategies among people with eating disorders. In the presented study the analysis of this issue was undertaken. In the study participated 127 women, aged 18-69 ($M=28.73$; $SD=7.74$). Among all the respondents there were 61 persons without diagnosis, 21 women with anorexia nervosa, 23 respondents with bulimia nervosa, and 22 persons with binge eating disorder. All diagnoses were given by psychiatrists. Respondents filled in Eating Disorder Inventory and Eating Attitudes Test. It was proved that women without eating disorders were recruited mostly from the group of low anxious and repressors. In the group with anorexia nervosa repressors were most frequent. For women suffering bulimia nervosa the most popular was high anxiety, whereas for persons with binge eating disorder low anxiety was the most frequent. The relations between type of disorder and defensive coping style was statistically significant $\chi^2(9)=53.25$; $p<.001$. Based on the ANOVA results it was also proved that there were statistically significant differences between groups identified according to the coping style in their mean attitudes towards eating: $F(3,123)=5.54$; $p=.001$, overeating $F(3,123)=17.46$; $p<.001$, and laxatation $F(3,123)=9.68$; $p<.001$. According to the results it might be stated that repressors, high anxious, and sensitizers are more prone to having eating problems than low anxious, but next studies are needed since gathered results are ambiguous in some respects.

Keywords: *Repression, sensitization, anorexia nervosa, bulimia nervosa, binge eating.*

1. Introduction

Data gathered in the literature proves that there are connections between emotion regulation and eating behaviors (e.g. Patel & Schlundt, 2001). Tendency to overeating is correlated with experiencing negative emotions (Ogden, 2011), while restrictive eating stays connected with high levels of cognitive control (Boon, Stroebe, Schut & Jansen, 1998). Michael Macht (2008) underlined that under emotions a person is able either to control their food intake, decide not to eat any food at all, experience problems with cognitive control over eaten food, decide to use food as a mechanism of regulation of emotions or eat under the influence of emotions. Emotions can disturb processes accompanying nutrition. Affective processes can create needs for food intake or inhibit those desires. They could also be understood as an element of bilateral regulative relationship, where emotions regulate food intake, and food intake regulates emotions (e.g. Evers, Marijn Stok & de Ridder, 2010).

There were studies, in which the connection between emotional control and eating disorders was discovered (Harrison, Sullivan, Tchanturia & Treasure, 2010). Eating disorders quite often co-occur with mood disorders, high levels of anxiety, personality disorders, impulse control disorders, self-injurious behaviors and substance abuse (Keski-Rahkonen & Mustelin, 2016). In some studies it was proved that problems with emotional control may cause or uphold eating disorders, including anorexia nervosa

(Harrison, Tchanturia & Treasure, 2010), binge eating (Dingemans, Danner & Parks, 2017) or obesity (Lehr et al., 2015).

It was discovered that the connection between eating disorders, ruminations and problems with accepting one's own emotions is stronger for people with higher BMI than it is for lower BMI levels (Leppanen, Brown, McLinden, Williams & Tchanturia, 2022). It is possible that problems concerning eating disorders and emotional dysregulation are also connected with defensive styles of coping, that are understood as a relatively stable tendency to cope with difficult or stressful situations through use of repression or sensitization (Weinberger, Schwartz & Davidson, 1979). Up to now studies in which eating disorders and defensive styles of coping were analyzed together were not conducted. It is possible that problems with accepting one's own emotions is connected with repression, while rumination is similar to the tendency for sensitization. Since emotional dysregulation (namely not accepting emotions and ruminations) is correlated with eating disorders, it is therefore justified to empirically verify the connection between eating disorders and defensive styles of coping.

2. Method

2.1. Participants

In the study participated 127 women, aged 18-69 ($M=28.73$; $SD=7.74$). Among all the respondents there were 61 persons without diagnosis (age 18-69; $M=28.54$; $SD=8.61$), 21 women with anorexia nervosa (age 18-42; $M=28.19$; $SD=7.39$), 23 respondents with bulimia nervosa (age 18-39; $M=27.7$; $SD=6.19$), and 22 persons with binge eating disorder (age 22-48; $M=30.86$; $SD=7.05$). All diagnoses were given by psychiatrists. The number of women without a clinical diagnosis who completed the study was significantly greater than the number of respondents with each type of eating disorder accounted separately $\chi^2(2)=35.99$; $p<.001$.

It was decided to invite females only to participate in the study, since the general statistics prove that the three mentioned above eating disorders are more common for women than men (e.g. Statistics & Research on Eating Disorders).

2.2. Materials

Four standardized tests were used in the conducted study, out of which two were aimed at measuring different aspects of eating disorders, and two others were introduced to identify the type of defensive coping strategy characteristic for respondents. Problems concerning eating disorders were assessed with Eating Disorder Inventory (Pawłowska & Potembska, 2014) and Eating Attitudes Test (Garner, Olmsted, Bohr & Garfinkel, 1982) in Polish adaptation authored by R. Rogoza, A. Brytek-Matera, A., and D. M. Garner (2016). Defensive style of coping was identified with Polish adaptation of State Trait Anxiety Inventory (Wrześniewski, Sosnowski, Jaworowska, & Fecenec, 2011), and Social Desirability Questionnaire (Drwal, & Wilczyńska, 1980).

Eating Disorder Inventory consists of 37 items with a 5-point Likert scale, and it is used to identify four different attitudes towards eating: (1) negative perception of one's body; (2) overeating; (3) restrictive diet; and (4) laxativation. The questionnaire is reliable, reaching Cronbach's alpha $\alpha=.96$ for negative perception of one's body; $\alpha=.97$ for overeating, $\alpha=.89$ for restrictive diet, and $\alpha=.94$ for laxativation.

Eating Attitude Test helps to describe eating habits that could be connected to anorexia nervosa, bulimia nervosa or binge eating disorder. The test includes 26 items with a 6-point Likert answer scale. It can be divided into three independent scales: (1) dieting; (2) bulimia and food preoccupation; and (3) oral control, that reach satisfactory reliability of Cronbach's alphas of $\alpha=.93$ for dieting, $\alpha=.84$ for bulimia and food preoccupation, and $\alpha=.89$ for oral control. The test results can be also analyzed without the division into certain subscales, and then it reaches reliability of $\alpha=.91$. When analyzing the general result of the test, reaching the level of at least 20 points is considered as an indicator of possible tendency for eating disorders. This method of interpretation of gathered results was used in the presented study.

Polish adaptation of State Trait Anxiety Inventory (Wrześniewski, Sosnowski, Jaworowska & Fecenec, 2011) was used as an instrument indicating the level of anxiety. The questionnaire includes 20 questions measuring anxiety understood as a temporary state, and 20 other questions for estimation of a stable trait. Each scale includes a 4-point Likert scale. In the described study the scale measuring anxiety understood as a trait was used, and it reached a satisfactory reliability level of Cronbach's alpha $\alpha=.88$.

The last questionnaire used in the presented study was Social Desirability Questionnaire (Drwal & Wilczyńska, 1980). It was used for assessment of the level of social desirability understood as an indicator of defensiveness level. The instrument includes 29 questions with a true/false response sequence. It includes items that are socially desirable but rather uncommon in society (e.g. "I am never

late for my work”), and other features that are quite frequent in the society, but socially undesirable at the same time (e.g. “I remember I was pretending to be sick in order to avoid something”). The reliability of the test in the conducted study equals $\alpha=.84$.

3. Results

At first it was checked whether there are any connections between defensive style of coping and type of eating disorder. The crosstab with χ^2 test proved that there is a significant connection between those two variables $\chi^2(9)=53.25$; $p<.001$, with the greatest frequency of repressors among respondents, who declared not having any eating problems. Among females diagnosed with anorexia nervosa there were many repressors as well, whilst in the group with bulimia nervosa there were a lot of high anxious respondents, and in the group diagnosed with binge eating there was a high frequency of low anxious persons. Detailed information is given in table 1.

Table 1. Number of people from low-anxious, high-anxious, repressors, and sensitizers types according to diagnosed eating disorder.

	without a diagnosis	anorexia nervosa	bulimia nervosa	binge eating
low-anxious	16	1	0	10
high-anxious	16	2	16	7
repressors	23	14	0	2
sensitizers	6	4	7	3

Based on the results presented above it could be stated that the most characteristic for respondents diagnosed with anorexia nervosa is a tendency to avoid directing attention toward emotions. People with bulimia nervosa present a propensity towards high levels of anxiety. It is difficult to describe binge eating disorder according to defensive styles of functioning, since most females in that group are recruited from persons with low levels of anxiety. Surprisingly, many repressors were identified in group not diagnosed with any eating disorders.

In the next step, based on the ANOVA analyses, the mean differences between the attitudes toward eating in groups identified based on defensive styles of coping were assessed. There were three significant differences that are given in detail in table 2. below.

Table 2. Results of ANOVA analyses for mean level of attitudes toward eating, overeating and laxatation in groups identified according to defensive style of coping

	low anxious N=27		high anxious N=41		repressors N=39		sensitizers N=20		F	p	η^2
	M	SD	M	SD	M	SD	M	SD			
attitudes toward eating	12.04	7.56	24.22	11.68	24.74	18.09	23.10	14.76	5.54	.001	.12
overeating	15.74	10.45	22.61	9.19	6.82	9.13	16.95	11.44	17.46	.001	.30
laxatation	1.33	2.35	7.98	7.70	3.08	3.86	7.15	7.24	9.68	.001	.19

According to gathered results it is possible to see a certain tendency of representatives of each type to present specific eating attitudes. At the same time it is crucial to be very careful with interpretations of presented data, since in some cases the mean value is not a good descriptive of obtained results. In general, it might be observed that low anxious persons differ from other groups according to their attitudes toward eating. High anxious respondents have the tendency to engage in overeating. In accord with the obtained results disturbances in attitudes toward eating might be observed in repressors. At the same time it is difficult to clearly describe results gained by sensitizers. It seems they might face disturbed eating attitudes; they have a slight tendency toward overeating and probably present an inclination for laxatation as well.

4. Discussion

Based on the gathered results it can be stated that there are differences between groups identified according to their level of defensive style of coping in their mean level of attitudes toward eating, overeating, and laxatation. The healthiest approach toward eating was presented by low anxious

individuals, while high anxious persons and both defensive groups, i.e. repressors and sensitizers presented disturbed attitudes in that area. Based on this data it is possible to hypothesize that repressors are similar to groups declaring high levels of anxiety in some aspects. Overeating was the most frequent for highly anxious persons, and lowest for repressors. It is possible that people experiencing high levels of anxiety engage in overeating as a strategy for regulation of their unpleasant emotions. Repressors on the other hand probably underestimate the level of overeating they truly experience. The results for laxatation are the hardest to explain, especially looking at the standard deviation scores that in all cases are higher than mean values. Since the results for this dimension in all of the groups are very discrepant, other studies in that matter are needed.

The results obtained in the described above study are ambiguous, but in that matter they stay relevant to the data already published in the literature. It was proved that women with eating disorders less frequently use cognitive reinterpretation strategy, and are more prone to apply strategies based on suppression of emotions (Danner, Sternheim & Evers, 2014). Namely, it is underlined that disturbed eating goes in accordance with problems in emotional regulation. Persons with bulimia nervosa have problems using any adaptive coping strategies (Dixon-Gordon, Aldao & De Los Reyes, 2015), while for females with anorexia nervosa quite common is incorporation of repression strategies (Ruscitti, Rufino, Goodwin & Wagner, 2016), and a tendency for withdrawal of positive emotions (Józefik & Pilecki, 1999), that could be considered as a maladaptive strategy.

It was hypothesized that disturbed relations with eating could be differentiated based on the strategies of coping with stress individual uses (Villa et al., 2009). Ineffective styles of coping could result in sustaining unhealthy eating habits that could result in interpersonal conflicts (Holt & Espelage, 2002). Frequent use of disturbed eating behaviors could also result in developing fixed, unhealthy, methods of dealing with difficulties in life (Wiatrowska, 2009). Therefore it is important to plan and conduct further analyses in that area. The results obtained in the study presented above are very hard to interpret. There are no consistent connections between disturbed eating habits and defensive styles of coping, and further analyses are needed in that matter. It is possible that better understanding of relations between eating disorders and defensive styles of coping will help professionals to plan adequate psychological interventions, that most probably should be different for each of the groups identified based on their levels of defensiveness and anxiety.

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ONLINE AND OFFLINE ART THERAPY BASED INTERVENTIONS IN PANDEMIC TIMES

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Abstract

In our paper, we would like to give a summary of two art therapy based research projects, one online and one offline, conducted by ELTE EMIND laboratory. The online study is a mixed qualitative and quantitative methods research, exploring how online individual art-therapy based (ATB-SHOT) self-help tasks could support international students during the COVID 19 pandemic lockdown. Partially based on the result of ATB-SHOT, a similar in-person group protocol was designed for students. Both the effectiveness of the different settings and the correlations of outcomes with personality constructs are shown. The preliminary results suggest that art therapy might be an effective method for supporting in stressful times, even if tasks are not focused directly on the stressor. The importance of our findings might be further utilized in preventive mental health structures.

Keywords: Time limited art therapy protocols, ATB-SHOT, stress reduction.

1. Introduction

Due to social crisis and economic funding and restrictions in the health system, there is a growing interest in time limited short term art therapy protocols (LST-AT) and brief art psychotherapy (ed Hughes, R., 2016). However, the practical utilization in psychiatric care and social systems and social recognition of art therapy is still at its beginning. In order to prove that this approach is capable of enhancing wellbeing and can be used in numerous settings, it is necessary to have evidence-based art therapy protocols which are cost effective and capable of being either online or offline.

Many theoreticians agree that there are some main components of art making that contribute to wellbeing (Secker et al., 2018). Artmaking is a transition from inner unconscious content to external conscious content that helps individuals to gain distance from overwhelming emotional content (Malchiodi, 2011). The expression of an individual's inner reality in art combines interoceptive, sensory and motor experiences and affective and cognitive processes so that implicit, non-verbal, somatic experience becomes reflectable (Camansky-Cohen & Wehis, 2016). The visual image, or object, fosters access to association, and in the creative process, the engagement with the art material helps to release stress (Aaron et al, 2011), and to experience flow and immersion (Chilton, 2013). The created artwork is often a container for ambivalent feelings, and for symbols of certain life phases and events (Machioldi, 2011). Moreover, art material creates a transitional space (Winnicott, 1971) where new perspectives can be gained, trial acts can happen, and new mindsets can be evaluated in the pretend mode of play and art. Re-scripting of the image (Arntz, 2012) is a direct technique offering the possibility to experiment with the emotionally saturated artwork, where re-creation or transformation of the materialized object can effect betterment in the affective system - similar to cognitive restructuring - often revealing insights and solutions.

Divergent thinking and creativity is supported in art therapy within a group setting as well, although such opportunities were limited during the pandemic. An initiative growing out of this challenge was the creation of self help art therapy-based tasks (ATB-SHOT).

1.1. Introduced protocol of ATB-SHOT

In the beginning of the pandemic, a seven session long online self help protocol was designed for university students, in order to introduce methods of art therapy based interventions, and to help them release stress and facilitate coping, based on the benefits of art making with reflexivity (Geréb Valachiné

et al., 2021). The art-based intervention tasks were based on art therapy clinical practices (Haeyen, 2018; Malchiodi, 2006), and reflective writing substituted for verbal elaboration. A qualitative analysis of 22 student images texts revealed (Geréb Valachiné et al., 2021) that ATB-SHOT helped participants externalize their pandemic related tensions and find personal resources. Emergent stressors were: frustration of isolation, loss of control, uncertainty about future and academic career. Found resources were support from memories and fantasies connected to nature, transpersonal themes, attachment figures, and relationships. The qualitative findings (based on data from 57 participants, from four tasks), showed that all ATB-SHOT tasks significantly reduced negative mood and two increased positive mood and control. (Geréb Valachiné et al., 2022)

1.2. Introduced protocol ATG: art therapy group

Based on the experiences of ATB-SHOT results, and in keeping with the positive focus, symbolism, and re-scripting, another seven-session protocol was designed. This was an in person group art therapy for university students, which coincided with the beginning of the post-lockdown economic and social crisis. The group setting was augmented with pairwork, which naturally contained verbal sharing, but lacked the deeper individual reflection which would have been achieved with reflective writing. Comparison of effectiveness and characteristics ATB-SHOT and ATG were objectives of the research.

1.3. Personality traits and protocols

Evaluation of participants' personality constructs may help to determine the best fit between client and method. Both protocols were analyzed using this perspective. In our previous findings (Valachiné et al, 2022), we found that considering ATB-SHOT overall strengths (baseline measures of emotional intelligence - and resilience) had little effect on outcomes (statistically significant results were not supported by g power). In contrast, participants with higher susceptibility profile (sum of baseline anxiety measured with STAI-T and somatic complaints measured by PHQ-15) showed significantly greater decrease in negative mood. Trait anxiety by itself had a strong correlation with negative affect reduction, which was an unpredicted result. This finding related to trait anxiety was the opposite of what the literature shows about in-person therapy effectiveness studies (Min et al, 2012; Meier, 2019). In this paper, our research question is whether this outcome is due to the online aspect, or the art therapy-based format.

2. Objectives

ATB-SHOT and AGT are based on similar constructs: thematized sessions, same number of sessions, and similar themes (see Table 1) same mediums, nonverbal artmaking, followed by verbal elaboration (in forms of written texts or as verbal sharing). On the other hand, they were very different in terms of therapeutic frame: presence of art therapist and peers, time and space (constant in ATG, flexible in ATB-SHOT). The quality of feedback was also different, as ATB-SHOT was more of an introspection, and in ATG there was an interpersonal exchange.

In this paper, we would like to investigate whether short protocols in individual online format (ATB-SHOT) and in person group settings (ATG) differ in their effectiveness, or in outcomes, in groups of young university students. First, we compared the 2 groups, using PANAS to measure the change between the pre-intervention and post intervention self-reported negative and positive mood. Second, we correlated the protocol effectiveness (average means of PANAS changes) with baseline trait anxiety measured by STAI-T, and somatic complaints (measured by PHQ-15), using the sum of these measures as the Susceptibility score of the participants in both settings (ATB-SHOT and ATG). 3. We also correlated the susceptibility profile and its components with the affective changes (average means of PANAS) in the whole dataset, in order to solely see the effect of the art therapy based protocol format.

3. Methods

3.1. Participants

In this study, we included native Hungarian students, who participated in the protocols 1-6. Our participants for both online and offline groups were recruited at Eötvös Loránd University of Budapest, from within those students who were enrolled in the Arts and Research elective course, and received course credit for participation. The online (ATB-SHOT) group included 19 students (17 female, age 31,55 SD 14,36), whilst the offline (ATG) group included 25 students (23 female, age 22,11 SD 1,75). All students had no prior art therapy experience.

3.2. Measure

Mood changes were measured with the self-reported validated PANAS questionnaire. *Positive and Negative Affect Schedule (PANAS)* was used to measure positive and negative emotions. PANAS was developed by Watson and Tellegen (1988), aiming toward a more precise emotional measurement. It is a widely used self-administered questionnaire with a 5-point scale. It consists of two 10-item scales

measuring both positive and negative affect. In college samples, both subscales demonstrate high reliability and excellent psychometric properties (Watson et al., 1988).

Personality traits were measured with self-reported validated questionnaires such as:

Trait Anxiety (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) was used to measure trait anxiety, which describes the overall person in terms of dimensions of anxiety. All items are rated on a 4-point scale, with higher scores indicating greater anxiety. Both internal consistency and test-retest reliability were high. It is a sensitive predictor of distress, which correlates with general negative mood and depressive symptoms.

The *Patient Health Questionnaire (PHQ -15*; Kroenke et al, 2002) is a brief self-report questionnaire that screens for somatization and in monitoring somatic symptom severity in research. The scale contains 15 questions about somatic symptoms or symptom clusters. On a 3 point Likert scale, participants had to rate how much their symptoms bothered them in the last 4 weeks. A score of 2 was considered severe. 2 questions referring to tiredness and insomnia have a high correlation with depression.

4. Protocols

Both protocols, ATB-SHOT and ATG, along with the targets of sessions, are shown in Table 1, and the structure and setting of the occasions in Table 2.

Table 1. Protocols.

	individual ATB-SHOT	group AT GROUP added pair work
1 color task	individual color dictionary, matching recent emotions to color	colors of the here and now, joint creation
2 squiggle task	creating emotional squiggles, meaningful creature -> and making narrative	attunement: Winnicott squiggle game
3 blot task	inkblots-> meaningful form, scenes	mirroring characteristics and providing holding (scene)
4 object task/ clay task	personal representation mindfulness drawing task	expression of personal stress in clay work→ supportive response art
5 avatar task	self-representation with wishes + body focus	interactive dramatic drawing: “crossing the swamp”
6 safety task	creating safe place	sharing safety: “making the bridge”
7 transformation task	overview of personal changes during the protocol	group discussion, highlighting shared values

As shown above, session four was changed, but the rest of the sessions used the same art mediums, topics, and aims. The structure of the sessions have both features in common and different features (different features highlighted in grey), as seen in Table 2.

Table 2. Structure of design.

ATB-SHOT/ ATG
0. personality baseline tests google forms (STAI-T, PHQ-15)
1. pretest on google forms (PANAS)
2. art making instructions (containing positive suggestions) / short warm up activity in group
3. art making
4. reflective writing /pairwork verbal sharing and co-creation
5. rescripting art making / individual and pairwork
6. reflective writing / group discussion, verbal sharing
7. post test on google form (PANAS)

5. Statistics

Efficacy of the protocol was calculated on the average group means of the variables of pre and post intervention Positive and Negative Affect Schedule (PANAS). The data was not normally distributed, we conducted non parametric Wilcoxon tests.

In order to **compare the two changes of the protocols**, the Man-Whitney test was used on the average means of the differences of post-pre intervention data of PANAS scales. Each individual had a variable based on PANAS positive /and negative Pre intervention data subtracted from Panas positive /and negative post intervention data.

Correlation between the personality traits of the two groups, such as trait anxiety (STAI), somatic complaints (PHQ-15), susceptibility profile (STAI+PHQ-15), and the effective changes (mean difference of PANAS changes) was analyzed by Spearman Correlation.

Susceptibility profile was calculated based on a new variable which was generated by summing baseline Trait Anxiety (STAI) and Patient Health Questionnaire (PHQ -15) variables.

6. Results

Since the relatively different setting of protocols could have modified the outcomes, we compared means of the 6 tasks' pre-post differences. Effectiveness of protocol shows that the ATB-SHOT is effective in reducing negative affect, and ATG is effective both in reducing negative affect and increasing positive affect. (See Table 3)

When we compared the average differences of PANAS changes of the groups, we found that the difference of the PANAS positive change in the two settings was not significant. However, the Panas negative changes have significant differences in favor of in person group settings.

Table 3. Results.

	Wilcoxon test		Man-Whitney
*0,05	ATB-SHOT	ATG	ATB-SHOT vs. ATG
PANAS Pozitive	Z:-0,852 (p:0,394)	Z:-2,565* (p:0,010)	Z: 0, 492 p: 0,623
PANAS Negative	Z:2,870* (p0,04)	-1,969* (p0,049)	Z: -3,406 *p:0,01

However, in our previous study with ATB-SHOT (where more participants showed a significant correlation), this time susceptibility had no significant correlation with PANAS changes in either ATB-SHOT or ATG. However, if we drew together the two datasets and consider them as a combined six session protocol, we get similar results as the previous online study. Within this combined analysis, STAI correlates with the Panas Negative change, meaning that the more anxious an individual, the greater his/her negative affect lowers as a result of the art therapy protocol. (R -0,393 p:0,01). Susceptibility in general shows even stronger effects (Z:-0,416 p:0,06.).

7. Discussion

Both protocol settings are effective in general betterment of the affective system. However, in person protocol increased positive emotions, and had a greater effect on the reduction of negative emotions. Social support and the bigger sample size both could influence this result. However, the fact that an online self help art therapy based intervention can reduce negative affect is a promising result, both for future research and for supplementary treatment in therapy. Due to COVID, there was a collective shift even in art therapy toward implementing online digital and technological practices (Zubala & Hacket, 2020). Young service users can adapt to digital self-care approaches easily (Fischer et al., 2020)

Personality trait analysis did not show strong correlations, but this was affected by the small sample size. On the other hand, this could also mean that artmaking in general has a strong correlation with trait anxiety and susceptibility. There is some evidence that art therapy reduces participants' state anxiety (Abbing et al,2018), especially in females undergoing cancer treatment (Tang et. Al, 2019). A bigger sample indicated that such a nonverbal approach as visual art therapy is beneficial even for more anxious and vulnerable individuals, that balances susceptibility, as Fonagy (2012) claims: "art therapists...succeeding in creating communication and interpersonal understanding where others struggle".

8. Conclusion

In person group art therapy has stronger therapeutic effects. Online art therapy based methods, however, might be good supplements of in person therapies, especially in stressful times. These changing and challenging times call for action in research and therapeutic approaches in order to balance crises, stress, and struggles, particularly in vulnerable populations.

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THE EFFECTS OF PROBLEM-SOLVING SKILLS ON PERCEIVED DISCRIMINATION AND RELATIONSHIP SATISFACTION OF INTERRACIAL BLACK-WHITE COUPLES

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Abstract

In light of the increasing number of interracial marriages in the U.S., this study aimed to investigate the effect of couples' problem-solving skills on how discrimination experience is related to relationship satisfaction among interracial Black-White couples. A sample of 178 interracial couples (93 Black husbands-White wives and 85 Black wives-White husbands) participated in the study by completing online surveys via Qualtrics Panel. A structural equation model was utilized to test whether or not problem-solving skills could moderate the relationship between couples' experience of discrimination and relationship satisfaction. Results revealed a positive association between relationship satisfaction and problem-solving skills and a negative association between the perception of relationship satisfaction and couple discrimination. Interracial couples' problem-solving skills buffered the relationship between the experience of discrimination and relationship satisfaction. The results of the present study highlighted the importance of interracial couples' problem-solving skills in effectively addressing relationship concerns.

Keywords: *Black-white couples, discrimination, interracial couple, problem-solving skills, marital satisfaction.*

1. Introduction

Racial and ethnic diversity is rapidly increasing across the U.S., and the percentage of interracially married couples raised from 1.6 to 6.3 since 1980 (Parker et al., 2015). Although interracial marriages have become more common, they are still not widely accepted in U.S. society (Garcia et al., 2015), and much of the opposition these couples face comes from their families and the public (Bratter & Eschbach, 2006; Lewis, 2013). Support and help from family and friends can be considered vital resources for marital satisfaction. Thus, a lack of support and disapproval from family, friends, or society may increase negative interactions between partners (Genç & Baptist, 2020). As a result, experiencing discrimination due to one's partner's race can lead to lower happiness and stability in relationships among those couples who married outside their race (Baptist et al., 2019; Genç & Su, 2021). Despite the challenges mix-race couples may encounter in their daily life, it should not be assumed that these couples are less satisfying than same-race couples. Much of the research in this area suggested that partners in interracial relationships possess certain strengths. For example, interracial couples could be happier and more successful in their relationship than some intra-racial couples (Troy et al., 2006; Wong, 2009) and have stable marriages as same-race marriages (Fu & Wolfinger, 2011). Further, mix-race marriages can provide unique opportunities for learning, growth, commitment, and respect through accepting differences (Wong, 2009).

Given the fact that there is an increasing trend in interracial marriages, it is important to comprehend the relationship development skills of those couples to strengthen their marriage. When couples face challenging situations, they may tend to engage in destructive behaviors toward each other. Thus, their problem-solving skills can be considered an essential factor that affects how couples would deal with stress and interact with each other (D'Zurilla & Nezu, 2007). Former studies also claimed that problem-solving skills are a strong factor in relationship satisfaction (e.g., Sullivan et al., 2010). Specifically, while negative problem-solving behaviors such as denial of responsibility, blaming, disagreement, and justification of own manners resulted in declines in relationship satisfaction, positive problem-solving behaviors including constructive communication, being responsive, and active engagement in resolving problems increased marital satisfaction (Gottman, 1999). Although there is a lack of research attention on the role of problem-solving skills among couples who experience racial

discrimination, problem-solving skills, as a concrete strategy for addressing relationship problems, can be beneficial for the happiness of interracial marriages.

The literature has been largely focused on the experience of interracial couples in the past thirty years following the abolishment of anti-miscegenation laws. Although previous studies on Black-White couples found a negative association between racial discrimination and relationship satisfaction (e.g., Baptist et al., 2019; Genc & Su, 2021), the mechanism underlying this association is not fully understood. Therefore, the current study seeks to better understand the potential effects of discrimination on interracial couples' daily life by examining the role of problem-solving skills as a moderator between discrimination and relationship satisfaction.

2. Method

2.1. Participants

Qualtrics was used to recruit a panel of respondents to participate in the online survey based on the following criteria: being a) in an interracial (Black-White) heterosexual relationship, b) married, and c) residing in the U.S. For the current study, 178 couples were recruited. In terms of the sex-race configuration of the sample, 93 couples were in Black husband-White wife relationships while 85 couples were in White husband-Black wife relationships. Participants' relationship duration with their current partner was reported as a long-term relationship ($M = 8.99$ years, $SD = 4.57$ years). The mean age was 32.31 ($SD = 4.26$) for Black husband-White wife couples and 31.37 ($SD = 4.01$) for White husband-Black wife couples. For the Black husband-White wife couples, the Black male participants attended college with 26.9%, while 32.6% of the White wife possessed a Bachelor's degree. Regarding White husband-Black wife couples, the rate of educated participants was higher than Black husband-White wife couples. 45.9% of White males and 47.1% of Black females received bachelor's degrees.

2.2. Measures

2.2.1. Problem-solving. Couples' problem-solving skills were assessed using the Interactional Problem-Solving Inventory (IPSI; Lange, 1983), which is a 17-item self-report measure. The internal reliability estimate of IPSI in this study was strong, as Black ($\alpha = .81$) and White ($\alpha = .80$) participants.

2.2.2. Relationship satisfaction. Couples' relationship satisfaction was measured using the 4-item Couple Satisfaction Index (CSI-4; Funk & Rogge, 2007). The Cronbach's alpha of CSI-4 was $\alpha = .92$ for Black participants and $\alpha = .92$ for White participants for the present study, estimating high reliability.

2.2.3. Perceived experience of discrimination. Couples' perceptions of discrimination experience were measured with the 6-item self-report Midlife Development in the United States survey (MIDUS; Kessler et al., 1999), adapted by Trail et al. (2012). Cronbach's alpha revealed strong reliability, as $\alpha = .90$ for Black participants, $\alpha = .89$ for White participants.

3. Results

3.1. Normality and missingness

In order to test the hypothesized relationships among variables, several statistical analyses were performed. First, a basic normality test and missing data analysis were conducted. All variables were normally distributed with acceptable kurtosis and skewness (Finney, & Distefano, 2006). Twenty-six couples (14.6%) had missing data, although no obvious pattern of missingness was detected.

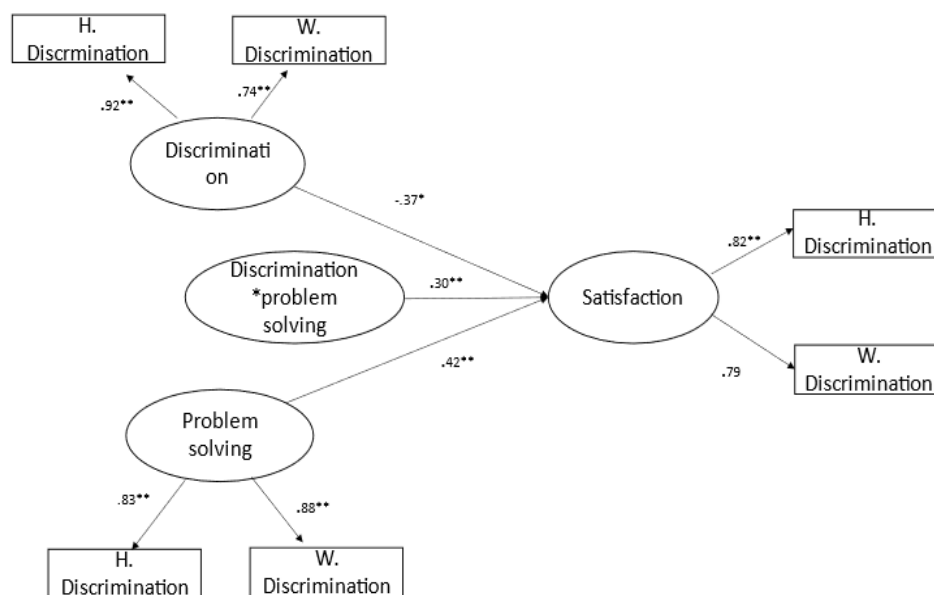
3.2. Correlation

The correlation test is used to test the degree of association between couples. In both groups (white-husband/black-wife and black husband/white wife), all three variables (couple discrimination, problem-solving, and relationship satisfaction) were positively correlated between partners significantly. In addition, the husband's problem-solving skills were positively related to the husband's relationship satisfaction, the wife's problem-solving skills, and the wife's relationship satisfaction.

3.3. Problem-Solving Skill as Moderator

A structural equation model with a moderation effect of problem-solving skills is conducted. These analyses were employed using *Mplus* 6.12 (Muthén & Muthén, 2004). Next, as depicted in figure 1, problem-solving as a latent moderator as recommended was examined. As expected, the results show a significant positive association between relationship satisfaction and problem-solving skills ($\beta = .42$, $p < .001$), and a negative association between the perception of relationship satisfaction and couple discrimination ($\beta = -.37$, $p < .05$). The interaction effect of problem-solving skills and perceived discrimination was positively related to relationship satisfaction ($\beta = .30$, $p < .05$). In other words, problem-solving skills appeared to buffer the effect of perceived couple discrimination on relationship satisfaction. When including the group as a predictor in this model, it appeared that the grouping variable predicted perceived discrimination ($\beta = .24$, $p < .001$).

Figure 1. Moderating model of problem-solving skills of interracial couples.



4. Discussion

The purpose of the current study was to explore whether couples' problem-solving skills have a buffering effect on the relationship between perceived discrimination and relationship satisfaction among Black-White interracial couples. Data were gathered from 178 Black-White couples across the U.S. Overall, our results support that interracial couples who perceived discrimination from outside sources experience less satisfaction in their relationship. Relationship satisfaction of those couples was found to be positively related to problem-solving skills. Further, problem-solving skills maintain relationship satisfaction, even for couples who have experienced discrimination.

A noteworthy finding from this study was the positive association between relationship satisfaction and problem-solving skills. Specifically, it has revealed that the problem-solving skills of interracial couples had a positive effect on relationship satisfaction. One interpretation of this finding is that when coping with external challenges, it is important for interracial couples to be more open, tolerant, patient, understanding, and supportive of one another (Baptist et al., 2019; Genc & Su, 2021).

Finally, the most striking finding from this study is that problem-solving skills moderated the relationship between discrimination and relationship satisfaction. It is plausible that during the coping stage (Foeman & Nance, 2002), problem-solving skills can be used strategically by partners experiencing discrimination to manage the challenges and protect themselves. The experience of discrimination can bring a new opportunity to couples' relationships to gain insight into their own cultural differences and develop strategies to deal with challenging experiences in daily life that may strengthen their relationship and increase satisfaction.

4.1. Limitations and future directions

Although this study offers a contribution to the current literature on interracial couples, and this is one of the few studies that explore the relationship between perceived discrimination, problem-solving skills of interracial couples, and their marital satisfaction, it has some limitations that prompt future directions. The primary limitation of the current study is that the data is cross-sectional, which imposes limits on interpreting and making claims regarding the directionality of the associations found. Further research with longitudinal data would be helpful in explaining the cause-and-effect relationship. Another limitation of these findings is the lack of exploration regarding the interaction effect of gender and race. In future research on interracial relationships, researchers should provide a better understanding as to how such gender roles and/or racial identity can benefit or hinder those couples' relationship satisfaction.

5. Conclusion

This study provides an initial sight at the connection between perceived discrimination and relationship satisfaction in Black-White interracial marriages. Results indicated that higher levels of perceived discrimination were related to lower levels of relationship satisfaction in general. Also, higher levels of problem-solving skills were related to higher levels of relationship satisfaction. Furthermore, the results of the present study claim that problem-solving skills buffer the relationship between perceived discrimination and satisfaction.

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THE ROLE OF PUBLIC AND INTERNALIZED STIGMA ON SEEKING PSYCHOLOGICAL HELP: A STUDY TARGETING ALBANIAN YOUTH

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Abstract

As in other cultures, the stigma associated with mental health symptoms or therapeutic services appears to be a substantial barrier to obtaining professional assistance in Albania. In the psychotherapy literature, stigma often refers to the public stigma associated with having a mental illness and to the feelings of shame involved with seeking professional help. The nature of the study is correlational based and aims to explore the relationship between public stigma and internalized self-stigma, and how may influence young people in Albania to seek psychological help. In the study participated 153 students, 95 females (62.1%) and 58 male students (37.9%). The age range of participants was 18-23 years of age (mean=20.50 years of age). The data were collected using a demographic data form, the Self-Stigma of Seeking Help Scale, the Social Stigma Scale for Receiving Psychological Help, and the Attitudes toward Seeking Professional Psychological Help Scale-Short Form. The findings indicated that self-stigma ($r = -0.577, p < .01$) and public stigma ($r = -0.763, p < .01$) correlated negatively with help-seeking attitudes. The multiple regression analysis results showed that only the self-stigma scale significantly predicted the attitudes toward seeking psychological help, $F(2, 150) = 39.614, p < .0005, R^2 = .346, p < .05$.

Keywords: *Internalized stigma, mental illness, psychological help, public stigma.*

1. Introduction

According to the World Health Organization (2022), around 25% of the global population suffers from mental illness, with depression and anxiety being the most prevalent illnesses. Social stigmatization is unique to each country, and the majority of them face it in some form or another. However, there are common denominators in the stigmatization features of former communist countries. According to Šumskienė and Nemanyte (2020), post-Communist societies are distinguished by a high stigma towards mental health. Consistent with this, people labeled as having received counseling services were rated less favorably and treated more negatively than those who were not treated (Corrigan, 2004). Similarly, individuals described as seeking help for depression are rated as more emotionally unstable, less interesting, and less confident than those individuals seeking help for back pain (Ben-Porath, 2002). The public also associates the utilization of psychological services with not being in control of one's emotions (Vogel & Wester, 2003). Movements of health services consumers are weak and frequently focused on providing services and assistance to their members.

In Albania, cultural differences differ because stigma is more prevalent in smaller cities or villages where people have known each other for generations than in larger cities. Stigma is one of the issues addressed in official public health reports on mental health in Albania and Kosovo (Fanaj & Shkëmbi, 2013). Jupe et al. (2017) discovered that schizophrenia patients are stigmatized more than diabetic and alcoholic patients. However, stigma among healthcare professionals was identical to that of the general population in Albania. There is evidence confirming the important contrast between the utilization of services and the prevalence of mental health problems within the population where Albania has the lowest healthcare utilization rates for mental health in the European region when population studies demonstrate a relatively high rate of reported signs of depression among high school aged adolescents (25% - 30%) (Como, 2015).

In this study, the focus is on the 18–23 age range, which the World Health Organization refers to as part of the 'Youth' target. Considering that this study focuses on analyzing the attitudes toward seeking psychological help, it was estimated to include young people over 18 years of age who can legally seek therapy without needing parental approval. It is especially critical to address mental disease

self-stigma among young people, as half of all lifetime cases of mental illness manifest by age 14 (Kessler et al., 2005a, 2005b). Similarly, a large-scale meta-analysis determined that 14.5 years was the peak age for the beginning of mental illness (Solmi et al., 2021). Moreover, it is a crucial period of identity formation during which early intervention for developing mental disease is essential (Meiser & Esser, 2017). Experiencing stigma at this age may be especially detrimental and lead to deteriorating health consequences later in life (Yang et al., 2010). Understanding individuals' experiences, attitudes, and self-beliefs in relation to mental illness necessitate an understanding of stigma.

2. Method

2.1. Research design

This is a survey-based correlational study. Correlational studies are also a sort of survey research due to the fact that the relationships between variables are defined as they are. Without manipulation, correlational studies evaluate the relationships between two or more variables (Fraenkel & Wallen, 2003). In the present study, the relationships between self-stigma and social stigma, and attitudes toward psychological help-seeking have been investigated.

2.2. Participants and procedure

A total of 95 females (62.1%) and 58 male students (37.9%) participated in the study. The age range of participants was 18-23 years of age (mean=20.50 years of age). Students were recruited through university announcements and study flyers. When participants expressed interest in the study, they were invited to complete the survey via an online data collection approach. At the beginning of the survey, each participant was given a detailed explanation of the study and their consent was requested.

2.3. Instruments

The present study collected data using a demographic data form, the Self-Stigma of Seeking Help Scale, the Social Stigma Scale for Receiving Psychological Help, and the Attitudes toward Seeking Professional Psychological Help Scale-Short Form. Each measure's pertinent information is detailed below. The three scales used in this study were translated into Albanian utilizing a rigorous process of translation and back-translation.

Demographic data form: This form collected information regarding gender, age, birthplace, and family economic status.

Self-Stigma: Self-stigma was measured with the Self-Stigma of Seeking Help Scale (SSOSH) developed by Vogel et al. (2006). The SSOSH is a 10-item scale with items such as "I would feel inadequate if I received psychological help from a therapist." Items are graded on a partially anchored 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Point 3 on the scale is equally anchored by agree and disagree. Higher scores indicate greater self-stigma. Internal consistency estimates range from 0.86 to .90, and the 2-week test-retest reliability at university student samples has been recorded at .72. (Vogel et al., 2006). In this study, the scale scored a coefficient of internal consistency of $\alpha = .80$.

Public Stigma: Public stigma was measured with the Social Stigma for Receiving Psychological Help Scale (SSRPH) developed by Komiya et al. (2000). The SSRPH is a 5-item scale with items such as "People tend to dislike persons obtaining professional psychological assistance." Items are ranked from 1 (strongly disagree) to 4 (strongly agree). Higher ratings indicate stronger public stigma perceptions. The SSRPH correlates with attitudes toward treatment-seeking and has an internal consistency found in university samples of .73. (Komiya et al., 2000). In the present study, the sample's generated scores had a coefficient of internal consistency of $\alpha = .71$.

Seeking psychological help: The Attitudes Toward Seeking Professional Psychological Help Scale - Short Form (ATSPPH-SF) developed by Fischer and Farina (1995) was utilized to assess students' attitudes toward seeking professional psychological help. The ATSPPHS short form is a 10-item scale that asks respondents to evaluate the extent to which they agree with statements about seeking help from a mental health professional. The scale was used to assess participants' ATSPPH and included two dimensions: openness to seeking professional help for emotional problems (items 1, 3, 5, 6, 7) with item scores ranging from zero (disagree) to three (agree); and value and need in seeking professional help (items 2, 4, 8, 9, 10) with item scores ranging from zero (disagree) to three (agree). The ATSPPHS has good internal consistency ($\alpha = .86$).

3. Results

This study focused on the association between self-stigma, public stigma, and attitudes toward seeking psychological help. Data analysis was conducted using SPSS 22.0. Descriptive statistics were

used to analyze variables. Frequency, means, and standard deviations were used to describe participants' characteristics. Pearson correlation analysis was used to better understand the relationship between the three main variables in this study (e.g. self-stigma, public stigma) and help-seeking attitude. Results were considered statistically significant with a level of $P < .01$. Multiple regression was used to analyze and predict the value of help seeking psychological attitude based on the values of self-stigma and public stigma. Alternately, to know how much of the variation in help seeking attitudes can be explained by self-stigma and public stigma.

3.1. Sample characteristics

The average age of the participants was 20 years old ($M = 20.50$, $SD = 2.23$). Regarding the division of the age groups in the study sample, 79 students were from the 18-19 age group (51.6%), 42 students from the 20-21 age group (27.5%), and 32 students from the 22-23 age years old group (20.9%). Referring to the data on economic status, 13 students responded they had a below-average financial level (8.5%), 130 students belonged to a moderate financial situation (85%), and 10 students belonged to the status of above average (6.5%).

Self-stigma scale. The total score on the Self-stigma scale ranged from 10 to 49 (Mean =37.7, $SD = 5.14$), indicating participants had a greater score of self-stigma. In order to understand the differences between the levels of the three variables and the divisions of age, gender, and economic status, descriptive data and crosstabulations were carried out. In the case of self-stigma, female students presented higher levels of internalized stigma (71.3%) compared to men, who presented moderate self-stigma (59.1%). Meanwhile, the age group 18-19 shows the highest self-stigma level (50.9%) for the age distribution. Regarding economic status, there are no significant differences between the three levels of self-stigma.

Public Stigma scale. The score of the public stigma scale ranged from 7 to 20 ($M = 17.8$, $SD = 1.71$) showing high levels of public stigma. Regarding group differences for the public scale, from the data in the crosstabulations, it was noted that female students had the highest level of public stigma (72.3%) compared to boys who showed a moderate level of public stigma, as well as the age of 20-21 marked the highest percentage of public stigma level (51.6%).

Seeking psychological help scale. The total score on the ATSPPH-SF was less than 25 ($M = 24.5$, $SD = 2.63$) indicating that the overall attitude was negative. The score on value and need was near the critical value of 10 ($M = 10.01$, $SD = 3.74$) indicating a neutral attitude and the score on openness was less than 10 points ($M = 8.09$, $SD = 3.53$) indicating a negative attitude. Meanwhile, from the data, female students (76.7%) and students from the 18-19 group appear to have greater negative attitudes toward psychological help-seeking (52.3%).

3.2. Pearson correlation analysis between self-stigma, public stigma, and attitudes toward seeking professional help

Figure 1. Pearson Correlation Analysis.

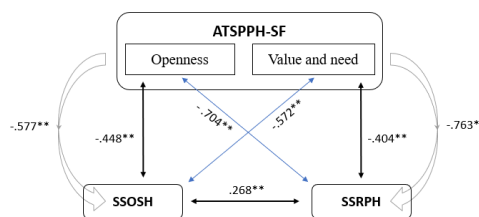


Figure 1 shows that self-stigma and public stigma negatively correlated with attitudes toward seeking professional help scale. The relationship between self-stigma and help-seeking attitudes is a moderately strong negative relationship ($r = -0.577$, $p < .01$). That is to say that the higher levels of self-stigma will be associated with negative attitudes toward professional help-seeking. The relationship between the public stigma scale and professional help-seeking is a strong, negative, statistically significant relationship ($r = -0.763$, $p < .01$). Reflecting that high levels of public stigma are related to high negative attitudes toward seeking professional help scale. A correlation analysis was also carried out to understand the relationship between self-stigma and public stigma with the two subscales of the attitude towards the professional help-seeking scale. The correlation analysis showed that openness had a moderate negative correlation with self-stigma ($r = -0.448$, $p < .01$) and with public stigma ($r = -0.572$, $p < .01$). Indicating that low levels of openness to seeking professional psychological help for emotional problems are related to greater scores of self-stigma and public stigma. Value and need had a statistically significant strong correlation ($r = -0.704$, $p < .01$) with self-stigma and a moderate negative correlation with public stigma ($r = -0.404$, $p < .01$). This implies that low perceived value and the need to seek professional psychological is related to higher self-stigma and public stigma at a moderate level.

3.3. Multiple regression analysis on predictor variables for attitudes toward seeking professional help

Multiple regression analysis was used to analyze the value of the ATTPHS variable based on the value of self-stigma and public stigma and to understand whether the attitudes scale can be predicted based on the other two variables. The results show that only the self-stigma scale statistically significantly predicted the attitudes toward seeking psychological help, $F(2, 150) = 39.614$, $p < .0005$, $R^2 = .346$, $p < .05$ (see table 1). Meanwhile, it results that public stigma doesn't play a predictor role on the scale of attitudes ($p > .05$). ANOVA and t-test analysis were also carried out to understand if there is an impact on the attitude toward seeking professional help based on age, gender, and economic status. The results indicated that neither of them could predict the scale of attitudes.

Table 1. Multiple linear regression.

	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>Sig.</i>
	.588 ^a	.346	.337					
Help-seeking scale				3.561	.368		9.673	.000
Self-stigma scale				-.517	.065	-.546	-7.958	.000
Public-stigma scale				-.166	.097	-.117	-1.708	.090

^a $p \leq .05$

4. Discussion and conclusions

This study sought to investigate the nature of the relationships between public and internalized stigma related to attitudes toward seeking professional psychological help. The findings indicate that self-stigma ($r = -0.577$, $p < .01$) and public stigma ($r = -0.763$, $p < .01$) correlated negatively with help-seeking attitudes supporting other studies' results that suggest both forms of stigma have been shown to reduce the willingness of people with mental health difficulties to seek help and it is conceivable that they mutually reinforce each other (Bos et al. 2013). As well, an individual is likely to react to stigma by avoiding help-seeking to protect their self-esteem and sense of self-efficacy (Vogel et al., 2006). Researchers have also noted that individuals who self-stigmatize may avoid seeking psychological services to avoid being labeled as having a mental illness (Link et al., 2001).

Contrary to the first assumption referring to the literature and other findings, the study indicated that public stigma had a stronger significant correlation with attitudes toward seeking help than self-stigma. Suggesting that public stigma is the most prominent barrier to help-seeking for Albanian students supporting that the perceived consequences of public stigma against mental health in general, and psychological help have a greater impact on the tendency of individuals to seek psychological help. Researchers have suggested that beliefs and stereotypes about those who seek help for mental illness often lead to various forms of discrimination such as avoidance, lack of opportunity, and loss of self-determination (Corrigan & Shapiro, 2010). In fact, those who have sought mental health treatment report higher levels of perceived discrimination than those who have not received treatment (Jorm & Wright, 2008).

The strongest negative correlation of the openness component of the help-seeking scale was with self-stigma compared to the strongest negative correlation of public stigma with the perception of the need and value of seeking professional help. Supporting other studies' results indicate that participants who reported embarrassment associated with mental health treatment were less likely to perceive a need for help or use mental health services (Mojtabai et al. 2002). The regression analysis results showed that it was self-stigma that has a greater role as a predictor of attitudes toward seeking psychological help. One explanation for this is that, in the instance of self-stigma linked with a mental disease, the label of mental illness to which the stigma is tied is frequently given externally, and the individual then determines whether to accept it. In contrast, seeking therapy, which is frequently voluntary, may result in an internally generated label (Corrigan & Rao, 2012).

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SOCIAL ANXIETY CONNECTION WITH INDIVIDUAL CHARACTERISTICS: THEORY OF MIND, VERBAL IRONY COMPREHENSION, AND PERSONAL TRAITS

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Abstract

Social anxiety disorder (SAD) is one of the most common mental health problems not only in adults but also in adolescents. Individuals with SAD exhibit difficulties in interpersonal relationships, understanding emotions, and managing them as well. This prevents individuals from optimal functioning, as far as, it is crucial for social and emotional adaptation to identify, understand, accept, and manage emotions correctly. Researchers are still concerned about the factors that contribute to the development and maintenance of this condition. Therefore, the main purpose of this study is to acquire knowledge about the association between social anxiety and individual characteristics, such as theory of mind (ToM), verbal irony comprehension, and personal traits. The quantitative method of research was selected and the data from 112 adolescents were collected for this research. Adolescents aged from 12 to 18 years and 15 of them had a diagnosis of Social Anxiety Disorder. Statistical analysis was performed on the whole group, additionally, two groups: adolescents with and without SAD were compared separately. Social anxiety (Social Anxiety Scale for Adolescents, 1998) and personal traits (Der Münchner Persönlichkeitstest, 2012) were measured by questionnaires. Theory of mind (A Movie for Assessment for Social Cognition, 2006) and comprehension of verbal irony (Mewhort-Buist, & Nilsen, 2012) were assessed using psychological tests. Statistical analysis indicated a positive relationship between social anxiety and comprehension of verbal ironic criticism. Moreover, social anxiety was significantly positively correlated to neuroticism and isolation tendency, while it was negatively related to extraversion and frustration tolerance. On top of that, statistical analysis revealed a positive relationship between ToM and verbal irony comprehension. However, the relationship between social anxiety and ToM was not statistically significant. Two main explanations for this result are that hypermentalizing is related to social anxiety only when the social situation is self-referential (Ballespi et al., 2019) and theory of mind impairment may manifest only on the clinical and not subclinical level of social anxiety (Lenton-Brym et al., 2018).

Keywords: *Personal traits, social anxiety, theory of mind, verbal irony.*

1. Introduction

According to the American Psychiatric Association (2013), social anxiety disorder (SAD) is characterized by a constant and intense fear of social situations where an individual may become an object of observation. The cognitive basis of this fear is the thought that a person will be negatively evaluated by others. Furthermore, studies conducted on cognitive bias show that people with social anxiety disorder interpret neutral or ambiguous situations more negatively and consider them to be more dangerous than non-socially anxious individuals (Niels-Christensen, Stein, Means-Christensen 2003). It is worthy of note that such negative thinking tendencies show their inaccurate perceptions of how others view them. However, clarifying the cognitive factors that contribute to social anxiety disorder is still a matter of interest.

But one of the factors that should be considered is theory of mind. For a better understanding, theory of mind is the ability to understand the mental states of oneself and others, including thoughts, intentions, and emotions. This ability makes it possible to explain and predict people's behavior (Premack & Woodruff, 1978). Studies indicate that impairment in theory of mind is associated with several mental health problems, such as autism spectrum disorder, schizophrenia, and social anxiety (Baron-cohen, 1995; Montag et al., 2011; Hezel & McNally, 2014). However, studies conducted to find out the relationship between social anxiety and theory of mind are contradictory. Some of them indicate

that people with social anxiety have difficulties understanding people's mental states, while others do not (Hezel & McNally, 2014; Philippot & Douilliez, 2005; Öztürk, et al., 2020).

Interpretive biases of people with social anxiety are likely to affect their understanding of irony. People often use irony while communicating with others. Verbal irony is a form of figurative language when what is said is the opposite of the speaker's meaning (Dews & Winner, 1997). For understanding verbal irony is necessary to consider contextual references, intonation, and also, and the speaker's thoughts and intentions, i.e. theory of mind. Many studies indicate that people with autism spectrum disorder who have impairment in theory of mind at the same time have difficulties in comprehension of verbal irony (Happe, 1993). Also, children under 6, who have not developed theory of mind yet are unable to understand verbal irony (Dews & Winner, 1997). Therefore, theory of mind, on the one hand, and social anxiety, on the other, will make a significant contribution to the understanding of irony. Since irony is often expressed by evaluations of others and what is said is ambiguous due to inconsistency with the context, interpretive biases and the tendency of negative evaluation of ambiguous information may lead people with social anxiety to misinterpret verbal irony.

It has been established that social anxiety is positively related to neuroticism, while there is a negative relationship between SA and extraversion (Kaplan et al., 2015). According to meta-analytic research social anxiety is significantly associated with social isolation (Teo, Lerrigo, & Rogers, 2013), and low frustration tolerance is considered a risk factor for social anxiety (Harrington, 2006).

2. Method

2.1. Participants

Research data were collected from 112 adolescents, aged 12 to 18 years. Of adolescents 80 (71.4%) were girls and 32 (28.6%) were boys with an average age of 15 years. The current study also included 15 adolescents who met social anxiety disorder diagnostic criteria.

2.2. Measures

Social anxiety was measured using the eighteen items "Social Anxiety Scale for Adolescents" (La Greca & Lopez, 1998). This questionnaire consists of three subscales: 1) fear of negative evaluation, 2) social avoidance and distress in new situations, 3) social avoidance and distress in general. All items are measured on a 5-point Likert scale, ranging from 0 (*never*) to 4 (*always*).

Theory of mind was assessed by applying the following two measurements: 1) "A Movie for Assessment for Social Cognition" (Dziobek, et al., 2006) and 2) "The Strange Stories task" (White, et al., 2009). "A Movie for Assessment for Social Cognition" (2006) consists of 15 min movie show about a friendly meeting of four people. During the movie screening, it is stopped forty-eight times and each time appears a question. Participants need to understand the characters' thoughts, emotions, and intentions in order to answer forty-two questions with multiple choices. Besides these questions, six control questions assess memory and general understanding. In order to answer those questions participant needs to analyze the physical context.

As mentioned above, another assessment to measure theory of mind was "The Strange Stories task" (White, et al., 2009). Participants are requested to read 16 stories and answer one open-ended question that followed each story. Eight stories are about social situations, where participants need to understand the characters' intentions. The other half of the stories are control stories and do not require an understanding of other individuals' mental states.

Verbal irony comprehension was also measured using sixteen short stories (Mewhort-Buist, & Nilsen, 2012). Stories are divided into 4 groups depending on the type of criticism/compliment used. Some stories consist of literal/ironic compliments and literal/ironic criticism. Each story is followed by five closed questions, from which, three questions have a correct answer and are used to assess understanding, meaning, and intention of verbal irony, while another two questions are used to measure attitudes.

"The Munich personality test" (Der Münchner Persönlichkeitstest, Zerßen & Petermann, 2012) was used for the personality traits assessment. This measure consists of forty-nine items and eight subscales: Neuroticism, Extraversion, Isolation Tendency, Frustration Tolerance, Rigidity, Esoteric Tendencies, Orientation towards Social Norms, and Motivation. All items are measured on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

3. Results

3.1. Correlations

Spearman rank order correlation (ρ) was used to identify the relationship between social anxiety and personal traits. Analysis showed that social anxiety was negatively correlated with extraversion ($r_s = -.416, p < .01$) and with a tolerance of frustration ($r_s = -.410, p < .01$). There was a strong positive correlation between social anxiety and neuroticism ($r_s = .628, p < .01$), a small positive correlation between social anxiety and isolation tendency ($r_s = .278, p < .01$) (Table N1).

Social anxiety and theory of mind were not significantly correlated. The study found that there was a small positive correlation between social anxiety and ironic criticism comprehension ($r_s = .196, p < .05$), but the correlation between social anxiety and comprehension of ironic compliment do not reach statistical significance.

Table 1. A correlational network between social anxiety and personality traits.

variables	1	2	3	4	5	6
1. Social anxiety	–					
2. Extraversion	-.416**	–				
3. Neuroticism	.628**	-.261**	–			
4. Frustration tolerance	-.410**	.473**	-.382**	–		
5. Isolation tendency	.278**	-.103	.449**	-.1	–	
6. Rigidity	.098	.318**	.166	.237*	.04	–

* $p < .05$. ** $p < .01$.

Correlation analysis showed that theory of mind was positively correlated with verbal irony comprehension. ($r_s = .486, p < .01$). Specifically, there was a medium positive correlation between theory of mind and understanding of verbal ironic compliment ($r_s = .401, p < .01$), and also a medium positive correlation was revealed between theory of mind and understanding of verbal ironic criticism ($r_s = .463, p < .01$).

3.2. Standard multiple regression

A standard multiple regression was calculated to predict social anxiety based on personal traits. To predict social anxiety a model was made from extraversion, neuroticism, and frustration tolerance. The model explains 44 % of the variance in social anxiety. $R^2_{ADJ} = 44.4, F(3,104) = 29.44, p < .01$. Of these three variables, it was found that social anxiety is significantly predicted by neuroticism ($\beta = .53, p < .05$) and extraversion ($\beta = .23, p < .05$). Neuroticism explains 25% and extraversion 4% of the variance in social anxiety (Table N2).

Table 2. Regression analysis: predictors of social anxiety.

Variables	Social Anxiety		
	B	SE B	β
Extraversion	-.53	.19	-.23**
Neuroticism	1.11	.16	.53**
Frustration tolerance	-.4	.35	-.09
R2		.46	
F		29.44**	

* $p < .05$. ** $p < .01$

3.3. Groups comparison

As mentioned before, the current study included 15 adolescents who were diagnosed with social anxiety disorder. 13 of them were girls and 2 were boys. For comparison, a control group was created from the rest of the sample. These two groups were similar in terms of sex and age. The difference between social anxiety and without social anxiety group was investigated by the Wilcoxon Signed Rank Test. Analysis showed that social anxiety group scores on theory of mind tests did not significantly differ from control group scores.

Significant differences were found between these two groups on the personal traits scale. Participants without social anxiety had higher median scores on extraversion and frustration tolerance scales than participants with social anxiety. ($Md = 21$, $Md = 13$). $Z = -2.477$, $p < .06$. $Z = -2.502$, $p < .05$. $r = .45$, $r = .46$.

4. Discussion

A positive correlation was found between social anxiety and ironic criticism comprehension. In particular, adolescents who scored higher on the social anxiety scale demonstrated better performance in understanding ironic criticism than adolescents with lower scores on the social anxiety scale. This result can be explained by the nature of the anxiety. People with social anxiety are sensitive to the evaluations of others. Therefore, they are more attentive to social cues, which may lead to a better understanding of ironic criticism.

The connection between social anxiety and the development of theory of mind has not been proven. The result showed that participants who had social anxiety symptoms were able to correctly identify and reason about the mental state of others as well as participants without social anxiety symptoms. These findings are consistent with a previous study which found that individuals with higher and lower scores of social anxiety did not differ from each other on theory of mind test. This result, which is inconsistent with previous studies, researchers explained by the fact that theory of mind impairment may manifest only on the clinical and not subclinical level of social anxiety (Lenton-Brym et al., 2018).

There is another explanation for this result. When people with social anxiety are involved in social situations they are afraid of evaluations, focus on themselves, and are not able to attribute other people's mental state correctly. In the current study, the measures that were used for assessing theory of mind do not request participating in social situations, adolescents were just observers that may foster an understanding of social cues. This view is supported by a study, which found that theory of mind deficit in social anxiety is context-dependent. According to this study, hypermentalizing is related to social anxiety only when the social situation is self-referential (Ballespi et al., 2019).

It is important to consider two theoretical frameworks under which researchers explain the role of social cognition in social anxiety. According to social-cognitive deficit theory, difficulty in understanding of mental states of others is due to a deficit in theory of mind, that makes social situations unpredictable and uncomfortable which causes fear and anxiety toward social situations (Hezel & McNally, 2014; O'Toole et al., 2013).

According to the second approach, advanced theory of mind enhances the individual's self-awareness in social situations. Understanding others' mental states makes the person more sensitive to social cues, making it easier for them to understand that they might become the object of evaluation by others. And because this assessment can be negative, the individual may develop social anxiety. Therefore, cognitive features of social anxiety might be a result of a deficit in theory of mind as advanced theory of mind. Some studies support this idea. Previous research found that advanced mindreading is correlated with social anxiety (Sutterby et al., 2012; Nikolic et al., 2019). People with advanced mindreading can easily understand mental states of others, they are more attentive to other people's evaluations and give more meaning to what others think of them.

Social anxiety is negatively correlated with extraversion and frustration tolerance, while positively correlated with neuroticism and isolation tendency. Regression analysis has shown that neuroticism and extraversion are good predictors of social anxiety. These results are consistent with the results of previous studies (Kaplan et al., 2015, Teo, Lerrigo, & Rogers, 2013, Harrington, 2006).

5. Conclusions

According to the study, the hypothesis that social anxiety is negatively related to the level of development of theory of mind was not confirmed. No statistically reliable relationship between these two variables was revealed. Also, the second hypothesis, according to which social anxiety would be negatively related to the understanding of verbal irony, was invalidated. Instead, we obtained the opposite result: social anxiety is positively related to the understanding of verbal ironic criticism.

As for the third hypothesis, regarding theory of mind and understanding of verbal irony, the assumed positive relationship was confirmed. The level of theory of mind development is positively related to both verbal irony comprehension subscales. The obtained result is consistent with the results of the studies conducted so far.

The fourth hypothesis, according to which social anxiety is positively related to neuroticism, isolation tendency, and negatively related to extraversion and tolerance to frustration, was confirmed. The results are consistent with those of previous studies. In addition to the strong association between them, the

results reveal that neuroticism and extraversion are strong predictors of social anxiety, which is also consistent with other research findings.

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EXTERNAL SHAME, COPING COMPETENCE AND SOCIAL SUPPORT AS PREDICTORS OF QUALITY OF LIFE IN INFERTILE WOMEN DURING IVF*

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Abstract

World health organization's statistics show that 8-12% of couples worldwide have a problem with fertility, so it is a public health problem around the world. The problem is that the percentage of infertile couples is constantly increasing. Infertility is a medical condition that represents a great challenge for mental health and can significantly affect the quality of life (QoL) of people who face this problem. The aim of this research was to investigate whether external shame, coping competence, and social support are significant predictors of QoL in infertile women during their In Vitro Fertilization (IVF). QoL was examined according to two dimensions - as a core QoL which represents the QoL across the following domains - Emotional, Mind-Body, Relational, and Social - and as the QoL determined by the different aspects of infertility treatment. This study involved 151 women who were undergoing IVF at the time of testing. The following instruments were used: Fertility quality of life tool (FertiQoL) - in this study we used two of three total scores: The Core FertiQoL (the average fertility QoL across Emotional, Mind-Body, Relational, and Social domains) and The Treatment FertiQoL (the average QoL across treatment domains - Treatment Environment and Treatment Tolerability), the Other as Shamer Scale (OAS), the Coping Competence Questionnaire (CCQ) and the Multidimensional Scale of Perceived Social Support (MSPSS). The results of the regression analysis show that Coping competence defined as resilience to learned helplessness and depression is a significant predictor of The Core FertiQoL ($\beta = .49$, $p < .001$) and that this model explains 33% of the criterion variance ($R^2 = .33$, $F(3, 147) = 25.33$, $p < .001$). When it comes to the prediction of QoL determined by treatment characteristics, the regression model explains 11% of the criterion variance ($R^2 = .11$, $F(3, 147) = 7.37$, $p < .001$), while the significant predictors of this aspect of QoL are Coping competence ($\beta = .28$, $p = .002$) and Perceived social support ($\beta = .19$, $p = .022$). Individual coping skills in dealing with infertility are very significant for the global QoL, while in the case of the QoL associated with accessibility and quality of infertility treatment in addition to individual competencies, social resources are also important. The results may have practical implications as an important guideline in counseling and psychotherapy work with this group of clients.

Keywords: *Infertility, quality of life, external shame, coping competence, social support.*

1. Introduction

Infertility is defined as the failure to achieve pregnancy after 12 months of regular, unprotected intercourse. Around 48.5 million couple worldwide face this problem (Verkuijlen et al., 2016). Infertility is a great challenge for couples both medically and psychologically (Burns, 2007). It affects many aspects of life, primarily personal and social, but also financial, work/career and more (Newton et al., 1999). Regardless of the fact that infertility is not physically disabling, its emotional consequences are comparable to those of serious chronic diseases, including cancer, heart disease, and HIV (Domar et al., 1993). Some authors emphasize the experience of losing control over one's own life as one of the most difficult consequences of infertility (Cousineau & Domar, 2007). As a stressful event, infertility causes a whole range of negative emotions such as surprise, sadness, anger, anxiety, depression, helplessness, and guilt (Menning, 1980). When it comes to negative emotions, the inevitable topic for these couples is the feeling of shame, which is a very powerful emotion related to self-evaluation. There is external and internal shame. External shame is related to the social environment and the person's beliefs that others evaluate him/her in a negative way, while internal shame concerns our internal negative evaluations of our own abilities and traits (Gilbert, 1998). The results of the research by Galhardo et al.

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(2011) show that infertile couples show a higher degree of both external and internal shame as well as self-judgment compared to fertile couples and couples with an infertility diagnosis who are applying for adoption.

Psychological adjustment to the IVF is determined, as with other important life events, by both of the two groups of factors – risk and protective factors (Rockliff et al. 2014). The most frequently emphasized protective factors in the case of infertility are social support (Martins et al., 2011; Mitrović et al., 2021), problem-focused coping (Peterson et al. 2006; Mitrović et al., 2022), positive family/marital function (e.g. Mitrović et al., 2021). Research shows that social support is associated with lower levels of infertility-related stress, as well as lower levels of negative emotions during IVF, while it positively contributes to positive emotions, and this effect on positive emotions proved to be specific to the IVF group of women compared to the group of women who do not have a problem with fertility (Martins et al., 2011; Mitrović et al., 2021).

Individual assessment of the situation and the person's personal resources to cope with the situation determines which coping strategies will be activated (Lazarus & Folkman, 1987). The experience of controlling the situation takes a central position when it comes to the effectiveness of coping (Folkman, 2011). Uncontrollable stressful situations will cause a higher level of stress compared to stressful situations that can be controlled to some degree, whereas infertility can be defined as a stressor that is difficult to control (Mitrović et al., 2022). Research shows that men and women cope differently with infertility (e.g. Peterson et al., 2006). When considering coping strategies and infertility, it is important to note that in situations where it is difficult to control the stressor emotion-focused coping can be more effective than problem focused coping strategies (Sorgen & Manne, 2002). However, Peterson et al. (2006) report a negative association of infertility stress with planful problem-solving and seeking social support in both men and women.

The level of stress caused by this problem is illustrated by findings that show that a high percentage of women rate the problem of infertility as the worst event in their life (e.g. Burns, 2007). It is not surprising then that infertility has the potential to cause psychological problems and negatively affect quality of life (QoL). Research shows that infertility is associated with a decrease in QoL (Chachamovich et al., 2007; Droszól & Skrzypulec, 2008). It has also been established that infertility affects the QoL of women more than men (e.g. Zurlo et al., 2018). When investigating the factors that contribute to the reduction of women's QoL, Maroufizadeh et al. (2017) showed that women with high levels of anxiety and depression, with unknown cause of infertility and failure of previous round of IVF treatment show worse QoL.

Measuring the QoL of infertile couples is important because of the identification of those aspects of fertility problems that are related to QoL, because of the need to improve the QoL of this group of patients. Another reason is the need for improvement of research in health service evaluation and in this context the use of a standard measurement tool (Saxena et al., 2001, as cited in Boivin et al., 2011). For this purpose, a group of experts developed the Fertility Quality of Life Questionnaire (FertiQoL), which is specific to infertility and aims to assess the QoL of men and women who face this problem. The instrument has been shown to have satisfactory reliability and validity (Boivin et al., 2011).

2. Objectives

The aim of this research was to investigate whether external shame, coping competence, and social support are significant predictors of QoL in infertile women during their IVF. QoL was examined based on two dimensions - as a core QoL which represents the QoL across the following domains – Emotional, Mind-Body, Relational, and Social – and as the QoL determined by the different aspects of infertility treatment.

3. Methods

3.1. Sample

The study involved 151 women, aged 23 to 48 ($M = 35.6$, $SD = 5.1$), who were undergoing IVF treatment at the time of testing. The average duration of infertility treatment for the group of women undergoing the IVF procedure is 5.1 years ($SD = 3.2$). As for the reason for starting the IVF treatment, 15.2% of participants' state male infertility, 29.8% female infertility, 16.6% mentioned both male and female infertility and 38.4% state that there is no medical reason or that it is unknown. For 37.7% of participants this was the first IVF treatment, for 25.2% second, for 20.5% third, for 6.0% fourth, and 10.6% of participants reported that this is their fifth or more IVF treatment. The research was approved by the Ethics Committee of the Department of Psychology of the Faculty of Philosophy in Niš. Before

participation in the study, all of the respondents were informed about the goals of the research, how the data will be used, and their rights, as well as other information that is needed for valid consent.

3.2. Instruments

The Others as Shamer Scale (OAS; Goss et al., 1994). These 18 items scale measures external shame (global judgments of how people think others view them). Respondents rate on a 5-point Likert scale (0–4) the frequency of their feelings and experiences described in items such as “I feel other people see me as not quite good enough” or “I think that other people look down on me”. Higher scores on this scale reveal high external shame. The reliability of the scale in this sample is $\alpha = 0.92$.

The Coping Competence Questionnaire (CCQ; Schroder & Ollis, 2013) is a 12 items scale (e.g., “When I fail at something, I tend to give up”; “Failures can shake my self-confidence for a long time”) which is a brief measure of resilience against helplessness and depression. Respondents use 6-point Likert scales (1 = *very uncharacteristic of me* to 6 = *very characteristic of me*). Higher scores indicate resilience to learned helplessness (i.e., coping competence) and low scores indicate a propensity towards helplessness in stressful situations. The reliability of the questionnaire in this sample is $\alpha = 0.92$.

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is intended to assess perceived social support. It consists of 12 items divided into three subscales: family support, friend support, and significant other support, but the total score on the scale is also used. The respondent gives answers on a seven-point Likert scale expressing the level of agreement with an item. In this study, we used only the total score on the scale. The reliability of the scale in this sample is $\alpha = 0.93$.

The fertility quality of life questionnaire (FertiQoL; Boivin et al., 2011) is intended to assess QoL in men and women experiencing fertility problems. First two items capture an overall evaluation of physical QoL and satisfaction with QoL. The remaining 34 are intended to assess personal and interpersonal quality of life (“Core FertiQoL”) and treatment quality of life (“Treatment FertiQoL”). Core FertiQoL includes the following domains: Emotional, Mind-Body, Relational, and Social. Treatment FertiQoL is determined by two treatment domains: Treatment Environment and Treatment Tolerability. In this study we used two of three total scores: The Core FertiQoL (the average fertility QoL across Emotional, Mind-Body, Relational, and Social domains) and The Treatment FertiQoL (the average QoL across treatment domains – Treatment Environment and Treatment Tolerability). The reliability of the Core FertiQoL in this sample is $\alpha = 0.83$, and of the Treatment FertiQoL α is 0.72.

4. Results

Descriptive statistics of variables were presented in Table 1, and then results of correlation (Table 2) and regression analysis (Table 3) were given afterwards.

Table 1. Descriptive statistics of the of measured variables.

Variable	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Sk</i>	<i>Ku</i>
External shame	151	1.00	4.00	2.02	0.61	0.89	0.59
Coping competence	151	1.17	5.83	4.10	0.99	-0.29	-0.46
Perceived social support	151	1.67	7.00	5.50	1.18	-0.86	0.40
Core FertiQoL	151	20.83	79.17	48.51	12.03	0.10	-0.56
Treatment FertiQoL	151	12.50	75.00	48.61	11.41	0.06	0.20

Tabel 2. Correlation between variables.

	External shame	Coping competence	Perceived social support	Core FertiQoL	Treatment FertiQoL
Coping competence	-.517**	1			
Perceived social support	-.267**	.212**	1		
Core FertiQoL	-.404**	.569**	.165**	1	
Treatment FertiQoL	-.179*	.314**	.241**	.437**	1

**Correlation is significant at the .01 level *Correlation is significant at the .05 level

Table 3. Multiple regression analysis: external shame, coping competence and perceived social support as predictors of Core FertiQoL and Treatment FertiQoL (Enter procedure).

Predictors	Core FertiQoL			Treatment FertiQoL		
	β	<i>p</i>	Model summary	β	<i>p</i>	Model summary
External shame	-.145	.070	<i>R</i> = .584	.017	.854	<i>R</i> = .362
Coping competence	.489	.000	<i>R</i> ² = .327	.186	.022	<i>R</i> ² = .113
Perceived social support	.022	.753	<i>F</i> (3, 147) = 25.33 <i>p</i> = .000	.283	.002	<i>F</i> (3, 147) = 7.37 <i>p</i> = .000

As can be seen in Table 3, both models are statistically significant. External shame, coping competence and perceived social support explain 33% of the variance of the criterion - Core FertiQoL, while coping competence i.e., resilience against helplessness and depression stands out as a significant predictor of personal and interpersonal QoL. When it comes to Treatment FertiQoL as a criterion, the model explains 11% of the variance of this criterion. Within this model, Resilience against helplessness and depression and perceived social support stand out as statistically significant predictors.

5. Discussion and conclusion

In this research, we examined the possibility of predicting QoL, more precisely, the possibility of predicting personal and interpersonal QoL and QoL determined by treatment characteristics based on the following predictors – level of external shame, coping competence, and social support in women during IVF. Coping competence, which implies resilience to learned helplessness in a stressful situation, proved to be a significant predictor of both Core FertiQoL and Treatment FertiQoL. Coping competence represents the capacity to effectively deal with negative life events or failure in terms of a reduced likelihood of helplessness and fast recovery from any occurring helplessness symptoms. Coping competence is a protective factor in the development of helplessness-based depression (Schroder & Ollis, 2013). It has already been mentioned that individual assessment of the situation and the personal resources to cope with the situation determine which coping strategies will be activated (Lazarus & Folkman, 1987). In this sense, the association between coping competence and coping strategies can be understood. Dysfunctional coping styles probably mediate, at least in part, the effects of coping competence on depression. This would mean that people who are prone to develop learned helplessness will most likely engage less in problem-solving or emotion-stabilizing coping strategies, and will therefore more often engage in dysfunctional coping. Instead of showing flexibility in the use of coping strategies, these individuals will react to different stressors with the same dysfunctional coping strategies and thereby increase the likelihood of depression (Schroder, 2012, as cited in Schroder & Ollis, 2012). It has already been pointed out there is a connection between depression and other psychological problems and reduced QoL in infertile couples especially women (Chachamovich et al., 2007; Drosdzol & Skrzypulec, 2008; Zurlo et al., 2018), as well as a connection between coping strategies and psychological health in infertile men and women (Zurlo et al., 2018), so we can say that the results obtained in this research are in line with previous findings. Future research could investigate the mediating role of coping strategies in the relationship between coping competence, i.e. resilience against helplessness and QoL.

In addition to coping competence, social support was shown to be a significant predictor of QoL associated with treatment and patients' assessment of treatment characteristics. The results of this research are consistent with the results of previous research that show that social support is a protective factor when it comes to mental health and QoL of infertile couples (Martins et al., 2011; Mitrović et al., 2021). It is rather surprising that social support contributes to the prediction of QoL determined by treatment characteristics, but not personal and interpersonal QoL (Core FertiQoL). We assume that in stressful situations, social support is important in those aspects of the situation that do not depend on us (in this case, the treatment and the characteristics of the treatment) and that are more difficult to control than those aspects of the situation that are to some degree under our control. It is necessary to test such conclusions on a larger sample that also includes men, with an examination of the relationship among the variables that were predictors in this research. Examining these relationships would contribute to the understanding of the interaction of risk and protective factors in a situation that can greatly affect mental health and QoL.

The results of this research could be used to inform guidelines for mental health professionals who work with infertility couples in terms of strengthening those factors that have a protective role and that contribute to the preservation of mental health and, therefore, the QoL.

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EMOTIONAL DISTURBANCES IN URBACH-WIETHE DISEASE WITHOUT VISIBLE AMYGDALA DAMAGE

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Abstract

A 19-year-old man with Urbach-Wiethe disease (UWD) – a rare genetically-based syndrome which usually is accompanied by various dermatological changes and bilateral calcification of the amygdalae – was investigated neuropsychologically and neuroradiologically. As consequence of amygdalar damage, typical functions mediated by this structure are disturbed. These are alterations in emotional behavior – both with respect to positive and negative emotions – changes in sensory perception, primarily olfaction and taste, and impairments in certain memory domains. Especially the emotional flavoring of autobiographical memories is impaired, both with respect to anterograde and retrograde memories. As the neurological changes in the amygdalae occur gradually over time, it is of major importance to investigate (a) whether there is major amygdalar damage already at age 19, and (b) whether in case of no major measurable amygdalar damage, UWD-related behavioral changes are nevertheless apparent.

Case: The patient had genetically-proven UWD and had been investigated by us at age 9 and at age 19. He visited high school, but was every day accompanied by an assistant, who helped him to keep track of his duties and to co-ordinate his school work. His mother said that he is quite uncoordinated. Both a computer tomography and magnetic resonance imaging failed to show evidence of brain damage, which is an unusable finding in comparison to other, and even younger patients with UWD. On the other hand, the neuropsychological tests revealed a number of deviances from normality. These were seen with respect to his attention and concentration abilities, with respect to emotional behavior and personality dimensions, and with respect to certain aspects of memory. As predictable from his mother's judgment, he was found to have concentration problems. On the emotional level, he had problems in judging facial emotional expressions. And with respect to personality, he scored high on dimensions of depression, compulsion, and anxiety.

These findings indicate that behavioral changes precede measurable brain organic changes and that UWD has a major impact on the well-being, even when the usual bilateral amygdalar calcification is not yet apparent.

Keywords: *Affect, static brain imaging, effort, calcification, personality dimensions.*

1. Introduction

Urbach-Wiethe disease (UWD; also named *Lipoid proteinosis* or *Hyalinosis cutis et mucosae*) was first described by the Austrian scientists Erich Urbach and Camillo Wiethe (Urbach & Wiethe, 1929) and constitutes an autosomal recessive disorder which is characterized by a number of changes of body and brain. Among them are a thickened skin, scarring on the skin, beading of papules around the eyelids, a hoarse voice, and changes in the position of the teeth, compared to normal. In the great majority of patients who up to now were investigated with brain imaging, symmetrical calcifications in the medial temporal lobes, especially the amygdala and the periamygdaloid region were found (e.g., Siebert et al., 2003; Koen et al., 2016).

It is known from studies in animals as well as from work with human patients that damage to the amygdala – especially, if it is bilateral – leads to various behavioral changes, above all changes in emotional behavior (Feinstein et al., 2011; Markowitsch & Staniloiu, 2011) and in emotionally-colored memories (Cahill et al., 1995; Phelps, 2004). The interpretation of odors (Siebert et al., 2003) as well as that of facial expressions is centrally mediated by the amygdala (Demos et al., 2008; Jones et al., 2009). The amygdala controls positive as well as negative emotions (Janak & Tye, 2015), as well as hedonic and

reward-related evaluation processes (Tiedemann et al., 2020) and the perception of social support (Sato et al., 2020).

In the following we will describe the case of an adolescent with genetically proven UWD, who – up to now – lacks significant brain calcification, but already shows a number of behavioral symptoms which are indicative of a progressive cognitive-emotional deterioration.

2. Case description

The 19-year-old is a high school student who since the first years of his life required special care (also up to the present in school). He has under-weight and looks more like a 14-year-old. He has the tendency to not attend to his duties and is easily distracted. Furthermore, he is more introverted and socially deviant from his school companions. He states that he has not much interest in others. When asked about a future with a significant other, he stated that he has no interest in having a friend or a partner.

He agreed to participate in neuropsychological testing and was also eager to have his brain scanned. We obtained informed consent from him for publishing his results.

2.1. Brain scanning

He received magnetic resonance imaging of his brain shortly after his 18th birthday. Unfortunately, the results were not very clear due to artefacts. Therefore, one month later he received an additional cranial computer tomography. None of the two scans demonstrated any visible calcifications in his temporal lobes.

2.2. Neuropsychological testing

Tests were administered for the following functions:

- Standardized tests for lateralization and intelligence/general cognitive status
- Standardized tests for the evaluation of attention, concentration, and processing speed
- Standardized test for the evaluation of constructional functions and planning
- Standardized tests for the evaluation of verbal and non-verbal explicit anterograde long-term memory
- Tests for the assessment of executive functions, problem solving, and cognitive flexibility
- Symptom-validity-tests
- Tests for the assessment of emotional functions
- Questionnaires on personality dimensions and eating

3. Results

Due to space limitations, results are only summarized. The patient was clearly above average in his verbal intellectual abilities (estimated IQ of 124); in screening tests of his intellect, he was normal as well. In attention and concentration abilities, the patient was average in two tests and subaverage in one. In problem-solving, mental processing speed and proneness to interference he was normal as well.

In memory tests without a direct speed component (e.g., having to react within 3 seconds) he was normal to even above average. This held especially for the revised version of the German Wechsler-Memory-Scale (Härting et al., 2000). In two test of memory malingering (Rey-15-Item Test; Test of Memory Malingering; Lezak et al., 2012; Tombough, 1996) he performed without errors, so that there was no tendency for malingering at all.

Tombaugh, T. N. (1996). *Test of Memory Malingering (TOMM)*. New York: Multi Health Systems.

With respect to emotional functions, he scored subaverage. This was found in the “Reading the Mind in the Eyes Test” (Baron-Cohen et al., 2001), where he made nine errors in the 24 items (37.5% error rate) and in the more complex subtests of the Florida Affect Battery (Bowers et al., 1991; Breitenstein et al., 1996). In this test battery, he made three errors (15%) in discriminating affects (subtest 2), four errors (20%) in naming the correct emotion out of five alternatives (subtest 3), and six errors (30%) in matching facial affects. In a test on remembering neutral and emotional pictures (Cramon et al., 1993), he showed the reverse effect to normal by being worse than the normal control group in re-identifying emotional pictures, but better than the control group in re-identifying neutral pictures. Though the differences were not significant, they show a trend, especially as the control group received the pictures a second time after a delay of 30 min, while UW received them immediately after the first trial was over.

In questionnaires, the patient performed in part conspicuously. In the German version of the Interpersonal Reactivity Index (Saarbrücker Persönlichkeitsfragebogen; Paulus, 2012) he received nearly maximal scores for fantasy and empathy (19 out of 20 points) and also a high score on perspective taking (17/20). With respect to feeling distress, he scored slightly above average (13/20). In the Symptom-Check-List (SCL-90-R; Franke, 2002), scores revealed that the patient is uncertain about social contacts and that he scored high on the dimensions of depression, compulsion, and anxiety.

The Freiburg-Personality-Inventory (Fahrenberg et al., 2001) provides a detailed picture of the patient's personality. Here, he received scores in the more extreme range: A maximum was in negative 'social orientation', which the authors of the Inventory equalize to be being very dissatisfied, dejected, and having a negative attitude to life (stanine 9). He viewed himself as non-aggressive (stanine 2), as controlled and as socially responsible, helpful, and as caring about others (stanine 9). However, he also thought that others take advantage of him (stanine 8) and that he can control himself with respect to his emotionality (stanine 8).

The scale of 'openness' only had a stanine score 2, which the test authors interpret as either being strongly oriented towards social conformity or as tending to make a good impression. So, he either is seen as having a lack of self-criticism or as idealizing himself. The most likely interpretation is that he seems to deny socially undesirable behaviors. It also appeared that he frequently feels stressed, nervous, and overwhelmed; and as being emotionally labile, anxious, and with many problems.

The results in the scales 'achievement orientation' and 'extraversion' (each stanine 3) suggest a not very extensive achievement orientation and an "introverted, reserved, pondering and serious" character.

The two applied measures on possible eating disturbances showed a minor risk for the presence of an eating disorder.

The results of all the questionnaires should be interpreted with caution and may in part not reflect true opinions of the patient. This is, because of his low stanine score (2) in the Freiburg-Personality-Inventory on 'openness'.

4. Conclusions

A young adult with confirmed Urbach-Wiethe disease was studied with the principal question, whether already at his age of 19-years calcifications in the amygdalae are found with the consequence of possible deteriorations in cognitive and emotional functions. Scanning the brain of the patient with magnetic resonance imaging and computer tomography surprisingly revealed no visible brain damage. We furthermore subjected him to intense neuropsychological testing which demonstrated largely undisturbed and in part even above average functions on the intellectual side, but several deviations on personality dimensions.

4.1. Brain

Up to now, we studied 14 patients, aged 17 to 63 years, with Urbach-Wiethe disease (Babinsky et al., 1993; Markowitsch et al., 1994; Siebert et al., 2003; Brand et al., 2007; Markowitsch & Staniloiu, 2011); all of them showed calcifications in the amygdalae. Other groups reported amygdala calcifications in their Urbach-Wiethe disease patients as well (Tranel & Hyman, 1990; Hurlmann et al., 2007; Koen et al., 2016). The apparently youngest patient, reported to have proven significant bilateral brain damage in the region of the amygdala was 17 years old (Brand et al., 2007).

In a paper on ten cases with Urbach-Wiethe disease we stated "that the principal brain degeneration in patients with UW [Urbach-Wiethe] disease lies within the amygdaloid region and seems to develop over time" (Siebert et al., 2003, p. 2634). The present case seems to confirm this thesis, but leads to further questions, as the other youngest patients from our previous publications (Siebert et al., 2003; Brand et al., 2007) had amygdaloid calcifications. Both of previous patients were female and had little school education. It might be that there are gender-specific effects which determine start, speed and extent of calcifications. Furthermore, specific variants of the gene mutation may determine the intensity and time-related appearance of the calcifications.

4.2. Neuropsychology

Our patient knew from young age on that he was "special" in comparison to his peers. It seems obvious that the description of the disease had an impact on his psychic well-being. Though he was intellectual unimpaired, he had a number of deviations from the average: These appeared in a below average performance in speed-related attentional tasks, which was confirmed by his mother, who stated that he needed throughout his school years guidance by an assistant, is generally somewhat slow in mental following, and seems to be unable to keep order in his room at home. Furthermore, the patient had

problems with emotional processing and in his personality dimensions (questionnaires). In emotional functioning there were negative deviations from normality in all major tests. In the “Reading the Mind in the Eyes Test” he was clearly subaverage (only 9 out of 24 correct identifications [in spite of a 25% chance to vote correctly by chance]). In the Florida Affect Battery he was subaverage in the three more complex subtests. For the comparison of the emotional and neutral photographs, he also showed a trend towards problems with emotion processing by being worse than normal individuals with respect to the emotional, but better than normal individuals with respect to the neutral photographs.

From the results of the questionnaires, it became evident that he was insecure in social contacts and had tendencies towards depression, obsessiveness, and anxiousness (SCL-90-R). In scales on empathy and social orientation he scored high. Eating disturbance could not be verified by the questionnaires used. However, all these scores have to be evaluated with caution due to a stanine score of 2 in the FPI-R scale on openness; they may not reflect his true opinions. This especially, as he certainly is of above average intelligence.

4.3. Implications on Urbach-Wiethe disease in young individuals

The results of both the neuroimaging and the neuropsychological analyses revealed that our young adult patient (still) does not show evidence for neuroanatomical changes in his brain and can be considered to be a so-called high-functioning individual from a behavioral-cognitive perspective. Koen et al. (2016) wrote that “[c]alcification of the amygdala tissue is most often slowly progressive and benign” (p. 505). Our patient confirms this view. The calcification of the amygdala may indeed start only in the third decade of life and its effects on behavior – particularly on emotional functions – may be retarded by cognitive strategies or alternative routes circumventing the amygdala (Siebert et al., 2003, p. 2635).

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AFFECT-RELATED CHANGES IN PATIENTS WITH DISSOCIATIVE AMNESIA

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Abstract

Dissociative amnesia is a psychiatric syndrome accompanied by severe memory disturbances which are usually retrograde and restricted to the autobiographical domain. If the amnesia relates to the whole past life, self-consciousness (“autonoetic consciousness”) is considerably disturbed. Due to the fact that autobiographical memories are usually affect-related, it is of interest to investigate whether a reason for the patients’ memory disturbances can be sought in changes in affect and emotion. We therefore investigated possible affect-related changes in 34 patients with a diagnosis of dissociative amnesia using neuropsychological tests and questionnaires.

Patients: The patients were between 11 and 54 years of age at the time of their investigation (mean age: 37 years). All but one of them had live-long retrograde amnesia; the exception had continuous anterograde amnesia (a very rare, but existing form of dissociative amnesia). The majority of the patients had deficits in attention and concentration (20 patients; 59%). With respect to affect-related changes, many of the patients (24 patients; 71%) had a blunt affect in interviews and conversations; and in affect-related tests (Florida Affect Battery; Reading the Mind in the Eyes Test; Toronto-Alexithymia-Scale), again most of them (26 patients; 76.5%) showed remarkable deficits. Furthermore, in questionnaires used to investigate personality dimensions (Freiburg-Personality-Inventory; Symptom-Check-List 90; Dissociative Experiences Scale-II; Beck Depression Inventory; Interpersonal Reactivity Index), the clear majority (>75% of the patients tested with these instruments) manifested deviances suggestive of affect-related changes (tendencies of depression, anxiety, somatization, alexithymia).

It is concluded that the old concepts for dissociative amnesia, namely ‘hysteria’ and that patients with this disease condition demonstrate a kind of ‘belle indifference’ towards their social environment, are still valid and may contribute significantly to their lack of self- or autonoetic consciousness. Furthermore, their usually selective autobiographical retrograde amnesia seems to be attributable to a desynchronization between affect-related and memory-processing regions of the brain, a hypothesis which is confirmed by more recent functional neuroimaging data in patients with dissociative amnesia.

Keywords: *Emotion, autonoetic consciousness, memory, personality dimensions.*

1. Introduction

‘Dissociative amnesia’ is a term that was introduced relatively lately in the last century. Other terms in use were ‘psychogenic amnesia’, ‘medically unexplained amnesia’, ‘functional amnesia’ and – above all – ‘hysteria’, a term used by Charcot in France (Bogousslavsky, 2011). The concept of *hysteria* spread to German-speaking countries by Sigmund Freud’s work, and thereafter quickly reached further countries and continents. While hysteria was initially seen as a condition affecting exclusively women, this view dramatically changed after the description of many World War I soldiers who were labeled “war tremblers” (or “Kriegszitterer” in German-speaking countries). ‘Dissociative amnesia’, however, is the legitimate diagnostic entity in international nosology.

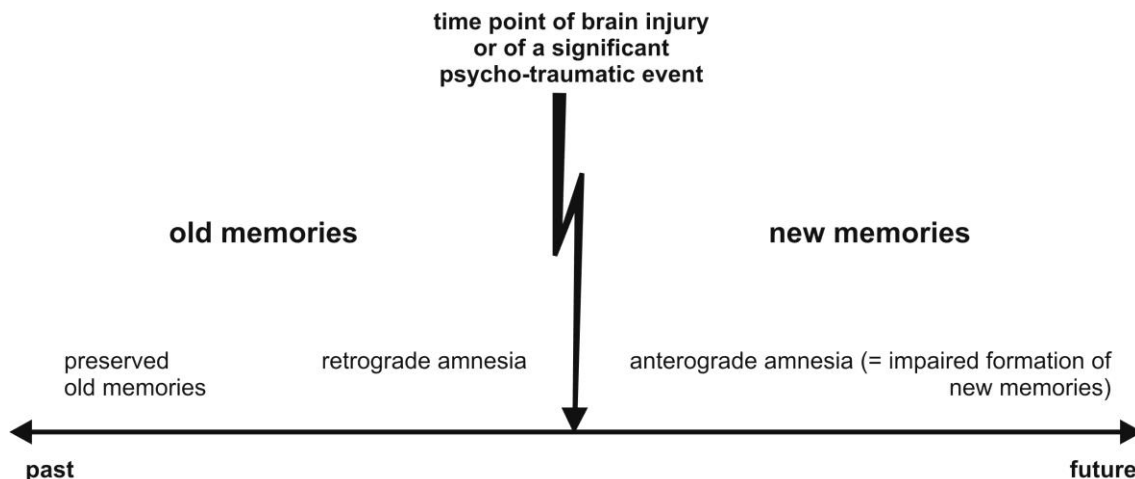
The expression ‘dissociation’ refers to spreading (of emotion and cognition) in opposite directions (Markowitsch, 1999); it is therefore the opposite of unity or synchronization. The term ‘dissociation’ is also used to indicate a measurable psychobiologic trait. Some authors view ‘dissociation’ as a spectrum, while others argue for a categorical division into normal (e.g., absorption) and pathologic dissociation (e.g., amnesia). A bridging view postulated that normal dissociative reactions provide a fertile ground for pathologic dissociation rather than being categorically distinct phenomena.

Dissociative amnesia is a psychopathologic condition, which can lead to disaggregation of personhood through a disruption or discontinuity of otherwise normally integrated functions of memory, consciousness, emotion, personal identity (self-reference), and behavior (Staniloiu & Markowitsch, 2014; Markowitsch & Staniloiu, 2016).

Prevalence rates of dissociative amnesia were found to vary considerably across countries and populations (0.2 to 7.3%) (Staniloiu & Markowitsch, 2014). Most patients are between 20 and 40 years of age at the time of diagnosis, but children and old people can develop the condition as well (Staniloiu & Markowitsch, 2014). Dissociative amnesia can be recurrent, but data are largely missing. In many patients, long-lasting disability was found. Genetic and epigenetic data on dissociative amnesia are missing, although heritability rates of dissociation are estimated to be 50% or higher (see also Markowitsch, 2015, on an epigenetic hypothesis).

The hallmark of dissociative amnesia is a temporary or long-lasting inability to recollect personal (autobiographical) memory, which is termed retrograde amnesia (Fig. 1). The underlying mechanism is assumed to be blockade of accessing the old personal memories. Therefore, dissociative amnesia was named ‘mnestic block syndrome’ as well (Markowitsch, 2002). Contrary, to the frequently observed Ribot’s law (implying that old information is easier accessible than recent one; Ribot, 1882), the inaccessible memories in dissociative amnesia can be related to any time period, but are related more frequently to early periods in life, as in these often more affect-connnotated incidents occurred.

Figure 1. Possible consequences of a significant event on old and new memories. Anterograde amnesia refers to the inability to store new memories long-term, retrograde amnesia to an inability to retrieve stored information (biographical events, facts). Very old memories are usually more likely preserved than more recent ones.



A frequent phenomenon accompanying dissociative amnesia is ‘la belle indifférence’ (Reinhold & Markowitsch, 2007, 2009), a term used by Sigmund Freud that may have been originally coined by Jean-Marie Charcot (Bogousslavsky, 2011) or by Pierre Janet (Janet, 1892, 1907). It implies that patients with dissociative amnesia have reduced emotional responsiveness – they remain in a narrow emotional equilibrium. The possible reason for this can be explained from results obtained by using functional brain scanning (FDG-positron emission tomography) in patients with dissociative amnesia (Brand et al., 2009; Staniloiu et al., 2010). Here, it was found that these patients show a hypometabolism in emotion-processing areas of the right anterior temporal region, including the amygdala, plus a reduced ventral prefrontal metabolism, that is, in an area necessary for monitoring, controlling and retrieving memories (Kroll et al., 1997; Fink et al., 1996).

2. Patients and methods

We studied altogether 34 patients (age range: 11-54 years; mean age: 37 years) with the diagnosis of dissociative amnesia. All but one of them had live-long retrograde amnesia; the exception had continuous anterograde amnesia (a very rare, but existing form of dissociative amnesia; see Staniloiu & Markowitsch, 2014, Table 2).

Patients were investigated with a psychiatric interview and various neuropsychological tests. Nearly half of them had static and functional brain imaging as well. In addition to tests on attention and concentration, problem solving and concept formation, several memory tests, including an autobiographical memory interview were applied. In addition, tests on symptom validity were used.

Special emphasis was laid on testing affect-related tests (Florida Affect Battery; Reading the Mind in the Eyes Test; Toronto-Alexithymia-Scale; in 3 patients a test on remembering neutral and emotional pictures was applied as well; Bowers et al., 1991; Breitenstein et al., 1996; Baron-Cohen et al., 2001; von Cramon et al., 1993). As questionnaires we used the Freiburg-Personality-Inventory (Fahrenberg et al., 2001), the Symptom-Check-List 90-R (Franke, 2002), the Dissociative Experiences Scale-II (Gast & Rodewald, 2004), the Beck Depression Inventory (Hautzinger et al., 2006), the Structured Clinical Interview for DSM-IV Dissociative Disorders (SKID-D; Steinberg et al., 1993) and the Interpersonal Reactivity Index (Paulus, 2012).

3. Results

Deficits in attention and concentration were found in most patients (20 = 59%). Of course, all of them had severe and lasting retrograde amnesia in the episodic-autobiographical domain (cf. Markowitsch & Staniloiu, 2012, especially their Figure, and Markowitsch & Staniloiu, 2022a, especially their Figure 1), while fact memory (semantic memory) was largely unimpaired or was regained within weeks (with 2 exceptions). Many of the patients (24 patients; 71%) had affect-related changes, manifesting from the start as blunt affect in interviews and conversations. In affect- or emotion-related tests (Florida Affect Battery; Reading the Mind in the Eyes Test; Toronto-Alexithymia-Scale) most of the patients (26 patients; 76.5%) showed remarkable deficits. These were especially seen in the more complex tests of the Florida Affect Battery and in the Reading the Mind in the Eyes Test. The results of the Toronto-Alexithymia-Scale revealed a reduced emotional responsiveness in about half of the patients, tested with this questionnaire.

The application of the other questionnaires confirmed this impression. Frequently minor depressive tendencies were observed (Beck Depression Inventory, Symptom Checklist 90-R), confirming our results from patients with dissociative amnesia that we had tested more than 20 years ago (Markowitsch et al., 1997, 1999). The results from the other questionnaires brought a high number of sometimes were individual deviances from the normal. Roughly three quarters of the patients manifested deviances suggestive of affect-related changes (tendencies of depression, anxiety, somatization, alexithymia).

4. Discussion and conclusions

As the name of the disease – dissociative amnesia and its predecessors (hysteria) – implies, there is a disorganization or decay of normally integrated, or, as we favor to term them, synchronized functions in patients affected by the disease (Markowitsch & Staniloiu, 2022b). The two functional complexes disturbed are emotional evaluation and memory processing (Staniloiu & Markowitsch, 2020). In normal individuals, episodic-autobiographical memories are affectively colorized (Staniloiu & Markowitsch, 2020a, b); when we think of a past personal event, we simultaneously create an image, how we felt, when experiencing the happening. We do this by activating a special form of consciousness, named ‘auto-noetic consciousness’ (Markowitsch, 2003; Markowitsch & Staniloiu, 2011; Tulving, 2005).

Patients with dissociative amnesia usually have a long history of stressful or traumatic events which made their personality labile and susceptible towards influences from the social environment (Staniloiu & Markowitsch, 2010, 2012a, b). It is possible to compare their situation with one of ‘learned helplessness’ (e.g., Seligman, 1972; Maier & Seligman, 1976); they fall into a kind of stupor, of which they know no way out. Consequently, they lose their past – become retrogradely amnesic. And because of their autobiographical amnesia, they also no longer remember, how they behaved to others, when they showed which kinds of emotion. They regress into a state of ‘belle indifference’, some researchers name it ‘anhedonia’ (Bremner & Wittbrodt, 2020), others even would compare it to a zombie-like condition. Taken together, these findings of an amalgamation of episodic-autobiographical memory and affect-related changes in patients with dissociative amnesia strongly point to the fact, mentioned already 150 years by Ewald Hering (1870). Hering wrote: “Memory connects innumerable single phenomena into a whole, and just as the body would be scattered like dust in countless atoms if the attraction of matter did not hold it together so consciousness – without the connecting power of memory – would fall apart in as many fragments as it contains moments” (p. 12).

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MATERNAL WORKLOAD, MATERNAL GUILT AND THE COPING STRATEGIES OF WORKING MOTHERS

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Abstract

Introduction: The current study examined intensive mothering ideals and the maternal guilt experiences of full-time working mothers. Also, it was aimed to explain how they emotionally cope with this sense of guilt they experience. Maternal guilt is common in many countries (Collins, 2020). With the increased number of working women, many mothers feel guilty about the high standards set by intensive mothering (Aycan & Eskin, 2005; Karakaya et al., 2021). While research has indicated that maternal guilt has been linked to many negative effects such as depression, anxiety, and stress (Constantinou et al., 2021; Dunford & Granger, 2017; Sánchez-Rodríguez et al., 2019), less attention has been focused on what mothers do about this guilt they feel. This study investigated the factors and experiences leading to the feeling of guilt and how full-time working mothers cope with this sense of guilt arising. **Method:** This study investigated mothers' emotional coping with guilt using in-depth semi-structured interviews conducted with 10 full-time working mothers living in Turkey. The inclusion criterion for mothers is having at least one 2–6-year-old child because mothers with younger children feel more guilty due to toddlers demanding more care (Borelli et al., 2017). The data gathered from the interviews were analyzed by using phenomenological analysis in the program MAXQDA 20. **Results:** Two main following themes emerged: mothers' experiences and coping. Mothers' experiences consisted of intensive mothering ideals and maternal guilt. Mothers had some intensive maternal ideals like they have to plan all details and fulfill all needs of children. Also, being good both at work and mothering was challenging. These expectations and the feeling of being inadequate might cause maternal guilt. They experienced guilt after they were angry with the child and in some circumstances, such as leaving the child while he/she was sick or spending less time with the child. Another emerging main theme was coping. In an effort to cope with this guilt, mothers employed social support, tried to have time to relax, gained meaning through work, refused intensive and perfect mothering, and emphasized taking less load at work. **Conclusion:** The lived experiences of maternal guilt emanating from intensive mothering ideals and the mothers' management strategies were examined. Implications for working mothers and mental health workers dealing with guilt were discussed in the light of literature.

Keywords: *Mothering, maternal guilt, coping, qualitative study.*

1. Introduction

«Guilt. Uncertainty. Trying to do it better this time around. Trying to give more. Trying to be a better mother than Mother was. In spite of such feelings or because of them, the guilt that mothers feel is endless and tyrannical. Guilt for providing too much attention or not enough, for giving the child too much freedom, or not enough, for spanking, or not- these feelings are common yet often hidden. The guilt of the working mother, the guilt of the mother who does not have to work, the guilt of the mother who tried to do both – work part-time and mother part-time – and feels both jobs suffer because of it...the guilt of the mother whose child is showing signs of disturbance, unhappiness, physical illness; the certainty you've somehow damaged your child permanently, no matter what you've done or fail to do.» Swigart (1991; p.66) *The Myth of the Perfect Mother.*

Being a mother can bring a powerful sense of guilt within the framework of traditional roles. Society and cultural transferences put the heavy burden of child-rearing on the mothers' shoulders. Feminist and sociocultural theories put forth that guilt is excessively induced in women by traditional roles and expect all parenting duties from only women (Taylor & Wallace, 2012). Especially when women start to work after birth, there are many burdens related to the baby and also work. It is very hard to balance work and family life. Mothers feel more burdened because of social judgments and labeling as "bad" mothers in society. Mothers report that they feel guilty because of intensive mothering ideals or, in

other words trying to be a “good” mother in society (Liss et al., 2013). Intensive mothering asks women to devote all energy and time to a child, being child-centered and self-sacrificing (Sutherland, 2010). Mothers are seen as the ones who are responsible for children, and they should fulfill all needs of children all the time. On the other hand, fathers who are in the other part of parenting feel less stressed and guilty about their parenting roles because fathers’ roles are more flexible and uncertain in society (Martinez et al., 2011). Working women, especially those who have young children needing more care, feel more intense guilt and anxiety than working men (Aycan & Eskin, 2005; Borelli et al., 2017). This also shows that maternal guilt arises as a consequence of high standards set by intensive mothering, it is not a natural parenting issue.

Many studies are reporting that maternal guilt is related to many negative experiences and mental health outcomes, such as mood and anxiety disorders, anger, and decreased life satisfaction (Aycan & Eskin, 2005; Liss et al., 2013; Rizzo et al., 2013). So, it is important to understand this concept to find solutions and increase the well-being of mothers. Maternal guilt is common in many countries (Collins, 2020). Constantinou and friends (2021) reviewed the studies conducted about the experiences of maternal guilt in Western cultures. They presented that maternal guilt has a negative impact on mothers’ mental health and well-being and highlighted that there is a need to understand the concept of maternal guilt and how mothers experience it in different cultures. In Turkish culture, while the family system and parenting roles are changing to a more egalitarian structure (Zafer, 2013), the mother is still seen as mainly responsible for child care and the household. In Turkish society, many discourses hand over the burden of the household and the child to the mother (ex: The female bird makes the nest; A mother would be the best nanny, and the dough would be the best yeast). This cultural transference makes mothers feel more responsible and have many responsibilities both at work and home that cause them to feel helpless and inadequate (Karakaya et al., 2021).

While research has indicated that maternal guilt has been linked to many negative effects such as depression, anxiety, and stress (Constantinou et al., 2021; Dunford & Granger, 2017; Sánchez-Rodríguez et al., 2019), especially in Western cultures, less attention has been focused on what mothers do about this guilt they feel. Also, there is not enough qualitative research on this topic, especially in non-Western cultures. In order to cope with maternal guilt and negative outcomes, it is important to understand how working mothers perceive intensive mothering ideals and how they emotionally cope with maternal guilt experiences. This study investigated the factors and experiences leading to the feeling of guilt and how full-time working mothers cope with this sense of guilt arising.

2. Research design and method

In this study, descriptive phenomenological design, one of the most widely used qualitative approaches, was adopted in order to explore working mothers’ experiences of guilt and how they cope with this feeling. This design allows an exploration of the meanings of experiences and provides the development of an in-depth understanding of phenomena by simplifying participants’ expressions (Forrester, 2010; Patton, 2014).

Ten working mothers living in Turkey were enrolled in this study. Purposeful sampling was used to select the participants. The inclusion criteria were as follows: (1) being a full-time working mother, (2) having at least one 2–6-year-old child, and (3) having provided informed consent to participate in the study by signing the informed consent form. Participants mean age was 33.5, ranging from 30 to 35. All participants were married. Six of them had one child, and the others had two children. Three mothers were academicians, three were teachers, two were doctors, one was a diplomatist, and one was an engineer.

2.1. Data collection and analysis

The semi-structured interview questions were the main data collection tool in this study. Interview questions which were created by the author were checked by two clinical psychologists, and the final version of questions was asked to participants. The interviews were carried out online as a Zoom meeting. The interviews were recorded for transcription and lasted about 20 minutes. Some example questions were: “What are the issues about motherhood that you feel guilty about?”, “How do you deal with this guilt?”, “What would help you to feel more comfortable?”.

Interviews were transcribed verbatim were fed into the MAXQDA20 computer program to complete the data analysis. Each transcript was read multiple times, and recurrent themes were defined. Initial codes were identified by the author, and then an inquirer checked the codes and discussed the themes with the author (Patton, 2014). Until saturation was achieved, the process of coding themes was continued. In order to ensure rigor, the author wrote reflexive notes and completed an audit trail (Forrester, 2010).

3. Results

According to the data analysis, two main themes emerged: mothers' experiences and coping. The main theme of mothers' experiences consisted of intensive mothering ideals and maternal guilt. Intensive mothering ideals have three main sub-themes: feeling torn between work and child, planning all things, and being the one to fulfill the child's needs.

Mothers expressed that they are feeling stuck between work and child, they think that they should carry out these two in a balanced way; however, they cannot do it. Some examples of their statements are:

Participant 3 (P3): "Motherhood means splitting both work and home for me. How can I devote myself to work, I always have a mind for my child. I can't concentrate fully on work; I don't want to take too much workload. Always such an escape. I have to go home. In other words, if I can finish the work at hand, I can leave an hour early, otherwise, I will leave at 8-9 o'clock. That's why I don't want to take full responsibility at work. I can't say that: Let me just take responsibility and show myself. I have to think about things at home too. It's always a mess."

P4: "Job responsibilities, child responsibility.. my stress level is increasing, my tolerance is decreasing, and there are different emotional situations that we need to manage constantly, it requires more effort to be in balance. You need to achieve a great balance in every sense, both emotionally and in terms of using time. When there was a meeting during a pandemic, I always said to my child: "Can you come out, there is a meeting right now, will you please go inside?". All day I felt like I rejected my daughter. The biggest annoyance is that when trying to take on more than one role, I feel like I'm sacrificing motherhood the most."

The other intensive mothering ideal is that they have to plan all details and fulfill all needs of children, such as sleeping, playing, education and food. Being the one taking care of the child is exhausting.

P2: "Being a working mom means thinking about many things at once. You have to plan constantly, it's very tiring; thinking about the rhythm of the child is the part that consumes energy, and it is like a file that does not close in mind. In our country and in my own experience, I see this: these plans always fall on the mother. The people who organize all things are mothers. It is always the job of mothers to answer their questions about their children in difficult areas, to provide support, to give them the opportunity to participate in friend organizations, to think about their meals, and to prepare their bags."

Being good both at work and mothering was challenging. These expectations and the feeling of being inadequate might cause maternal guilt. All participants mentioned that they feel guilty as they have limited time for their children due to their work hours.

P5: "When my son started kindergarten, we started to spend less time because I come from work, I have to do housework, but he needs attention. This makes me feel guilty. Then sometimes I can't cook dinner, I think I'm not a good mother. When he gets sick, I have to send him to kindergarten because I have to go to work and there is no one to look after him. I feel guilty when he goes to school sick".

P7: "I'm working as a night doctor, so I am not at home. He was unhappy because he spent those nights without me, he didn't want that. I think he feels more deficient than children whose mothers do not work. I feel guilty."

P8: "I can't spare a lot of time because after going home from work, I have to cook and do the dishes. The child gets very tired and wants to sleep immediately. Sometimes I do not do housework and say let's spend time with her but I cannot because feeling extremely tired after work. Sometimes I feel very unhappy."

Another emerging main theme was coping. In an effort to cope with this guilt, mothers gained meaning through work, refused intensive and perfect mothering, employed social support, and tried to have time to relax. Nine participants out of ten emphasized that having a job is a chance due to many reasons (earning money, finding meaning, and feeling useful). Mothers stated that they are happier when they work and produce something. They said that when they quit their job, they would struggle psychologically and financially. They stated that working is better therefore, they should not feel guilty. They said that their children would be proud of them in the future.

Mothers try to cope with the feeling of guilty by refusing intensive mothering ideals. They stated that being perfect is impossible and spending a good time and having a good attachment are the most important things in their relationship.

P1: "When I feel guilty, I talk to myself: "I'm not the only parent, and I'm doing my best. I can do that much. I should stop trying to be the perfect mother." I'm trying to be more accepting of myself. The most important things are not cooking and cleaning. It is important to make the child feel your love".

P5: "... We must reject the rules of perfect mothering. You don't have to be perfect to be a good mom. You don't have to do all responsibilities. Good enough mothering is enough. Setting up a secure attachment is paramount."

P10: "The important thing is that he feels my love, I tell him that I love him all the time. I was more aggressive when I was at home. When I come from work, I try to spend a little but more quality time. Even if there is no food or the house is dirty, the important thing is the bond and love, I remind myself of this."

Mothers gave importance to having a social support system to cope with guilt. They emphasized spousal/family support as well as tangible support. Many participants indicated that their husbands tried to help them with household and childcare. Many participants stated that they would be more relaxed if they have enough social support in their system.

P9: "My husband and I looked at baby alternately day and night. It was very exhausting; I didn't sleep for weeks. It is very difficult for both the baby and work. If my mother or a mother-in-law was in the same city as us, it would be very helpful. There is no one to leave when the child is sick, no one to leave for 5 minutes. This made me very tired. because it is very expensive, I also could not take a nanny."

Mothers stated that they should have time to relax in order to be healthy and happy mothers. They emphasized that one of the mothers' responsibilities is taking care of themselves.

P2: "I remind myself of my own needs, I say I need this right now. Simply going to the hairdresser, and having coffee with my friends. You will release the tension created by all the roles so that you can continue as a calmer and more pleasant parent".

P4: "Sparing time for herself is something that contributes to motherhood. So you need to have a separate world from children and family. Well, when you catch a world apart from them, if you have such a possibility, if you can spare a special amount of time for yourself in your social circle with your friends, then I think you become a more peaceful and pleasant person. This reflects directly on your mood. I mean, happy mother, happy child".

4. Discussion

This study examined maternal guilt experiences and coping mechanisms through in-depth interviews with 10 Turkish full-time working mothers to develop a richer conceptualization of maternal guilt and coping. Findings helped to explain how mothers cope with this feeling created by the intensive mothering ideal and the pressures of childcare and heavy work life. It was found that mothers have ideas that they should perfectly balance work and family life. They are affected by cultural and social leanings. Even if they know that it is very hard to take on all responsibilities, they unconsciously believe that they should plan every detail about the children and house and also fulfill the child's needs. Dean et al. (2021) mentioned that the mental load that women disproportionately undertake in a family is a combination of cognitive and emotional labor. This makes them very stressed because all these duties need extra energy and time. Additionally, locking mothers lead to an anxiety-producing loop because they as they continually intended to meet unrealistic intensive mothering standards, then critique themselves when they unavoidably feel inadequate (Field-Singh & Cooper, 2021). This guilt loop has some psychological, economic, and social costs. As supported in previous studies (e.g., Derella & Milan, 2021), because of the ideals for good mothers, intensive mothering pressures are related to more stress, anxiety, and depression.

Mothers expressed that they try to manage their emotionality by refusing perfect mothering ideals, having a job (i.e., earning money and being productive), and taking social support. They also stated that spare time for themselves is very helpful in reducing stress and being a healthy and happy mother. In Turkey, motherhood is seen as a sacred living, and like in other cultures, the society gives the burden of childcare to a woman's shoulders. Likewise, Bianchi et al. (2012) found that mothers spend double the effort compared with men in providing childcare and doing housework. So, it is not surprising that mothers try to refuse these roles in order to deal with negative emotions. As indicated in Aycan and Eskin's (2005) study, spousal support is a necessity for childcare and reduced work-family conflict, this study also put forward that spousal, social, and tangible support is crucial for women's management of emotionality.

This study has an important limitation. The sample was small and limited to highly educated mothers. However, it is valuable to be an example of a qualitative study in a non-western country, Turkey and put the fact forward that maternal guilt is universal and related to the intensive mothering ideal. Furthermore, it provided a more robust understanding of the concept of maternal guilt and how mothers try to cope with it. It is recommended that further qualitative and quantitative research in different countries may help provide a better understanding of maternal guilt and coping mechanisms. When the needs of mothers are fully comprehended, what kind of changes and solutions need to be made in society and the family system can be better put forward and studied.

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SELF-DIFFERENTIATION, RESILIENCE, DISSOCIATION, AND DEPRESSION AS PREDICTORS OF DIFFERENT FAMILY ROLES *¹

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Abstract

In order to facilitate family functioning children often assume different roles (e.g. hero, scapegoat, mascot, lost child). The role that a specific child will assume is determined both by the characteristics of the family system and his/her personal characteristics. The aim of this research was to examine the relations between different family roles (hero, scapegoat, mascot, lost child) and dimensions of self-differentiation (emotional reactivity, I position, emotional cutoff, fusion), resilience, dissociation, and depression. The sample consisted of 179 students of psychology and social work and social policy, aged 18 to 25 years ($M = 20.09$; $SD = 1.64$). The following instruments were used: Children's Roles Inventory (CRI), Patient Health Questionnaire (PHQ-9), Differentiation of Self Inventory (DSI), Stress Related Dissociation-10 (SRD-10), Connor-Davidson Resilience Scale (CD-RISC). Results of regression analysis showed that fusion was the only statistically significant predictor of family role hero ($\beta = -.238$, $p = .004$; $R^2 = .137$, $F(4, 144) = 5.73$, $p < .001$). Significant predictors of family role scapegoat were emotional cut-off ($\beta = -.333$, $p = .000$) and dissociation ($\beta = .229$; $p = .048$; $R^2 = .188$, $F(4, 144) = 8.326$, $p < .001$). Emotional cut-off ($\beta = .180$, $p = .026$), and resilience ($\beta = .210$, $p = .035$) were statistically significant predictors of family role mascot ($R^2 = .188$, $F(3, 145) = 8.326$, $p = .002$). The emotional cut-off was the only statistically significant predictor of the family role the lost child ($\beta = -.470$, $p = .000$; $R^2 = .254$, $F(4, 144) = 12.286$, $p < .001$). Results indicate that dimensions of self-differentiation have an important role in assuming certain family roles. Higher scores of emotional cutoff play an important role in assuming less functional roles (role of the scapegoat and the lost child), while a lower level of emotional cutoff is a significant predictor of more functional role such as mascot. It is also showed that a higher level of fusion is predictive of family role hero. Dissociation is important in understanding assuming the role of a scapegoat, whereas resilience has a significant contribution in assuming the family role mascot. The results could have practical implications for psychotherapy, and a better understanding of family functioning.

Keywords: Family roles (hero, scapegoat, mascot, lost child), self-differentiation, resilience, dissociation, depression.

1. Introduction

The family can be perceived as a system in which all family members are interconnected, and the system itself can be viewed as the result of dynamic interaction among family members (Potter & Williams, 1991). Thus, the problem of one family member affects other members, but also the family as a whole. In an effort to maintain balance, the entire family system may become unhealthy, and family members could assume defensive patterns in order to survive. In order to facilitate family functioning, children often assume different roles. Black (1982; as cited in Potter & Williams, 1991) and Wegscheider (1981; as cited in Potter & Williams, 1991) theoretically indicated the roles that children could assume in dysfunctional families with alcoholism. A decade later, Potter and Williams (1991) created an instrument in order to empirically confirm these roles on a sample of adults. These roles are hero (guardian, responsible child), the scapegoat (problematic child, acting-out child), lost child (forgotten child/adjuster), and mascot (clown, family pet) (Potter & Williams, 1991; Veronie & Fruehstorfer, 2001). The hero obtains positive attention through achievement-oriented behavior (Samuel, Mahmood, & Saleem, 2014;

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Williams & Potter, 1994). These individuals are very successful in school or at work and put the needs of others before their own. Trying to achieve a certain level of control and stability within the family system, a child who assumes the role of hero may appear to others as competent and serious, while actually feeling weak and guilty inside (Veronie & Fruestorfer, 2001; Williams & Potter, 1994). Individuals who assume the role of scapegoat may seek attention through negative, confrontational, or defiant behaviors (Veronie & Fruestorfer, 2001; Williams & Potter, 1994). A child who assumes this role usually shows a preference for outside-family activities and is more influenced by the values of peer groups, whereby they often engage in antisocial, delinquent, destructive behaviors, dropping out of school (Veronie & Fruehstorfer, 2001; Potter & Williams, 1991). Individuals who take on the role of the lost child are usually isolated, neither successful nor weak in school, and often use imagination, drugs, or food as a form of escape (Potter & Williams, 1991; Scharff, Broida, Conway, & Yue, 2003; Veronie & Fruehstorfer, 2001). The mascot role is characterized by relying on humor when dealing with disturbing and unpleasant thoughts, feelings, or situations (Veronie & Fruehstorfer, 2001; Scharff et al., 2003).

Fischer and Wapler (1994; as cited in Samuel et al., 2014) placed the roles hero and the mascot in the “positive” category while the scapegoat and the lost child in the “negative” category. These two categories were determined by the extent to which these roles helped or hindered the normal functioning of the family.

Potter and Williams (1991) assumed that the effects of parental alcoholism on children’s emotional and behavioral functioning may follow them into adulthood, i.e. problems with low self-esteem and self-acceptance, trust, and control may continue after childhood and adolescence. Further, since they engage in behaviors consistent with their family role both inside and outside the home they tend to perpetuate their role into adulthood (Veronie & Fruehstorfer, 2001). In previous research (Potter & Williams, 1991) it is shown that these roles exist not only in families with the presence of parental alcoholism but in every family. According to our findings, only a few research was interesting in these family roles (Potter & Williams, 1991; Samuel et al., 2014; Veronie & Fruehstorfer, 2001; Williams & Potter, 1994), living this field of interest generally unresearched.

Relying on the descriptions of these family roles given in previous research (Potter & Williams, 1991; Samuel et al., 2014; Veronie & Fruehstorfer, 2001; Williams & Potter, 1994), we assumed that the inclusion of some of the individual characteristics, such as differentiation of self, depression, dissociation, and resilience, could significantly contribute to a better understanding of these roles.

Having in mind that the level of differentiation, as one of the most important concepts from Bowen’s theory of the family system, is primarily linked to family patterns of interaction (Chung & Gale, 2009), we assumed that it could be correlated with children’s family roles. Two levels of differentiation of self could be distinguished: intrapersonal and interpersonal (Skowron & Friedlander, 1998). On the intrapersonal level differentiation of self refers to the ability to distinguish between feelings and thoughts, and balance between emotional and intellectual functioning. On the interpersonal level indicate the ability to experience closeness with others, without the loss of autonomy of own self. Four indicators of the level of differentiation of an individual have been adopted: the ability to take an I position, emotional reactivity, emotional cutoff, and fusion with others. Poorly differentiated persons tend to be more emotionally reactive, thus in response to the emotionality of others they have difficulties to remain calm. More differentiated individuals are capable of taking an I position in relationships with keeping a clearly defined sense of self. Highly fused individuals remain emotionally “stuck” in the position they occupied in their families of origin, have few firmly held convictions and beliefs, are either dogmatic or compliant and seek acceptance and approval above all other goals. The emotional cutoff is personified by the reactive emotional distancer, who appears isolated from others, tends to deny the importance of family, and displays an exaggerated facade of independence. Fused person tends to experience separation as overwhelming, while the emotionally cutoff person finds intimacy threatening. Both individuals are poorly differentiated, whereby their self-esteem is based on the approval of others.

Since it has been shown that some children faced with problematic family circumstances withdraw into themselves, tend to fantasize, escape through food, and drugs, or develop certain psychological difficulties we included depression and dissociation (Potter & Williams, 1991; Scharff et al., 2003; Veronie & Fruestorfer, 2001; Williams & Potter, 1994). Depressive disorders are defined by gloomy feelings, loss of interest and energy, feelings of guilt or low self-worth, not enjoying anything (Lim et al., 2018). It is usually accompanied by physical symptoms, poor and insufficient sleep, poor appetite, low self-esteem, and low global satisfaction with life. Dissociation is a complex psychophysiological process that alters the accessibility of memory and knowledge, integration of behavior, and sense of self (Carlson, Yates, & Sroufe, 2009). Dissociative processes may manifest as disturbances of affect regulation (e.g., mood swings, feelings of isolation), identity disruptions (e.g., splitting, fragmentation), autohypnotic phenomena (e.g., time distortions, psychogenic numbing),

memory dysfunction (e.g., psychogenic amnesia, fugue), revivification of traumatic experience (e.g., flashbacks, hallucinations), and behavioral disturbance (e.g., inattention, poor impulse control, self-harm).

Considering that some children faced with problematic family circumstances take on roles that lead to functional solutions, such as the role of hero or mascot (Veronie & Fruehstorfer, 2001; Scharff et al., 2003), we hypothesized that resilience could contribute to a better understanding of some of the roles that children assume. Resilience refers to viewing changes as challenges, developing a strategy with a clear goal, action orientation behavior, strong self-esteem/confidence, adaptability when coping with change, humor in the face of stress, taking on responsibilities for dealing with stress, security/stable affectional bonds, commitment, faith (Connor & Davidson, 2003).

2. Objectives

The aim of this research was to examine the relations between different family roles (hero, scapegoat, mascot, lost child) and dimensions of self-differentiation (emotional reactivity, I position, emotional cutoff, fusion), resilience, dissociation, and depression. More precisely, we were interested in the predictive value of dimensions of self-differentiation (emotional reactivity, I position, emotional cutoff, fusion), resilience, dissociation, and depression in relation to different family roles (hero, scapegoat, mascot, lost child).

3. Methods

3.1. Sample

The research sample consists of 149 students of psychology and social work and social policy at the Faculty of Philosophy, University of Niš, Serbia, aged 18 to 25 ($M = 20.09$, $SD = 1.64$). Out of the total number, 88 respondents come from a complete family, 28 from an incomplete family, and 29 from an extended family. When it comes to the partnership status of the parents, 115 respondents indicated that their parents were married, 23 were divorced, and 6 marked the answer "other".

3.2. Variables and instruments

Children's Roles were measured with the Children's Roles Inventory (CRI; Potter & Williams, 1991) which consists of 60 items divided across four subscales – hero ("When I was a child I was an achiever."; $\alpha = .860$), scapegoat ("When I was a child I was aggravating"; $\alpha = .858$), lost child ("When I was a child I was depressed."; $\alpha = .868$), and mascot ("When I was a child I was animated"; $\alpha = .739$). The scale is rated on a five-point Likert scale. Although the scale was called Children's Role Inventory, it was intended for adults participants (Potter & Williams, 1991).

Self-differentiation was measured with Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998) that has 43 items with four subscales: emotional reactivity ("People have remarked that I'm overly emotional"; $\alpha = .753$), I position ("I tend to remain pretty calm even under stress."; $\alpha = .786$), emotional cutoff ("I have difficulty expressing my feelings to people I care for"; $\alpha = .752$), and fusion with others ("I worry about people close to me getting sick, hurt, or upset"; $\alpha = .612$). The scale is rated on a six-point Likert scale, with higher scores reflecting greater differentiation.

Depression was measured with the scale Patient Health Questionnaire - 9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001). The scale consisted of nine questions with possible answers from 0 (not at all) to 3 (nearly every day) ("In the last 2 weeks, how often have you been bothered by any of the following problems: weak interest or satisfaction to do something"; $\alpha = .850$).

Dissociation was measured with Stress-Related Dissociation – 10 (SRD-10; Knežević & Jović, 2004). This scale contains 10 questions with possible answers from 1 (not at all) to 5 (nearly every day) ("People tell me I'm distracted."; $\alpha = .846$).

Resilience was measured with Connor-Davidson Resilience Scale (CD-RISC; Connor & Davison, 2003). The scale contains 25 items with possible answers from 0 (nearly never true) to 4 (nearly always true) ("I have a feeling that I have control over my life"; $\alpha = .862$).

4. Results

Descriptive statistics of measured variables were presented in Table 1, and then results of correlation (Table 2) and regression analysis were given.

Table 1. Descriptive statistics of the of measured variables.

Variable	N	Min	Max	M	SD	Sk	Ku
Hero	149	2.47	5.00	3.83	0.59	-0.228	-0.722
Scapegoat	149	1.00	3.80	1.91	0.60	0.649	-0.063
Mascot	149	2.20	4.67	3.60	0.50	-0.405	-0.056
Lost child	149	1.00	4.73	2.53	0.74	0.424	-0.118
Emotional reactivity	149	1.40	6.00	3.09	0.88	0.634	0.623
I position	149	2.18	6.00	4.27	0.80	-0.182	-0.669
Emotional cut off	149	2.00	6.00	4.41	0.85	-0.453	-0.141
Fusion	149	1.00	5.50	2.71	0.80	0.707	1.071
Resilience	149	1.52	3.92	2.87	0.49	-0.413	-0.165
Depression	149	0.00	2.78	0.95	0.6	0.872	0.104
Dissociation	149	1.00	4.60	1.85	0.75	1.001	0.564

Table 2. Correlation between variables.

	Emotional reactivity	I position	Emotional cutoff	Fusion	Resilience	Depression	Dissociation
Hero	-.059	.209*	.117	-.175*	.287**	-.109	-.169*
Scapegoat	.008	-.169*	-.375**	.016	-.087	.220**	.294**
Mascot	.101	.163*	.212**	-.096	.254**	-.098	-.114
Lost child	-.150	-.083	-.494**	.018	-.171*	.248**	.231**

**Correlation is significant at the .01 level

*Correlation is significant at the .05 level

The results showed that family role hero is in positive correlation with I position and resilience, and in negative correlation with fusion and dissociation. Family role scapegoat is in negative correlation with I position and emotional cutoff, and in positive correlation with depression and dissociation. The mascot was in positive correlation with I position, emotional cutoff, and resilience. The lost child was in a negative correlation with emotional cutoff and resilience, and in a positive correlation with depression and dissociation.

Results of regression analysis showed that fusion was the only statistically significant predictor of family role hero ($\beta = -.238$, $p = .004$; $R^2 = .137$, $F(4, 144) = 5.73$, $p < .001$). Significant predictors of family role scapegoat were emotional cutoff ($\beta = -.333$, $p = .000$) and dissociation ($\beta = .229$; $p = .048$; $R^2 = .188$, $F(4, 144) = 8.326$, $p < .001$). Emotional cutoff ($\beta = .180$, $p = .026$), and resilience ($\beta = .210$, $p = .035$) were statistically significant predictors of family role mascot ($R^2 = .188$, $F(3, 145) = 8.326$, $p = .002$). The emotional cutoff was the only statistically significant predictor of the family role of the lost child ($\beta = -.470$, $p = .000$; $R^2 = .254$, $F(4, 144) = 12.286$, $p < .001$).

5. Discussion

In this research, we were interested in relations between different family roles (hero, scapegoat, mascot, lost child) and dimensions of self-differentiation (emotional reactivity, I position, emotional cut-off, fusion), resilience, dissociation, and depression.

The results showed that fusion was the only statistically significant predictor of family role hero in a way that a higher level of fusion is correlated with a higher probability that a person will assume this family role. Just to remember, in accordance with instructions given for scale DSI, higher scores of dimensions of emotional reactivity, I position, fusion, and emotional cutoff refer to a higher level of differentiation. This result is not so surprising having in mind that although the hero is usually seen as the one who is achiever, the successful one, inside themselves they feel weak and guilty (Veronie & Fruensterfer, 2001; Williams & Potter, 1994). According to obtained results, we could say that persons who assume the family role hero are somewhat poorly differentiated, i.e. fused (Skowron & Friedlander, 1998). When it comes to family role mascot statistically significant predictors were emotional cutoff (in a negative direction) and resilience (in a positive direction). In line with obtained results, we could say that an individual who assumed this family role is more self-differentiated and resilient. The emotional cutoff was the only statistically significant predictor (in a negative direction) of the family role lost child, while emotional cutoff (in a negative direction) and dissociation (in a positive direction) were statistically significant predictors of family role scapegoat. It could be said that persons who assumed family roles lost

child or scapegoat have a tendency to emotionally distance themselves from family and deny its importance, appear aloof and isolated from others. The results are as expected referring to previous findings of these family roles (Williams & Potter, 1994). Individuals who assume the role of the scapegoat usually show a tendency to outside-familial activities, and are more influenced by the values of peer groups, engaging more often in antisocial, delinquent, destructive behaviors, while individuals who assume the role of the lost child are usually isolated (Potter & Williams, 1991; Scharff et al., 2003; Veronie & Fruehstorfer, 2001). It showed that dissociation as a complex psychophysiological process that alters the accessibility of memory and knowledge, integration of behavior, and sense of self (Carlson et al., 2009) is of important in better understanding the family role scapegoat.

6. Conclusion

Results indicate that some dimensions of self-differentiation have an important role in assuming certain family roles. Higher scores of emotional cutoff play an important role in assuming less functional roles (role of the scapegoat and the lost child), while a lower level of emotional cutoff is a significant predictor of more functional roles such as mascot. It is also shown that a higher level of fusion is predictive of a family role hero. Dissociation is an important factor in understanding assuming the role of a scapegoat, whereas resilience has a significant contribution in assuming the family role mascot. The results could have practical implications for psychotherapy, and a better understanding of family functioning.

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HEALTH-RELATED GOALS AND GOALS OBSTACLES IN EMERGING ADULTHOOD

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Abstract

Aim: This study was conducted to investigate the description of the content of mental health-related goals that emerging adults try to achieve and goal-related obstacles. Additionally, it examined the relationship between subjective perceived mental health, action crisis (ACRISS scale,) and dispositional mindfulness (FFMQ 18). Content analysis identified categories of achieved goals and goal-related obstacles; and correlations. **Sample:** 400 Slovak respondents participated in an online study, with an age range of 20-30 years ($M = 22.5$ years, $SD = 2.66$). **Results:** Most respondents set mental-health-related goals. Overall were e.g., emotional stability, and coping with stress. Goal-related obstacles include lack of time, laziness, or lack of skills. Examining the relationships, we found that a higher rate of action crisis is associated with poorer mental health, and a higher frequency and intensity of obstacles are associated with a higher rate of action crisis in young adults, but the intensity and frequency of obstacles are not related to reported mental health. **Conclusion:** The results highlight the importance of investigation of mental-health-related goals, mindfulness, and action crisis research in emerging adulthood, as the relationship between mental health and the obstacles themselves has not been demonstrated.

Keywords: *Mental health, emerging adulthood, goals, obstacles, action crisis, mindfulness.*

1. Introduction

The research aim was inspired by the study by Milyavskaya and Nadolny (2016). Reflecting on the deteriorating health situation among young people and the growing number of preventable health problems, Milyavskaya and Nadolny (2016) asked their young American respondents about their current physical health, and whether they set and achieved physical health-related goals. However, in health research, it is also necessary to emphasize the specifics and importance of plans in the field of mental health, which is often (especially when researching goals) neglected. While depression is one of the leading causes of illness and disability in adolescents and young adults, half of all mental health disorders in adulthood begin as early as age 14 (Konstantopoulou et al., 2020; WHO, 2021). Therefore, this research addresses the issue of insufficient focus on goals in the mental health field among young Slovaks, represented by spontaneously stated experienced obstacles and the concept of mindfulness and action crisis assessed by a standardized scale. The aim of this work is to investigate the subjective mental health of young adults and to create categories of the most common goals of young Slovaks in the field of mental health, and their obstacles. Additionally, find out whether the variable as dispositional mindfulness and action crisis is related to the current mental health of young adults.

2. Methods

2.1. Participants

The research sample consisted of 400 participants (62% female), in the age range of emerging adulthood: 20-30 years ($M = 22.5$ years, $SD = 2.66$). The mean age of men was 23.3 years with a standard deviation of $SD = 2.26$ and the mean age of women was 23.1 years with a standard deviation of $SD = 2.75$.

2.2. Measurements

Health goal. According to the authors of Milyavskaya and Nadolny (2016), respondents were asked to answer whether they were currently achieving any goal in the field of mental health (yes/no). If they answered yes, respondents had space to write a specific goal that they had been trying to accomplish.

Then they were asked to list the most obstacle that had got in the way of them pursuing the goal. After each obstacle, participants were asked to rate selected obstacle characteristics: frequency, intensity.

Dispositional Mindfulness (FFMQ 18) The original FFMQ questionnaire (Baer et al., 2006) is a 39-item self-report questionnaire measuring the five mindfulness facets using a 5 point Likert scale formatted with responses ranging from 1="Never or very rarely true" up to 5="Very often or always true". The questionnaire used in this study is a shortened version of the FFMQ questionnaire adapted from Medvedev et al (2018). The short version was shown to be useful for comparisons of mindfulness and its facets at a group level or when investigating the associations of mindfulness with other variables. Items included questions such as: "I pay attention to physical experiences, such as the wind in my hair or sun on my face".

At the end of test battery, participants answer questions according to action crisis. Action crisis was measured using the ACRISS scale (Brandstätter & Schüler, 2013). Respondents answered by expressing agreement or disagreement on a 7-point Likert scale (1 - "strongly agree", 7 - "strongly disagree") to 6 items.

2.3. Analytical procedure

The descriptive data, correlations were computed in Jamovi 0.9.2.8. The collected data were part of a bigger project related to goal-directed behavior and overcoming goal-related obstacles. Nevertheless, the presented pattern of results is unique to this study. Two independent coders rated each description of the goal and the obstacles. The coders were in good agreement (95%) and any discrepancies were resolved by the lead author.

3. Results

Content analysis evaluated the goals of young Slovaks, which are reported below in Table 1. Most respondents (80%) set goals in the area of mental health. As presented in Table 1, the preliminary analyses revealed that 61% of the goals were related to psychological self-care activities. The most common obstacles include obstacles on side of person or lack of time.

Table 1. Percentage of reported goals and goal obstacles.

	Category	Example	(%)
SELF-	Emotional stability	overcome anxiety; to learn to manage emotions; emotional stability; not to get immediately upset about something that happens to me; better emotional regulation; to be in emotional balance; be happy	22
	Positive thinking	to take life more positively; to see things in a better light	9.7
PSYCHOLOGICAL CARE (61%)	Coping with stress	don't allow yourself to be stressed; to cope with stress; to learn how to reduce stress	15
	Self-esteem	to build better self-esteem; to learn to love yourself; to accept myself with all my qualities. think about my needs;	12
	Coping with mental disorder	to get out of depression; to take regular medication; look for psychologist	2.3
SELF-DEVELOPMENT (24%)	Skills and abilities	to learn to communicate with people; self-control skills; mindfulness techniques; techniques how to change rumination	15
	Productivity	stop procrastinating; better time management;	8
FAMILY GOALS (12%)	Independence	to become independent from parents; to detach emotionally from parents	8.6
	Family relationships	reconcile with mom	2.4
OBSTACLES	Me	me; lack of effort; lack of family support; doubts, subjective obstacles	36
	Time trouble	lack of time, time pressure, insufficient time	24
	Skills	lack of skills; lack of information; lack of competence	15,8
	Stress	a lot of stress, pressure from school	4

Examining the relationships between the variables, we found that a higher rate of action crisis was related to poorer mental health, $r = -.36$, $p < .01$. Supported by results that higher frequency and intensity of obstacles were associated with a higher rate of action crisis $r(\text{frequency}) = .27$, $p < .01$; $r(\text{intensity}) = .31$, $p < .01$ in young adults, but the intensity and frequency of obstacles were not related to reported mental health.

The analysis revealed a negative significant correlation between mindfulness and action crisis, $r = -.34$, $p < .01$; and positive relation between mindfulness and mental health $r = .21$, $p < .01$.

4. Discussion

Goals are very important in a person's life. Therefore, the main goal of this study was to explore what mental-related goals young people set and reach. Based on the sample of 400 young Slovak, the study has found, that goals in the area of mental health vary. The most represented category is goals focused on psychological self-care mainly in the form of emotional stability and coping with stress. Most young adults want to improve their abilities to manage their emotions. The sub-category coping with stress was related to stress reduction, which confirms that the period of young adulthood is to some extent a stressful period. Within the second most represented category, we can conclude that emerging adults are interested in their self-development, which they want to either maintain or acquire.

After sorting the obstacles mentioned by the respondents we found that the most mentioned obstacle was a subjective obstacle on side of a person, for example, lack of effort or laziness. The other most mentioned obstacles were lack of time or trouble with time regulation.

Additionally, the study analysed whether there is a relationship between subjectively perceived mental health, action crisis, and dispositional mindfulness. Results confirmed that higher rate of action crisis is related to poorer mental health. It is in relation to the general definition of action crisis that describe it as significant intrapsychic conflict to stay or deviate from the path to the goal. An action crisis is defined as a critical phase in the pursuit of a goal in the event that the goal appears difficult to reach (Brandstätter, Schüler, 2013) and action crisis is associated to lower levels of subjective well-being and health (Brandstätter, Herrmann, Schüler, 2013). Opposite, it was confirmed a significant relationship between mindfulness and mental health. This creates a hypothesis about the possible protective effect of mindfulness in problematic goal achievement.

Acknowledgments

APVV-19-0284 Factors of choosing and achieving long-term goals in young people in the transition to adulthood.

VEGA 1/0145/23 If achieving a health goal becomes problematic - what then? Overcoming an action crisis as a critical phase in achieving the goal.

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THE MEDIATORY ROLE OF SELF-COMPASSION IN THE RELATIONSHIP BETWEEN SOCIAL ANXIETY AND LONELINESS

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Abstract

The aim of this study is to examine the mediatory role of self-compassion in the relationship between social anxiety and loneliness among young adults. The study sample consisted of 356 young adults, 288 of whom were female (%80) and 68 of whom were male (%19.1). Participants had an average age of 24.05 which varied between 18 and 40 (SD=4.58). "Liebowitz Social Anxiety Scale", "Self-compassion Scale", "UCLA Loneliness Scale" and the demographic information form were used in the study. Regression analyses were primarily applied, and it was discovered that social anxiety predicted loneliness positively; on the other hand, self-compassion predicted it negatively. For mediatory analysis, SPSS PROCESS Program was employed. According to the results of mediatory analyses, self-compassion has a partial mediation role in the relationship between social anxiety and loneliness.

Keywords: *Social anxiety, loneliness, self-compassion.*

1. Introduction

Being noticed, recognized by other people, and communicating with them are among the basic needs of people (Peplau & Perlman, 1979). To avoid loneliness and meet the need for belonging, people tend to protect and maintain the relationships they have, even if these relationships are problematic. Therefore, it is possible to say that socialization is the common motivation of humanity (Baumeister & Leary, 1995).

Loneliness is an impulsive, distressing experience, just like depression, anxiety, and other negative emotional states. As a result of not being able to communicate with the environment as desired, or the communication is perceived as having poor quality, the communication being actualized doesn't meet the necessity, and an inconsistency emerges. Therefore, this situation is perceived as a deficiency in interpersonal relationships. This deficiency could be considered in terms of quantity (e.g., not having enough friends) and/or quality (e.g., not establishing enough intimate and quality relationships) as an uncomfortable experience for the person and manifests as a feeling of loneliness (Russell, Cutrona, Rose, & Yurko, 1984; Lopata, 1969; Perlman & Peplau, 1981; Heinrich & Gullone, 2006).

According to Horowitz, French, and Anderson (1982), some people who feel lonely have problems communicating with other people and believe that they are inadequate in interpersonal situations. As a result of their reluctance to take the necessary initiatives and avoid situations that require communication as much as possible, they cannot find enough opportunities to improve their social skills, and the possibility of making mistakes increases. As a result, some people experience manageable fear when confronted with social situations, while others experience extreme anxiety accompanied by physical symptoms such as nausea, flushing, trembling in the hands, and even panic attacks. When this situation interferes with the social life of people, it is called 'social anxiety' and is evaluated as a mental disorder (WHO, 2015; APA, 2013; Walsh, 2002).

According to the cognitive model of Clark and Wells (1995), the main cause of social anxiety is that people desire to have a positive impression on others, but do not believe that they are able to do so, that is, perceive themselves as inadequate. With the influence of people's previous experiences and cognitive predisposition, they develop many negative beliefs about themselves and their social environment. They tend to believe that when they enter a social environment, they would behave clumsily and in a way that is not accepted by society; and that these behaviors will eventually cause exclusion, and loss of value and status. When people perceive the social situation in this way, anxiety reactions increase

in a way that disrupts their functioning. Along with anxiety, some bodily reactions such as blushing and/or a rapid heartbeat may occur, and people become more anxious fearing that this situation will be noticed by other people. Indeed, this causes people to be constantly preoccupied with their appearance, feelings, and behaviors and not be able to pay enough attention to other people which is identified as seeing themselves as a 'social object' in the eyes of other people in social situations. As a result, the lack of outward attention and the tension brought by anxiety makes it difficult for people to treat other people warmly and therefore to receive a warm response from them. Consequently, social anxiety continues in a vicious circle by feeding on negative beliefs about the self and social environment (Clark & Wells, 1995; Bögels & Mansell, 2004). Hence, people with high social anxiety may prefer to be alone as they tend to avoid social situations unless there are people they trust and feel close to (Brown, Silvia, Myin-Germeys, & Kwapil, 2007). At the same time, the safety behaviors they perform to reduce anxiety can cause negative reactions from the people they communicate with, and this makes the person with high social anxiety less attractive to be chosen as a friend (Alden & Bieling, 1998).

In order for negative self-evaluation, which is a determinant of social anxiety, to change positively, it is important for people to approach themselves with compassion. As a matter of fact, even if people with high self-compassion evaluate their performance in a situation, they do not see this evaluation as a part of their personality. Therefore, their self-perceptions do not change depending on whether their performance is good or bad (Neff, Hsieh, & Dejitterat, 2005). The concept of self-compassion, which emerged from Eastern philosophy, could be defined as having a loving approach towards oneself (Self-kindness) instead of being harshly criticized (Self-judgment) in the face of mistakes and shortcomings; being aware of existing feelings and thoughts without making judgments (Mindfulness) instead of over-identifying (Over-identification) with the experiences that cause distress, and lastly being conscious of sharing with the perspective that many situations are the common experience of humanity (Common humanity) instead of being isolated by evaluating the experiences only as unique situations (Isolation) (Neff, 2003a). Therefore, self-compassion helps people be compassionate towards themselves and others by being aware of the imperfect nature of humanity (Neff, Kirkpatrick, & Rude, 2007; Neff, 2009). People with high self-compassion are less stressed because they accept the situation as it is they are in without judging themselves in a difficult situation. As a result of this, they are less afraid of making mistakes; they experience less negative mood states such as irritability, burnout, shyness, and inferiority complex (Gilbert & Procter, 2006).

Self-compassion is known to have a direct effect on loneliness. Self-judgment, the feeling of isolation from society, and over-identification with experiences are important factors that cause loneliness, and all these approaches are rarely seen in people with high self-compassion. Therefore, these people tend to feel less lonely (Akın, 2010a).

In the present study, the mediating role of self-compassion in the relationship between social anxiety and loneliness was examined. The hypotheses of the research are stated below:

H1: Social anxiety predicts loneliness positively.

H2: Social anxiety predicts self-compassion negatively.

H3: Self-compassion predicts loneliness negatively.

H4: Self-compassion is the mediating variable in the relationship between social anxiety and loneliness.

2. Methods

2.1. Participants and materials

The study sample consisted of 356 young adults, 288 of whom were female (%80) and 68 of whom were male (%19,1). Participants had an average age of 24.05 which varied between 18 and 40 (SD=4.58).

To collect data, a survey was prepared, which consisted of a Personal Information Form, the UCLA Loneliness Scale, the *Liebowitz Social Anxiety Scale*, and the *Self-compassion Scale*. All participants took part in the study online during the COVID-19 pandemic on a voluntary basis. On average, it took 15-20 minutes for participants to complete the survey.

Participants' demographic information was obtained through a "Personal Information Form", which includes personal questions about their age, gender, and grade and questions related to their parents/caregivers, such as their marital status, educational background, and occupation.

The UCLA Loneliness Scale (Russell, Peplau, and Cutrona, 1978) was used to assess the degree of loneliness. It is a four-point Likert-type scale that consists of 20 items in total and a minimum of 20 and a maximum of 80 points can be obtained from the scale. In the present study, Cronbach's alpha of the scale was .91.

The Liebowitz Social Anxiety Scale (Liebowitz, 1987) was used to measure social anxiety. It is a four-point Likert-type scale consisting of two sub-dimensions, 'Anxiety' and 'Avoidance'. Although the

same 24 items are included in both sub-dimensions, the 'Anxiety' dimension refers to the individual's anxiety about social interactions and performance; the 'Avoidance' dimension determines the level of avoidance from these environments. The scale can obtain a minimum of 48 and a maximum of 192 points by adding the two dimensions. In the present study, Cronbach's alpha of the 'Anxiety' dimension was .89, and of the 'Avoidance' dimension was .88. In this study, a total score (SA) was used, and Cronbach's alpha value was .94.

The Self-compassion Scale (Neff, 2003b) was used to measure self-compassion level. It is a five-point Likert-type scale consisting of 26 items and consists of six sub-dimensions: Self-kindness, Common humanity, Mindfulness, Isolation, Self-Judgment, and Over-identification. As each sub-dimension can be scored separately, a total score can be obtained by reverse scoring the items of the negative sub-dimensions. A minimum of 26 and a maximum of 130 points can be obtained from the scale as a total score. In this study, the total score (SC) was used and the Cronbach's alpha value was .92.

3. Results

In this section, analysis results are given. In accordance with the hypotheses of the study, firstly it is assumed that the distributions of the scale scores obtained from the data are normal distribution. While deciding about the distributions, and skewness/kurtosis measures, Kolmogorov-Smirnov Normality Test, histogram, and box plots were used. Then the correlation analyses were estimated between variables, and the loneliness of social anxiety was positive; self-compassion was found to predict negatively. Finally, multiple linear regression models were estimated for the mediation analysis-based SPSS PROCESS program was used. For this process assumptions of regression models (normality and multicollinearity) were tested.

Table 1. Multiple Linear Regressions for Mediator Variable.

Models		B	SE	β	t	R ²	Bootstrap LLCI	Bootstrap ULCI
SA→SC	Constant	104,94	4,075	-	25,747***	0,08	96,925	112,957
	SA	-0,247	0,044	0,282	-5,550***		-0,334	-0,159
SA+SC→UCLA	Constant	46,406	3,860	-	12,021***	0,22	38,814	53,998
	SA	0,096	0,025	0,181	3,713***		0,045	0,147
	SC	-0,235	0,0297	-0,387	-7,931***		-0,294	-0,177
SA → UCLA	Constant	21,685	2,468	-	8,784***	0,08	16,830	26,540
	SA	0,154	0,027	0,291	5,730***		0,0101	0,207

*p<0,05; **p<0,01;***p<0,001.

Table 2. Mediator Effects.

Mediator Effects	Total Effect	Direct Effect	Indirect Effect	Bootstrap LLCI-ULCI
	0,154	0,096	0,058	0,034-0,06

Table 1 shows that social anxiety significantly predicts self-compassion ($\beta=.28$, $R^2=.08$, $t=-5.55$, $p<.001$), and loneliness ($\beta=.29$, $R^2=.08$, $t=-5.73$, $p<.001$). Social anxiety in conjunction with self-compassion significantly predicts loneliness ($\beta_{SA}=.18/\beta_{SC}=-.39$, $R^2=.22$, $t_{SA}=3.71/t_{SC}=-7.93$, $p<.001$). Table 2 shows the mediator effects of self-compassion. According to the results, self-compassion has a partial mediation role in the relationship between social anxiety and loneliness.

4. Discussion

The aim of the present study was to examine the role of self-compassion as a mediator factor between social anxiety and loneliness and it was determined that self-compassion had a partial mediator role between social anxiety and loneliness. In the research, regression analyses were primarily applied, and it was discovered that as suggested in the hypotheses, social anxiety predicted loneliness positively and self-compassion negatively, and self-compassion predicted loneliness negatively. In addition, it was determined that self-compassion had a partial mediator role between social anxiety and loneliness. In other words, social anxiety causes an increase in the feeling of loneliness through decreasing self-compassion.

The findings obtained are consistent with the research in which social anxiety causes loneliness by the way of staying away from social environments, especially due to leading to avoidance of communicating with other people (Michela, Peplau, & Weeks, 1982), and through restriction of social life due to not being able to behave in accordance with the requirements of the environment (Burger, 1995).

However, the results of the mediator effect of self-compassion suggest that loneliness does not only arise from difficulties in social environments, but social anxiety probably affects people's approach to themselves in a negative way which may also be effective in the emergence of the feeling of loneliness in people. As a matter of fact, there are findings in the literature that 'self-judgment', 'over-identification', and 'isolation' which are the negative sub-dimensions of self-compassion, significantly predict loneliness (Crick & Ladd, 1993; Akin, 2010; Lyon, 2015; Ergün-Başak, 2012). It is possible that this could be stemmed from people's self-judgment having an accusatory attitude towards themselves by attributing the negative experiences and failures in social environments to internal reasons arising from themselves; seeing themselves as detached from other people as if, only they are experiencing them and over-identification with the negative feelings arising from negativity in social situations. It is possible that this could be stemmed from people's self-judgment and having an accusatory attitude towards themselves by attributing the negative experiences and failures in social environments to internal reasons arising from themselves. (Neff, 2003b; Blatt, D'Afflitti, & Quinlan, 1976; Reingenbach, 2009; Kirkpatrick, 2005). Similarly, Besser, Flett, and Davis (2003) observed in their research that people with a judgmental attitude toward themselves seek less social support and keep their distance from people. Accordingly, it can be interpreted that these people are more prone to loneliness.

Consequently, it can be said that social anxiety has an effect on the emergence of loneliness, either directly or by reducing self-compassion. Hence, it is expected that this research contributes to the scientific literature by stating the importance of self-compassion in preventing or reducing the experience of loneliness in people who suffer from social anxiety.

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CYBERBULLYING PERPETRATION IN ADOLESCENCE IN TERMS OF EXPOSURE TO CYBERBULLYING LEVELS

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Abstract

The aim of this study is to examine whether cyberbullying perpetration among adolescents is differed by different levels of cyberbullying exposure. The survey includes two different forms of Cyberbullying Scale. The first form is used to determine cyberbullying exposure and the second form measures cyberbullying perpetration of participants. In order to predict cyberbullying perpetration, inter-quartile ranges of cyberbullying exposure are created. To determine the cyberbullying exposure levels, quartile are used instead of arithmetical averages and standardized equation. Calculated exposure scores are divided into 3 quartile, 1 to 9 being cut points. In this case, participants score 1 point or below fall under the first quartile which indicates adolescents who are not exposed to cyberbullying. The second quartile consists of participants who are exposed to medium level of cyberbullying score between 1 and 9. The third quartile includes 9 point and above who are exposed to high level of cyberbullying. The study was conducted with 311 adolescent participants between the ages of 13 to 19. In order to predict cyberbullying perpetration, Multiple Linear Regression Analyzes were applied. As dependent variables, participants' self-esteem, pathological narcissism and empathetic anger scores are included in the anaylsis as well. As a result, adolescents' cyberbullying perpetration scores differed by non-exposure, medium and high cyberbullying exposure levels. The findings were consistent with the results of other studies in the literature of cyberbullying.

Keywords: *Cyberbullying exposure, cyberbullying perpetration, adolescence.*

1. Introduction

In today's modern world, the use of smart devices such as smart phones, tablets and computers has been increased. In the meantime, bullying has also evolved around these devices and it became "cyber". The definition of cyberbullying is intentionally causing harm to others repeatedly in cyberspace. These behaviors can include provocation through aggressive and vulgar messages, threatening, harassing, slandering, pretending to be someone else, revealing personal information, and excluding people online (Bridge and Duman, 2019).

The Internet provides anonymity which makes it easier for cyberbullies to hide by using pseudonyms and secret Internet addresses. The number of children and adolescents using smart devices is increasing every year. While bullying can occur in various settings and among different age groups, cyberbullying has emerged over the past two decades showing itself as difficulties in establishing and maintaining interpersonal relationships among children and adolescents (Cook, Williams, Guerra, Kim and Sadek, 2010).

The targets of bullying are usually assumed to be "lonely and weird" introverts by their peers. As they become excluded from their peers, victims suffer from feelings of hopelessness and helplessness to stop the bully. Victims of cyberbullying are at a higher risk of depression, anxiety, addiction, anger problems, and suicide compared to victims of traditional bullying. They also suffer from low self-esteem, sleep disturbances, and academic failures (Tokunaga, 2010). Because narcissistic personality traits are often characterized by an unrealistically high self-esteem, they can contribute to cyberbullying behaviors as a means of bolstering the self-esteem of the perpetrator (Goodboy and Martin, 2015). Moreover, people's likelihood of engaging in bullying behavior may vary based on their level of empathetic anger which refers to their tolerance for unfairness (Lomas, Stough, Hansen and Downey, 2012).

Cyberbullying literature shows that, having these types of psycho-social problems in regard to cyberbullying can manifest itself mostly in adolescence and early adulthood. To seek revenge, gain acceptance from a peer group, or regain a sense of power can cause victims of cyberbullying to become cyberbullies themselves. Thus, in this study we analyzed the possibility of high school students to become cyberbullies according to their previous cyberbullying victimization. Participants were divided into three groups as those who were not exposed to cyberbullying, those who were moderately exposed, and those who were severely exposed.

2. Method

2.1. Participants and materials

Participants were chosen from high school student who were adolescents between 9th to 12th grades. Purposive sampling and snowball sampling were used in order to select participants.

2.1.1. Procedure. To collect data, a survey was prepared, which consisted of a Personal Information Form, a Cyberbullying Scale, and a Cyberbullying Scale (Adolescent Form). All participants took part in the study online during the COVID-19 pandemic on a voluntary basis. On average, it took 15-20 minutes for participants to complete the survey.

Participants' demographic information was obtained through a "Personal Information Form", which includes personal questions about their age, gender, and grade, as well as questions related to their parents/caregivers, such as their marital status, educational background, and occupation.

The level of cyberbullying exposure and perpetration was determined by using different scales. The cyberbullying exposure levels was measured using the Cyberbullying Scale developed by Stewart, Drescher, Maack, Ebesutani, and Young (2014). On the other hand, the second Cyberbullying Scale (Adolescent Form) developed by Arıcak, Kınay, and Tanrikulu (2012) was used to measure the participants' cyberbullying perpetration level. In addition, the study incorporated the Rosenberg Self-Esteem Scale (Rosenberg, 1965), Pathological Narcissism Inventory (Pincus et.al, 2009), and Empathic Anger Scale (Vitaglione and Barnett, 2003) as independent variables to measure various psychological constructs related to cyberbullying.

2.2. Data analysis

In analyzing the distributions of total scores and sub-dimension scores, excluding scores for exposure to cyberbullying, critical values such as values between ± 2 obtained by dividing skewness and kurtosis values by standard errors, proximity of mean, trimmed mean, and median values to each other, and the ratio of inter-quartile ranges to standard deviations around 1.3, and variation coefficients below 30% have been taken into account. Based on examining all of these values, the distributions of all scores are assumed to follow a normal distribution using the aforementioned critical values as a basis.

As the distribution of scores for exposure to cyberbullying was obtained as an extremely left-skewed series, quartile (dividers) were used instead of mean and standard deviation to determine the levels of exposure. With the help of the first, second, and third quartile calculated for exposure scores, 1 and 9 were determined as the cut-off points. Accordingly, participants with scores below 1 were evaluated as non-exposed, those with scores between 1-9 were evaluated as moderately exposed, and those with scores above 9 were evaluated as highly exposed.

3. Results

In this section, analysis results are given. In accordance with the purpose of the study, firstly the levels were determined and then multiple linear regression models were estimated according to the levels. Stepwise technique used in model estimation and regression assumptions (normality and multicollinearity) were tested.

Table 1. Descriptive Statistics of the Cyberbullying Scale (Exposure) Total Score.

Scores	Min	Max	\bar{X}	SD	Median	Quartiles		
						Q1	Q2	Q3
Cyberbullying Scale (Exposure) Total Score	0	40	6.495	6.584	4.000	1.00	4.00	10.00

The Cyberbullying Scale which is used to measure exposure to cyberbullying has an average total score of 6.495 and a standard deviation of 6.584. The lowest exposure score is 0 and the highest exposure score is 40. Since the standard deviation of the Cyberbullying Scale total score is greater than the mean (skewed to the left), the median and quartile values were also obtained for exposure scores. The fact that the median is lower than the mean indicates a left-skewed distribution. Since the aim of the study is to determine the factors that affect exposure to cyberbullying at different levels of exposure, exposure levels were determined according to the 1st, 2nd, and 3rd quartile values of the exposure distribution.

Table 2. Number and Percentage Distribution of Participants According to Their Levels of Exposure to Cyberbullying.

Variable	Levels	n	%
Exposure scores	The Lowest	58	18.6
	Medium	170	54.7
	The Upper	83	26.7

When the participants' levels of exposure to cyberbullying were examined, it was observed that 58 (18.6%) of them did not experience cyberbullying, 170 (54.7%) had moderate levels of exposure, and 83 (26.7%) had severe levels of exposure.

Table 3. Comparison of the Total Score of the Cyberbullying Scale in terms of Exposure to Cyberbullying Levels through One-Way Analysis of Variance (ANOVA).

Levels of Exposure to Cyberbullying	n	\bar{X}	SD
The Lowest	58	25.396	4.364
Medium	170	25.747	4.237
The Upper	83	27.542	5.372
Total	311	26.160	4.651

	Sum of Squares	DF	Mean of Squares	F	p
Between Groups	221.356	2	110.678		
Within Groups	6486.605	308	21.060	5.255	0.006
Total	6707.961	310			

The result of the One-Way Analysis of Variance (ANOVA) conducted to investigate whether there was a difference in the mean scores of the Cyberbullying Scale among participants exposed to cyberbullying at different levels indicated that there was a statistically significant difference between the mean Cyberbullying scores of participants who did not experience cyberbullying, those exposed to cyberbullying at a moderate level, and those exposed to cyberbullying at a severe level. The significant difference obtained indicates that the effect of different exposure levels should not be ignored when examining the predictors of being exposed to cyberbullying.

Table 4. Results of Regression Analysis for Predicting Cyberbullying Scores Based on Levels of Exposure to Cyberbullying, Rosenberg Self-Esteem Scale, Pathological Narcissism Inventory Sub-Dimensions, and Empathetic Anger Scale Scores.

Levels of Exposure to Cyberbullying	Independent Variables	B	Standard Error of B	t	F
The Lowest	Constant	17.908	3.318	5.397***	5.238*
	Self-Esteem	0.260	0.114	2.289*	
R ² =0.086					
Medium	Constant	24.174	0.712	33.947***	6.118*
	Entitlement Rage	0.095	0.039	2.473*	
R ² =0.035					
The Upper	Constant	19.607	1.735	11.298***	12.510***
	Exploitativeness	0.394	0.102	3.852***	
	Grandiosity Fantasies	0.146	0.065	2.255*	
R ² =0.238					

*p<0.05; **p<0.01; ***p<0.001

Statistically significant results were obtained in the correlation analysis between the total scores of cyberbullying and the sub-dimensions as well as the total scores of the scales. Afterwards, a multiple linear regression analysis was conducted to examine the effect of the Rosenberg Self-Esteem Scale, Pathological Narcissism Inventory sub-dimensions, and Empathic Anger Scale total scores on the cyberbullying score according to levels of exposure to cyberbullying. As a result, for the level of not being exposed to cyberbullying, the slope parameter for Self-Esteem ($t(56)=2.289$; $p<0.05$), for moderate exposure level, the slope parameter for Entitlement Rage ($t(168)=2.473$; $p<0.05$) and for advanced exposure level, the slope parameters for Exploitativeness ($t(80)=3.852$; $p<0.001$) and Grandiosity Fantasies ($t(80)=2.255$; $p<0.05$) were statistically significant.

4. Discussion

The potential difference in the levels of cyberbullying perpetration due to participants' exposure to different levels of cyberbullying was examined by One-Way ANOVA. According to the result, it was found that the cyberbullying perpetration scores were differed according to the levels of cyberbullying exposure. These results suggest that the predictors of cyberbullying may differ according to the level of exposure to cyberbullying. Therefore, the predictors of cyberbullying according to the participants' levels of exposure to cyberbullying are Self-Esteem, Entitlement Rage, Exploitativeness, and Grandiosity Fantasies.

In this study, it was shown that Self-Esteem had an important effect on participants who did not experience cyberbullying because most likely that their self-esteem levels were not affected by cyberbullying experience, which reduced their likelihood of becoming a cyberbully. From the perspective of Entitlement Rage, it has been concluded that participants who experienced moderate levels of cyberbullying engage in cyberbullying behavior to fulfill their narcissistic aggression and to express their anger. For Exploitativeness, the anger caused by exposing to high level of cyberbullying goes beyond psychological over time and gains a behavioral dimension among adolescents. Victims might express themselves by exploiting others. Finally, Grandiosity Fantasies signifies excessive efforts to gain reputation and approval and can indicate that participants corresponded to the upper level of exposure are trying to increase their respect among peers through cyberbullying.

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EXAMINATION OF THE RELATIONSHIP BETWEEN DEPRESSION, ANXIETY, STRESS AND SPORTS IN TÜRKİYE: CROSS-SECTIONAL STUDY

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Abstract

Depression, anxiety, and stress are the most common psychological disorders. On the other hand, it is seen that the rate of sports in Turkey is quite low when compared to other European countries, while the obesity rates are quite high. This study aimed to examine whether doing sports and physical activity differ in terms of depression, anxiety, and stress levels in non-professional athletes. It is planned to collect data from a large group with a cross-sectional study. In the study, 3032 people (1715 female and 1317 male, ages between 18-70 years ($M = 26.51 \pm 10.55$ years)) were reached by convenient sampling method in 2022 in Turkey. The Hospital Anxiety and Depression Scale and The A Stress Scale-36-Tr were used in the study. According to the MANOVA results, a difference was found between the groups who regularly do sports or exercise, do it occasionally, and do not do it at all, in terms of depression, anxiety, and stress total scores. All three groups differed from each other. As you do sports or exercise, depression, anxiety, and stress total scores decrease. The obtained results seem to provide information about the public health problem in Turkey.

Keywords: *Depression, anxiety, stress, exercise, sports.*

1. Introduction

Mental health encompasses a range of disorders that can have a debilitating effect on individuals (Souteret al., 2018). When the studies on the subject were examined, it was found that approximately 18% of the participants met the criteria for a common mental disorder during the previous 12 months, and approximately 29% had a generalized mental disorder at some time in their lives. Many factors such as epidemic diseases, death of loved ones, job loss, financial insecurity, poverty, social isolation and loneliness, and physical and emotional fatigue in employees constitute risk factors that can contribute to mental health problems such as depression, anxiety, and stress (Cenat et al., 2021; Yates et al., 2020). The estimated lifetime prevalence of depression and anxiety syndromes as the most common mental disorders is approximately 10-13% (Hu et al., 2020; Petersson et al., 2023; Souteret al., 2018). In addition, it is reported that there is a consistent gender effect in the prevalence of common mental disorders and there is evidence of regional differences in the prevalence (Steel et al., 2014). In addition, mental disorders have many additional costs worldwide, including loss of productivity, the burden on health systems, and a negative impact on quality of life (McDowell et al., 2018; Whiteford & Baxter, 2013).

Epidemiological studies show a link between physical activity and the incidence of mental health disorders (Kandola & Stubbs, 2020). The isolation and quarantine restrictions on physical and social activities during the COVID-19 pandemic have contributed to the increased prevalence of mental disorders. On the other hand, the effects of exercise and sports as a subset of physical activity in combating anxiety and depression have been demonstrated in both cross-sectional and longitudinal studies (Hu et al., 2020; Kandola, et al., 2019; Lindwall et al., 2014; McDowell et al., 2018; Wu et al., 2018). Accordingly, physical activity is inversely proportional to the symptoms of anxiety disorders in the general population (Kandola & Stubbs, 2020). Data obtained from 47 countries within the scope of the World Health Survey (World Health Survey spanning 47 countries) reveal that high levels of physical activity may be protective against anxiety disorders, while low levels of physical activity may be a risk factor for anxiety disorders (Kandola & Stubbs, 2020).

Physical activity, mainly through exercise, produces an antidepressant effect that can affect depressive symptoms in various biological and psychosocial ways (Kandola, et al., 2019). Mental

well-being is defined as the individual's ability to realize their own potential, cope with the normal stresses of life, work productively and efficiently, and contribute to the society they live in (Souteret al., 2018). In this way, most of the available research reports positive results for the mental health benefits of physical activity (Carless & Douglas, 2010; Tatar, Astar et al., 2018).

However, participation in sports and other physical activities is below recommended levels in many countries. In Turkey, the prevalence of insufficient physical activity among adults over the age of 18 is 21.74% in men and 38.80% in women (WHO, 2016). The aim of the present study is to examine the effects of doing sports in Turkey on depression, anxiety syndromes, and stress-related mental disorders with a large group of participants.

2. Method

2.1. Participants

In the study, 3032 people, 1715 women (56.6%) and 1317 men (43.4%), were reached by convenient sampling method. Of the participants, 2306 were single (76.1%), 659 were married (21.7%, 67 were divorced or widowed (2.2%); 106 of them were primary school graduates (3.5%), 97 were secondary school graduates (3.2%), 1958 were high school graduates (64.6%), 858 were university graduates (28.3%) (13 people (0.4%) did not specify their educational status); the economic situation of 502 of them was bad (16.6%), the economic situation of 1886 of them was moderate (62.2%), the economic situation of 561 of them was good (18.5%) (83 people did not state their economic situation (2.7%)).

2.2. Materials

In the study, the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) and the A Stress Scale-36 were administered. The Hospital Anxiety and Depression Inventory is a 14-item, four-point Likert-type scale that single-items measures anxiety and dual-items measure depression (Zigmond & Snaith, 1983). The scale, which was developed with a three-step study to measure the stress level, consists of 36 items containing a five-point Likert-type assessment (Tatar, Saltukoğlu et al., 2018).

The level of physical activity was measured with one item version, of the three-level version adapted from the four-level Saltin Grimby Physical Activity Level Scale (SGPALS) (Saltin & Grimby, 1968). One-item version is commonly used in similar studies. Since professional athletes were not included in this study as exclusion criteria, "regular physical activity and training" and "regular heavy physical training for competitive sports" which are the 3rd and 4th levels of the scale, were combined and were taken as the only option.

2.3. Procedure and data analysis

The study was carried out in Turkey in 2022 with individual administrations. The administration was made by giving a printed form to all participants. Cronbach Alpha internal consistency reliability analysis, Pearson correlation analysis between total scores, and MANOVA for group comparisons were used to evaluate the data obtained.

2.4. Results

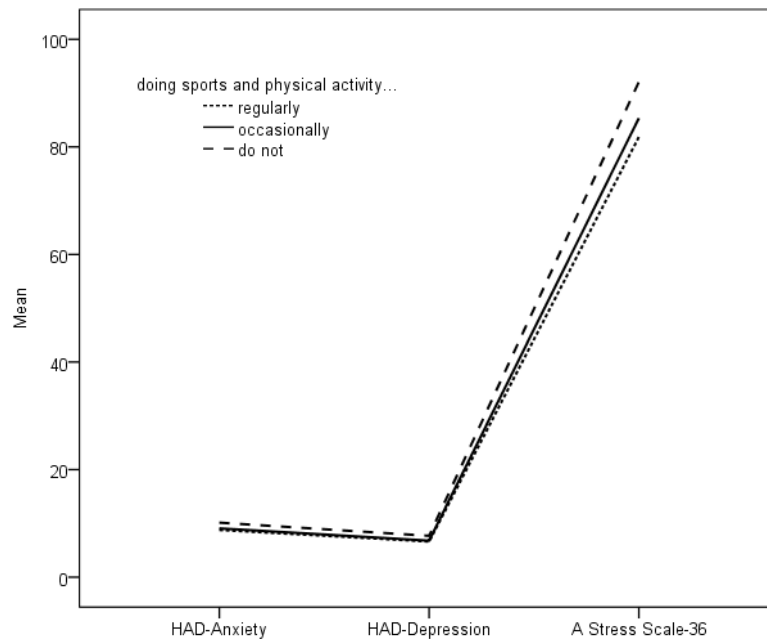
First of all, the internal consistency reliability coefficients of the scales used were examined and Cronbach Alpha values of 0.79 for the Anxiety sub-dimension of the Hospital Anxiety and Depression Scale, 0.71 for the Depression sub-dimension, and 0.94 for the A Stress Scale-36 were obtained. When the correlations between the total scores were examined, the coefficient was 0.56 ($p < 0.001$) between the total scores of anxiety and depression, 0.67 ($p < 0.001$) between the total scores of anxiety and stress, and 0.58 ($p < 0.001$) between the total scores of depression and stress. Then, the distribution of the participants in terms of doing sports was examined. Accordingly, 388 people (12.8%) do not do sports, 1363 people (45.0%) do sports occasionally, and 1281 people (42.2%) do sports regularly.

As a final operation, group comparisons were made with MANOVA in terms of total scores. According to the results, the Hospital Anxiety and Depression Scale's Anxiety sub-dimension total scores of the three groups who do not do sports, do sports occasionally, and do sports regularly ($F(2, 3029) = 25.28$; $p < 0.001$; partial $\eta^2 = 0.02$), the Depression subscale dimension between total scores ($F(2, 3029) = 21.24$; $p < 0.001$; partial $\eta^2 = 0.01$) and the A Stress Scale-36 total scores between the groups ($F(2, 3029) = 29.48$; $p < 0.001$; partial $\eta^2 = 0.02$) statistically significant differences were found. According to the results of the Tukey HSD multiple comparison tests performed to determine which group is different from which group, both the Anxiety and Depression sub-dimension scores of the group that regularly do sports are lower than the total scores of the groups that do not do sports and do sports

occasionally. There was no difference between the groups who do not do sports and those who do sports occasionally.

In the comparison made in terms of stress total scores, a difference was found between the three groups. Accordingly, the total score of the group that regularly does sports is lower than the total score of the groups that do not do sports and occasionally does sports, and the total score of the group that does sports occasionally is lower than the total score of the group that does not do sports. In the comparison made in terms of stress total scores, a difference was found between the three groups. Accordingly, the total score of the group that regularly does sports is lower than the total score of the groups that do not do sports and occasionally do sports, and the total score of the group that does sports occasionally is lower than the total score of the group that does not do sports (Figure 1).

Figure 1. The score distribution of the participants in terms of doing sports.



3. Conclusion

Most current research reports positive results for the mental health benefits of physical activity. Also, most studies focus primarily on the potential of physical activity to alleviate symptoms rather than contribute to recovery (Carless & Douglas, 2010). In this study, for simplicity, doing sports was considered as a measure of participation in exercise and it was examined whether there was a difference in anxiety, depression, and stress levels depending on the level of doing sports in Turkey. Accordingly, the relationship between individual changes in physical activity and changes in individual mental health, including anxiety, depression, and stress, was evaluated.

The potential contribution of sports and physical activity to mental health is related to what a person adds to their life rather than what it takes (Carless & Douglas, 2010). Because exercise-based interventions seem to be effective in reducing anxiety symptoms in people with anxiety disorders (Stonerock et al., 2015; Stubbs et al., 2017). In this direction, it is expected that doing an increased amount of physical activity can help reduce the symptoms of mental health problems (Kandola & Stubbs, 2020).

The results obtained support the information that there was an insufficient prevalence of physical activity among adults over 18 years of age in Turkey in previous years (WHO, 2016). The lowest anxiety, depression and stress total scores were observed in the group that regularly did sports. Therefore, the results also support the findings that exercise helps reduce symptoms related to mental disorders.

In general, in previous studies, the basic biological and psychosocial mechanisms of sports or physical activity have not yet been established. However, the results of this study supported the argument that doing and increasing physical activity is important for mental health in the general population in addition to its benefits for physical health (Tatar, Astar et al., 2018). Therefore, the results of this study show the importance of taking sports or physical activity into consideration in preventive studies related to mental health in the general population.

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LET'S TALK ABOUT MORE THAN SEX: INTIMACY, MENTAL HEALTH, AND PSYCHOLOGICAL FLEXIBILITY AFTER CANCER

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Abstract

Cancer survivors report disruptions to their relationships, including decreased sex drive and fear of initiating sex with their partner. Although research indicates that sexual functioning is not directly related to subjective well-being, higher intimacy is positively associated with higher life satisfaction. Psychological flexibility, the ability to make practical, values-based choices among many competing options, is the measurable outcome of Acceptance and Commitment Therapy (ACT). Inflexible individuals tend to ruminate and hold grudges leading to relational strain. Although previous research indicates relationships between psychological flexibility, anxiety, and depression, little research connects the specific pillars of psychological flexibility (Openness to Experience, Behavioural Awareness, Valued Action) to these outcomes. Thus, we investigated the relationships between intimacy, psychological flexibility, and mental health. In this study, we examined: (1) the connections between intimacy and mental wellness (e.g., anxiety, depression) in cancer survivors and (2) which pillars of psychological flexibility are most closely related to intimacy in psychological outcomes of cancer. Participants who reported being in a relationship and had a previous cancer diagnosis were recruited to complete questionnaires measuring factors associated with sexual activity and intimacy, psychological flexibility, satisfaction with life, as well as symptoms of anxiety and depression. All components of intimacy (emotional, sexual, social, intellectual, recreational) were inversely correlated with depression and anxiety. Mediation analysis indicated that psychological flexibility was a significant mediator in the relationship between emotional intimacy, anxiety, and depression. This research adds to the body of research supporting acceptance and commitment therapy to improve intimacy and relationship satisfaction levels, focusing on the most salient components of this population.

Keywords: *Cancer, sexual function, intimacy, psychological/physical symptoms, psychological flexibility.*

1. Introduction

Despite increased survival rates, cancer is a severe illness that significantly impacts survivors' physical, emotional, and social lives, as well as the lives of their loved ones (Hawkins et al., 2009; Manne & Badr, 2008). Survivors, their relatives, and close connections often experience disruptions in daily life that include increased anxiety and depressive symptoms, fear of recurrence, and the fear of loss and death (Gilbert et al., 2010). Factors such as individual coping behaviours and the exchange of support in relationships (Gilbert et al., 2010) can affect wellness after diagnosis, during treatment, and remission. Survivors and their intimate partners can engage in behaviours that strengthen or destabilize close connections, and perceived closeness or intimacy predicts positive psychosocial adaptation to cancer (Manne & Badr, 2008). Given the importance of intimate relationships, this research focuses on the sexual dysfunction and intimacy of survivors and their intimate relationships with their partners.

Sexuality and intimacy are central to quality of life, and cancer and side effects can result in tremendous changes in sexuality, sexual functioning, relationships, and sense of self (Ratner et al., 2010). Cancer treatments significantly impact sexual relationships, with 30% of men and 33% of women reporting that physical barriers to sex made it difficult or impossible to have sexual intercourse (Hawkins et al., 2009). Many psychosocial aspects of cancer and its treatment affect intimate relationships. Although most couples facing cancer fare well in the long term, the experience can strain relationships and lead to marital discord. When men and women are considered together in a sample, there is no significant increase in divorce in cancer survivors compared to non-survivors; however, individuals in

longer marriages were less likely to divorce (Glantz et al., 2009). Further, Glantz et al. (2009) reported a 6-fold increase in separation or divorce in female cancer patients compared to male survivors.

Individuals with cancer report that changes in sexual functioning are significant and impairing, leading to emotional distance between couples, feelings of isolation, anxiety, depression, or inadequacy (Gilbert et al., 2010). Both medical variables (surgery, side effects of treatment; Sadovsky et al., 2010), psychological variables (body image, emotional distress; Augustinsson et al., 2018), and relationship variables (partner's reaction to the illness and treatment; Katz, 2016) contribute to sexual dysfunction after cancer. Although sexual dysfunction refers to physical limitations to sexual activity (Hawkins et al., 2009), it is only one aspect of intimacy. It is essential to acknowledge that intimacy without sexual function is possible (Schaefer & Olson, 1981). Most survivors report experiencing intimacy loss, and fewer than half said they were satisfied with their sex life after cancer (Flynn et al., 2011; Moreira et al., 2013). Thus, research on the impact of intimacy on satisfaction with life (SWL) in populations known to experience sexual dysfunctions and relationship stress is important.

1.1. Acceptance and commitment therapy

Acceptance and commitment therapy (ACT) is a behavioural therapy that focuses on increasing psychological flexibility (PF), which is the ability to make practical, values-based choices among many competing options (Fani Sobhani et al., 2021). The goal of ACT is not to alleviate symptoms but to improve a person's sense of well-being. PF involves being consciously present in the moment and engaging in behaviours or changing behaviours to align behaviours with personal values. PF is a process amenable to change (Francis et al., 2016; Swash et al., 2017) through ACT (see Stenhoff et al., 2020).

The fear or avoidance of intimacy is an obstacle to developing and maintaining close relationships. Couples who experience fear of intimacy are more likely to lose their ability to form relationships because they develop behaviours that oppose intimacy and emotional closeness (Fani Sobhani et al., 2021). According to relationship awareness theory, couples can maintain intimacy when one partner develops cancer by incorporating the diagnosis into their relationship (Manne & Badr, 2008). Through the ACT process, survivors may approach their discomfort with their sexual challenges and move towards enhancing their connection despite them. "Relationship talk" has been linked to individual and relationship outcomes among couples dealing with illness, indicating that it may be a key mechanism by which relationship awareness facilitates intimacy (Manne & Badr, 2008). Exploring specific factors, such as aspects of PF, related to higher intimacy despite sexual dysfunction is an essential avenue of study.

1.2. Purpose of the current study

Although the effects of cancer diagnosis and treatment on sexual functioning and intimacy are significant, survivors sometimes have limited knowledge of the impact of their diagnosis and treatment, and healthcare professionals, patients, and partners are sometimes reluctant to discuss sexual functioning (Burbie & Polinsky, 1992; Naaman et al., 2009). Often neglected in research are the experiences of patients and their partner regarding sexuality and intimacy after cancer; however, there is growing recognition of these unmet relational needs (Burbie & Polinsky, 1992; Hawkins et al., 2009; Manne & Badr, 2008). Thus, we examined: (1) the connections between intimacy and mental wellness (e.g., SWL, anxiety, depression) in cancer survivors (2) how PF relates to intimacy and mental wellness and (2) how PF intersects the relationships between emotional intimacy and SWL.

2. Methods

In total, 357 cancer survivors (M age = 52.89 years, SD = 13.44) in a romantic relationship completed this study. The average time since diagnosis was 5.62 years (SD = 7.64); 23.6% (n = 61) reported that their cancer had relapsed. Participants completed the Comprehensive Assessment of Acceptance and Commitment Therapy Processes (CompACT; Francis et al., 2016) to measure aspects of PF, the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2010) to measure depression, the Satisfaction with Life scale (SWLS; Diener et al., 1985), the General Anxiety Disorder 7-item (GAD-7; Spitzer et al., 2006) to measure symptoms of anxiety, the Changes in Sexual Functioning Questionnaire (SFQ; Keller et al., 2006) that has specific versions for males and females, and the Personal Assessment of Intimacy in Relationships (PAIR; Schaefer & Olsen, 1981) to measure personal experiences of intimacy. The University of New Brunswick Research Ethics Board (#2022-162) reviewed this cross-sectional, online questionnaire study. After providing informed consent, participants completed the demographics questionnaire followed by the other measures, which were randomized.

3. Results

The descriptive statistics for the study variables for males and females are presented in Table 1. Given the number of t-tests used to examine gender differences, we used $p < .01$ as a criterion for statistical significance and included effect sizes to illustrate the magnitude of the differences. Overall, there were few differences between males and females. A high percentage of males (93%; $M = 19.47$, $SD = 18.27$) and females (96%; $M = 20.42$, $SD = 16.16$) had scores on the SFQ that were below the cut-off (47), indicating sexual dysfunction.

Table 1. Gender differences on study variables.

	Males (n=58)	Females (n=263)	t (p)	Cohen's d*
Sexual Function (SFQ-Total)*	2.32 (.86)	2.07 (.76)	2.17 (.031)	.31
Intimacy (PAIR)				
Emotional	20.07 (6.37)	19.19 (7.04)	.799 (.425)	.129
Social	16.46 (6.97)	15.89 (6.05)	.564 (.574)	.091
Intellectual	17.61 (5.58)	17.94 (6.37)	.330 (.742)	.053
Sexual	14.58 (3.93)	14.76 (4.25)	.252 (.801)	.041
Recreational	18.60 (6.06)	18.84 (6.17)	.033 (.974)	.055
Depression (PHQ-9)	17.23 (5.83)	18.40 (6.08)		.195
Anxiety (GAD-7)	7.29 (5.20)	8.70 (6.00)	1.69 (.093)	.243
Satisfaction with Life (SWLS)	17.85 (8.40)	18.43 (8.49)	.480 (.632)	.069
CompACT Subscales				
Openness	41.77 (11.91)	40.39 (10.95)	.850 (.396)	.123
Values Added	41.48 (9.60)	42.07 (8.48)	.464 (.643)	.067
Behavioural Awareness	22.44 (7.61)	20.17 (6.77)	2.23 (.027)	.32
CompACT Total Score	105.33 (24.43)	102.69 (21.72)	.807 (.420)	.118

Note. The SFQ has male and female specific scales. * Cohen's d was used to determine small (0.2), medium (0.5), and large (0.8) effect sizes.

Given the unequal number of males and females, a partial correlational analysis was conducted to examine associations between partner intimacy and psychological wellness (see Table 2). After controlling for gender, all aspects of intimacy were positively associated with SWL and inversely associated with depression and anxiety. Higher CompACT subscales were generally associated with all aspects of intimacy except sexual intimacy. Correlations between sexual function and psychological wellness were conducted separately for males and females. Overall, among females, sexual function was associated with life satisfaction, $r = .249$, $p < .001$, depression, $r = -.170$, $p = .03$, and CompACT: Values Added, $r = .159$, $p = .04$. Among males, only depression was associated with overall sexual function, $r = .307$, $p = .021$.

Table 2. Partial correlations between partner intimacy and psychological wellness.

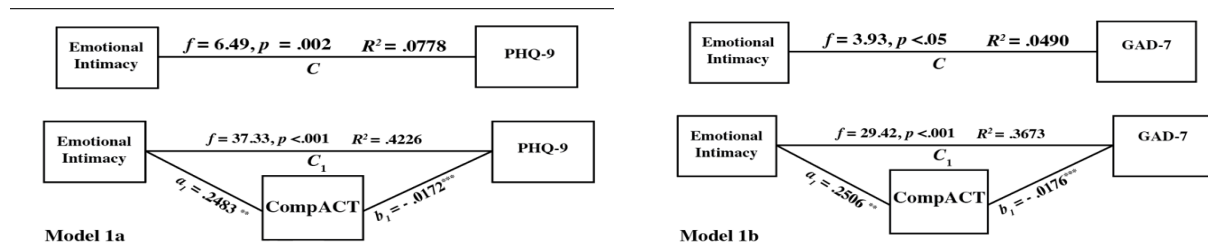
	PAIR: Emotional	PAIR: Social	PAIR: Sexual	PAIR: Intellectual	PAIR: Recreational
Depression (PHQ-9)	-.252**	-.283***	-.167*	-.245**	-.265**
Anxiety (GAD-7)	-.217**	-.247**	-.201*	-.191*	-.194*
Life Satisfaction (SWLS)	.331***	.341***	.169***	.299***	.404***
CompACT Subscales					
Openness	.197*	.251**	.136	.226**	.241**
Valued Action	.276***	.320***	.104	.382***	.368***
Behavioural Awareness	.138	.245**	.075	.205*	.214**
CompACT Total Score	.261***	.340***	.151	.316***	.345***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

We examined if PF mediated the relationship between emotional intimacy and depression (see Figure 1, Model 1a) and anxiety (see Figure 1, Model 1b). We tested the assumptions underlying mediation analyses (see Baron and Kenny, 1986 and Hayes, 2022) and entered CompACT total score as a mediator, with gender entered as a control. The indirect effects were tested using a percentile bootstrap estimation approach with 5000 samples, and the 95% confidence intervals were examined to determine the statistical significance of the indirect effects. In Model 1a, the indirect impact of CompACT total score was statistically significant [B= -.1330, CI: -.208, -.057] and completely mediated the relationship

between PAIR: Emotional intimacy and PHQ-9: Depression. In Model 1b, the indirect effect of CompACT total score was statistically significant [$B = -.1276$, $CI: -.203, -.053$] and completely mediated the relationship between PAIR: Emotional intimacy and GAD-7: Anxiety. Thus, when CompACT: total score was added to the regression models, the relationship between emotional intimacy and depression and anxiety was no longer significant.

Figure 1. Models depicting psychological flexibility mediating the relationships between emotional intimacy and anxiety and depression symptoms.



4. Discussion and conclusions

Survivors of cancer are faced with challenges across all areas of life. The support of a partner is vital for overall well-being, and intimacy and sexual function are important components of romantic relationships. Both male and female survivors experience a loss of sexual function; however, some people can renegotiate their intimacy to include sexual practices that were previously unexplored (Fani Sobhani et al., 2021). In this sample, most survivors reported sexual dysfunction, but not all reported a lack of intimacy. Although sexual dysfunction refers to physical limitations to sexual activity (Hawkins et al., 2009), it is only one aspect of intimacy. In this sample, intimacy was positively related to subjective well-being and inversely associated with reported symptoms of depression and anxiety. Further, PF was positively related to aspects of intimacy, except for sexual intimacy. Previous research has established that PF is inversely related to depression and anxiety (Hayes et al., 2012). We examined how this relationship influenced the impact of these mental health concerns within romantic relationships.

This study highlights how PF can play a role in fostering emotional intimacy and managing symptoms of anxiety and depression after cancer. Although the current model does not infer causality, it does identify links between deficits in emotional intimacy and anxiety and depression. Individuals with lower PF tend to ruminate and hold grudges, which can lead to relational strain. Thus, acknowledging that intimacy without sexual function is possible.

To conclude, the goal of ACT is to help individuals become more psychologically flexible. The fear or avoidance of intimacy is a common obstacle to developing and maintaining close relationships. Couples who experience fear of intimacy are more likely to lose their ability to form relationships because they develop behaviours that oppose intimacy and emotional closeness (Fani Sobhani et al., 2021). Arguably, as a result, people's ignorance of their inner experiences, avoidance of unpleasant inner experiences, and avoidance of behaviours and actions that are important and valuable to them can lead to a lack of general discord in marital relationships. Inflexible individuals tend to ruminate and hold grudges leading to relational strain. Through the ACT process, survivors may approach their discomfort with their sexual challenges and move towards enhancing their connection despite them.

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TURKISH ADAPTATION OF THE PERCEIVED STIGMA SCALE AFTER COVID-19

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Abstract

Social disapproval and devaluation of an individual or a group, called stigmatization, has become even more common with COVID-19, includes discriminatory and hostile attitudes towards the person/persons or place who have been diagnosed with the disease. This social discrimination may contribute to delay in diagnosis and treatment. To prevent this, stigmatization process can be assessed through valid assessment instruments. The objective of this study was to analyze the psychometric properties of COVID-19 Infection Stigma Scale (CISS) for measuring the social stigma among patients with COVID-19 in the Turkish sample. The participants are 364 male and 612 female aged between 18-70 who were diagnosed with COVID-19. The data obtained from the COVID-19 Infection Stigma Scale, Stigmatization Scale, Coronavirus Anxiety Scale and Hospital Anxiety and Depression Scale were analyzed by using Exploratory Factor Analysis, Confirmatory Factor Analysis, Correlation Analysis and Discriminant Analysis for validation. The results revealed that, the adapted Perceived Stigma Scale is reliable and valid measurement instrument in Turkish sample.

Keywords: *Stigmatization, COVID-19, perceived stigma scale, adaptation.*

1. Introduction

Stigmatization refers to the social disapproval and devaluation of an individual or a group due to certain characteristics (Bos et al., 2013). Stigma, which is widely discussed in research, is associated with race, sexual identity, psychological disorders, obesity and diseases (Özmen & Erdem, 2018; Pettit, 2008). In the field of health, it is stated that the stigmatization process, which includes discriminatory or hostile attitudes, occurs during and after the emergence of infectious diseases (Fischer et al., 2019). It is known that social stigma has been experienced due to diseases such as HIV/AIDS, SARS, ebola, and tuberculosis seen to date (Kimera et al., 2020; Köseoğlu Örnek and Sevim, 2022; Villa, 2020). Recently, with the spread of the COVID-19 virus, the problem of social stigma associated with the disease has once again attracted attention (Bhanot et al., 2021; Dağ et al., 2021; Ertem, 2020; Imran et al., 2020; Şimşek Arslan and Taşdemir, 2021). Şahan (2021) reveals the theme of stigma in his interviews with individuals who were quarantined in the early stages of the COVID-19 epidemic. Yaşar and Avcı (2020) draw attention to the fact that individuals aged 65 and over are stigmatized as potential virus carriers by the society because they are included in the risk group. Behaviors such as preventing health workers from using public transport, physical violence, social exclusion, dismissal, avoiding the use of the street where the person with COVID-19 is present, leaving a woman with a diagnosis of childbirth alone by her family are some of the attitudes that reflect the stigma associated with the disease (Adom et al., 2021; Tükel, 2020; Villa, 2020).

Due to the fear of stigma, individuals have difficulty in displaying the necessary health behaviors, delay in seeking treatment or refuse treatment, so there is difficulty in epidemic control (Dağ et al., 2021). The stigmatized individual may feel loneliness, guilt, or shame over time due to discriminatory attitudes. In addition, it is stated that feelings such as hopelessness, anxiety, helplessness, anger towards the environment can be felt towards the future. These negative effects and the stigmatization process are among the factors that threaten psychological health (Ertem, 2020). Teksin et al. (2020) showed that perceived stigma in healthcare professionals is positively related to depression and anxiety and negatively related to problem focused coping, emotion focused coping and psychological well-being. Given the prevalence and negative effects of the stigma process, researchers have developed various measurement tools to examine the process (eg. King et al., 2007; Ritsher et al., 2003). Ersoy and Varan (2007) arranged

the Turkish adaptation of the Internalized Stigma Scale in Mental Illnesses. The Stigma Scale was developed by Yaman and Güngör (2013) to measure the tendency of psychological stigma. In the current study, it is aimed to study Turkish validity and reliability of the *COVID-19 Infection Stigma Scale* which was developed by Elgohari et al. (2021) to measure the perceived social stigma after Covid-19. It is thought that fear and stigma can be prevented with awareness of stigma and correct information sharing during the epidemic (Dağ et al., 2021).

2. Method

2.1. Participants

The population of the study is of people diagnosed with COVID. There had been two phases of the sampling process for validity and reliability measures. In the first phase, sample consists of 976 people, 37.3% (n=364) of them were male and 67.2% (n= 612) were female. The mean age is 28.91, and the standard deviation is 110.91. While 8.5% of the people were hospitalized due to COVID, 29.9% of them lost a relative due to COVID. 85.5% of the participants have been vaccinated against COVID-19, and 71% of those who have been vaccinated stated that they had 2 doses of vaccine. In the second phase, the sample consisted of 372 people randomly selected from the first sample group 21 days after the first data collection process. This sample was used for conducting the test-retest method, 60.5% of this sample was female and 39% was male. The mean age of the sample is 28.58, and its standard deviation is 10.54.

2.2. Materials

Personal Information Form Participants' demographic information was obtained through questions about their age, gender, grade, and marital status as well as their health status, such as their chronic diseases, vaccination status, and covid related hospitalization.

COVID-19 Infection Stigma Scale The scale was developed by Elgohari et al. (2021) for measuring the social stigma among patients with COVID-19 in Egypt. It consisted of 14 items, four-point Likert-type scale. Cronbach's alpha coefficient for scale reliability is reported as 0.82 for the total score at original study. The results of the reliability score of the scale is 0.87 for Turkish sample.

Stigmatization Scale The scale, which measures psychological stigmatization tendency, was developed by Yaman and Güngör (2013) consists of 22 items and of four sub-dimensions, includes discrimination and exclusion, labeling, psychological health and prejudice. Cronbach Alpha reliability coefficient of total score was reported as .84 at original study.

Coronavirus Anxiety Scale The scale was originally developed by Lee (2020). The Turkish adaptation was made by Akkuzu et al. (2020). It is a five-point Likert type and consists of five items. The reliability coefficient has been found 0.81 for the Turkish sample.

Hospital Anxiety and Depression Scale, is a likert type scale which was developed by Zigmond and Snaith (1983) to measure the level and severity of depression and anxiety in patients. Its Turkish adaptation was made by Aydemir et al. (1997). The scale consists of 14 items as four-point Likert-type and scored between 0-3. In the adaptation study, the Cronbach-Alpha coefficient was found to be 0.78 for the depression sub-scale and 0.85 for the anxiety sub-scale.

2.3. Procedure

The study was approved by the Ethical Committee of Fatih Sultan Mehmet Vakif University, All participants completed the scales both online and face-to-face method during the COVID-19 pandemic on a voluntary basis. There was no difference between the mean scores of the two groups, the data sets were combined and a reliability and validity study were carried out with total observation.

3. Results

3.1. Validity study

3.1.1. Translation and back-translation. Translation validity was ensured by translating and back-translating the scale items. As a result of all the feedbacks, the translation has been compared with the original scale, and the final form was created with the translation that best represents each item.

3.1.2. Statistical analyses. Construct validity (exploratory and confirmatory factor analysis) and discriminant validity were examined in the study. The reliability study was examined with the Cronbach alpha coefficient and test-retest method. In addition, the differences between the item average scores of the lower 27% and upper 27% groups, which were formed according to the total scores of the test, were tested with the help of the Independent Samples t-Test. When the score distributions of the scales were examined, the distributions were assumed to be normal, since the skewness and kurtosis values were in the range of ± 2 , the coefficient of variation was below 30%, and the median values and mean values were

close. Parametric tests were preferred in the study. Descriptive statistics of the scores obtained from the scales used in the study are given in Table 1.

Table 1. Descriptives statistics for scores.

Variable	n	Min	Max	Mean	Std. Dev.	Median	IQR
COVID-19 Infection Stigma Score	976	14,00	51,00	16,71	4,77	15,00	3,00
Stigmatization Score	976	22,00	106,00	49,11	11,99	48,00	15,00
Coronavirus Anxiety Score	976	4,00	23,00	6,35	2,51	5,00	2,00
Anxiety Score	976	2,00	18,00	11,22	2,97	11,00	5,00
Depression Score	976	3,00	16,00	9,17	2,07	9,00	2,00

3.1.3. Factor analysis results. Adequate sample size was tested by using Kaiser Meyer-Olkin measure of sampling adequacy which was 0.90. Also, Bartlett's test of sphericity was 5008,509, and p value <0.001 indicate highly statistical significant relationship between items.

Table 2. Result of extraction of the component factor and rotated component matrix.

Items	Component 1	Component 2
Initial Eigenvalues		
Total	5,683	1,095
% of variance	29,385	19,029
Cumulative %	29,385	48,414
Item 1	0,272	0,647
Item 2	0,381	0,387
Item 3	0,495	0,404
Item 4	0,690	0,219
Item 5	0,039	0,512
Item 6	0,600	0,354
Item 7	0,452	0,403
Item 8	0,290	0,677
Item 9	0,569	0,360
Item 10	0,283	0,729
Item 11	0,250	0,787
Item 12	0,771	0,174
Item 13	0,189	0,726
Item 14	0,674	0,287

When the sub-dimensions of the scale were examined, it was observed that the items were collected in two dimensions. For these sub-dimensions in the original scale, it was stated that the first dimension addressed the treatment of the person himself, and the other dimension addressed the treatment of people such as coworkers and neighbors.

Confirmatory factor analysis was performed to test the number of factors obtained in the exploratory factor analysis and to determine the suitability of the factor structure for the sample. According to the results, the factor structure of the goodness-of-fit statistics showed a high agreement with the original scale. ($\chi^2=912.02$; $p<0.001$; $\chi^2/sd=76$; GFI=0.92; AGFI=0.90; CFI=0.83; RMSEA=0.106).

3.1.4. Criterion related validity. The results of the correlation analyses performed to test the criterion-related validity showed that COVID-19 Infection Stigma Scale have a significant linear positive correlation with Hospital Depression Anxiety Scale anxiety sub-dimension ($r=0.236$; $p<0.001$), and depression sub-dimension ($r=0.109$; $p<0.01$). COVID-19 Infection Stigma Scale also showed significant linear positive correlations with COVID Anxiety Scale scores ($r=0.494$; $p<0.001$) and with Stigma Scale scores ($r=0.224$; $p<0.001$).

3.1.5. Item validity by comparing the lower-ultimate 27% group means

Table 3. Comparing the lower-ultimate 27% group means.

Variable	Grups	n	Mean	Standar Deviation	t	df	p
COVID-19 Infection Stigma Scale	Lower	263	16,75	5,09	-0,072	524	0,943
	Ultimate	263	16,78	4,60			

The total scores obtained in the examination of the discrimination of the scale items were ordered from low to high. The first 27% ($n=263$) and the last 27% ($n=263$) of the ranking were compared.

As a result of the test, it was observed that there was a statistically significant difference between the low score average and the high score average obtained from the scale ($t(524)=-0.072$; $p>0.05$.)

4. Reliability analysis

In examining the reliability of the COVID-19 Infection Stigma Scale, the Cronbach-Alpha internal consistency coefficient was found to be 0.876. Guttman Split Half coefficient, examining the consistency between the two halves of the scale, was calculated as 0.793. The correlation coefficient ($r=0.578$; $p<0.001$) was found to be statistically significant as a result of the test-retest application performed with 372 individuals with an interval of 21 days. At this point, it was concluded that the findings obtained for reliability were sufficient.

Table 4. Reliability statistics.

Items	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item 1	19,168	0,613	0,863
Item 2	21,259	0,271	0,880
Item 3	20,837	0,609	0,867
Item 5	21,502	0,497	0,872
Item 6	19,601	0,644	0,862
Item 7	18,539	0,606	0,865
Item 8	18,939	0,679	0,860
Item 9	19,223	0,581	0,865
Item 10	18,597	0,658	0,861
Item 11	20,429	0,506	0,869
Item 12	19,857	0,543	0,867
Item 13	19,168	0,613	0,863
Item 14	21,259	0,271	0,880

The reliability was analyzed and determined using Cronbach's alpha coefficient. The coefficients if excluded the item and the total alpha of the scale dimensions are displayed in Table 3. Cronbach's alpha was considered good because all items had alpha more than 0,70.

5. Discussion

The objective of the study was to test the psychometric properties of the COVID-19 Infection Stigma Scale among a Turkish sample of COVID-19 patients. The scale was considered to be a very good tool for measuring stigma because of very good reliability, strong convergent validity, strong external consistency, and strong internal consistency. Further verification, such as using confirmatory factor analysis, was a strength for the scale where all items had r values more than 0.30 which means that there is no need to exclude any of them. The scale showed favorable psychometric properties which sustains the validity and reliability of the scale. The COVID-19 Infection Stigma Scale can stimulate the advancement of operational research and the development of strategies to reduce the stigma related to COVID-19.

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LIFE SATISFACTION AFTER TRAUMATIC SPINAL CORD INJURY: A COMPARISON OF LIFE SATISFACTION IN PEOPLE LIVING WITH PARAPLEGIA AND TETRAPLEGIA TO THE GENERAL CANADIAN POPULATION

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Abstract

Traumatic spinal cord injury (tSCI) can be a life changing event that has the potential to impact many aspects of life including subjective well-being. One component of subjective well-being that is commonly measured following tSCI is Life Satisfaction (LS). Despite this, it is difficult to find research that has made direct comparison between the levels of LS reported by tSCI survivors and the general population. To better understand the impact that tSCI has on LS, the present study compared the LS of individuals without a tSCI, to a large sample of individuals who are currently living with tSCI that resulted in either paraplegia or tetraplegia. Our analyses showed that individuals with tSCI report lower levels of LS, when compared to individuals without a tSCI, and that people with tetraplegia report lower LS than individuals living with paraplegia. We also determined whether people without a tSCI can make accurate predictions about how their LS would change if they sustained a tSCI resulting in paraplegia or tetraplegia. When participants without tSCI were asked to estimate their life satisfaction in both situations, they overestimated the impact of tSCI. The degree to which LS in tSCI survivors differs from individuals without a tSCI, reasons for the overestimations made by individuals without tSCI and implications of the findings are discussed.

Keywords: *Traumatic spinal cord injury, subjective well-being, life satisfaction.*

1. Introduction

Spinal cord injuries (SCI) are defined as any damage to the spinal cord that changes its function either temporarily or permanently (Ahuja et al., 2017). SCIs have two main categories of causes: non-traumatic and traumatic. This study focuses on Traumatic spinal cord injuries (tSCI), which result from any physical trauma to the spinal cord (Noonan et al., 2012), with the most common causes being by motor vehicle accidents or falls (Hagen et al., 2012). There are two categories of tSCI, determined by the location of the injury on the spinal cord. Damage to the lumbar and thoracic spine results in paraplegia, which is associated with loss of sensory and/or motor function to the lower extremities. Paraplegia may also be associated with issues in the trunk and pelvic organs, depending on the level of the injury, but the upper limbs are typically unaffected. An injury to the cervical spine results in tetraplegia, which is associated with loss of sensory and/or motor function from the neck down. In general, the higher the injury location on the spinal cord, the more serious the consequences (Kirsblum, 2011).

To better understand the presentation and outcomes of a tSCI the injury needs to be identified as being complete or incomplete. A complete injury inhibits all signals from being sent from and received by the brain beyond the location of the injury, while incomplete injuries maintain some of the spinal cord's function, allowing some signals through (Ahuja, 2017). This means that some sensory and/or motor function is maintained in an incomplete tSCI. The American Spinal Injury Association (ASIA) developed a grading and classification system to help classify sensory and motor impairment following a tSCI. The ASIA impairment scale categorizes injuries as ASIA A, B, C, D, or E based on the results of an examination of key dermatomes and myotomes. ASIA A is the only classification that describes a complete tSCI, whereas B through D describe incomplete injuries in which some motor and sensory function is preserved. ASIA E describes an incomplete tSCI in which all motor and sensory function is normal (Kirsblum et al., 2011).

Research on the prevalence of tSCI in Canada indicates that there are more than 44, 000 people living with a tSCI, and there are an additional 1,389 new cases occurring every year (Noonan et al., 2012). The Rick Hansen Spinal Cord Injury Registry (RHSCIR), maintained by the Praxis Spinal Cord Institute (PSCI), was established in 2004 to better understand various aspects of tSCI. A recent report based on a sample of these participants (Praxis, 2019), describes several large impacts of tSCI on these individual's lives. The report estimates that 42% of tSCI survivors became unemployed following their injury, that many saw a decrease in annual household income, that more than 80% report a secondary health complication caused by their tSCI, and that more than half required a wheelchair when outdoors. In numerous areas of life less than half reported being satisfied or very satisfied with their current situation.

Diener and colleagues (1999) define SWB as an overall evaluation of one's life that includes a consideration of affective and cognitive components. An evaluation of SWB involves both the consideration of emotional experiences as well as an evaluation of overall satisfaction with various situational and dispositional factors that occur in one's life. Given the findings of this 2019 report by PSCI, and the increasing number of people that sustain a tSCI, it is important to understand the impact of tSCI on subjective well-being (SWB). Evaluating SWB involves an evaluation of Life Satisfaction (LS). Measuring LS consist of measuring overall satisfaction with several domains that are considered important to life. Such domains include, but are not limited to employment, finances, leisure, social life, sexual life, independence, family life, romantic relationships, physical health, and psychological health (Diener, 1999). The community report released by PSCI (2019) showed that in each of these cases, except for family life (57%), less than half of their respondents reported be satisfied or very satisfied.

In a study by Gaudet, Best, & Attabib (2019), individuals without a tSCI were asked to estimate their levels of LS if they were to suddenly sustain a tSCI resulting in 1) paraplegia, and then 2) tetraplegia. The purpose of that study was to examine the perceptions people have about living with tSCI. Perhaps unsurprisingly, participants predicted that their LS would be lower with a tSCI, and that their LS would suffer more from a tSCI resulting in tetraplegia versus one resulting in paraplegia. This research suggested that the participants believed there is a link between the severity of the tSCI and LS. However, when we examined the literature, we were unable to identify research that has directly compared the LS of individuals with paraplegia versus tetraplegia to individuals unaffected by tSCI. Despite the existence of a national Canadian tSCI research database, there is also no research that has compared the LS of Canadian tSCI survivors to the LS of individuals without a tSCI. The present study was designed to examine differences in the levels of LS experienced by individuals living with paraplegia and tetraplegia, as well as to make comparisons of each type of tSCI to individuals who do not have a tSCI. Furthermore, we were also interested in assessing the accuracy of the predictions made by participants in Gaudet et al. (2019) regarding how their current LS would compare to scenarios in which they sustained a tSCI resulting in paraplegia or tetraplegia. Given what is known about affective forecasting (Wilson & Gilbert, 2003, 2005; van den Bosch et al., 2021) and research demonstrating the potential for some improvements in LS years after a tSCI (Van Leeuwen et al., 2011, 2012), we hypothesized that these predictions would be in the correct direction but overestimate the impact that tSCI has on LS. Finally, also examine differences in LS between each of the ASIA categories and also compared each ASIA classification to the LS of individuals unaffected by tSCI.

2. Method

2.1. Participants

Participants without tSCI. A total of 430 participants were recruited from undergraduate courses at the University of New Brunswick Saint John and through online social media platforms. The average age of these participants was 20.39 years (SD = 4.73 years). Three hundred and forty-five (80.2%) of the participants identified as female, with the remainder (19.8%) identifying as male.

tSCI survivors. The Rick Hansen Spinal Cord Injury Registry (RHSCIR) was used to obtain data from a sample of tSCI survivors. The final sample of tSCI survivors consisted of 1,016 individuals with a mean age of 45.44 years (SD = 18.03 years). Seven hundred and eighty-six (77.36%) identified as male with the remainder (22.64%) identifying as female. A total of 472 (46.45%) individuals could be categorized as having paraplegia (i.e., thoracic or lumbar injuries), and 526 (51.77%) were identified as having tetraplegia (i.e., injuries to the cervical region of the spinal cord). The remaining 18 individuals (1.8%) had insufficient information to be categorized as having paraplegia or tetraplegia.

2.2. Measures

Life Satisfaction Questionnaire – 11 (LiSAT-11). The LiSAT-11 measures an individual's satisfaction in 11 different domains, rated on a Likert-scale ranging from 1 (very dissatisfying) to 6 (very satisfying). Domain scores can be assessed independently or summed and averaged to assess overall Life

Satisfaction. Here the latter approach was used. Internal consistency of the LiSAT-11 has been found to be adequate ($\alpha = 0.75$, Post et al., 2012), and was also found to have slightly better internal consistency in the present study ($\alpha = 0.80$).

American Spinal Injury Association (ASIA) Impairment Scale. The ASIA impairment scale is a physical examination that results in an ASIA score ranging from ASIA A to ASIA E. The score describes the individual's functional impairment that resulted from their injury. These examinations have been shown to be reliable when conducted by trained individuals and interrater and intratester reliabilities are high (Marino et al. 2008). The ASIA assessment data was provided by RHSCIR for use in the present study.

2.3. Procedure

This study was reviewed and approved by the University of New Brunswick Research Ethics Board. Data pertaining to each of our samples (i.e., those with a tSCI and those without) was obtained using different procedures. All data from participants who did not have a tSCI was obtained from a previous study (Gaudet et al., 2019). These participants completed an online study that asked them to provide basic demographics and complete the LiSAT-11 under three different conditions. In the first condition, they completed the LiSAT-11 normally, as to reflect their actual levels of LS. They were then asked to imagine a scenario in which they had sustained a tSCI resulting in paraplegia, and to fill out the LiSAT-11 to reflect how they think their LS would be in that situation. Finally, they were asked to fill out the LiSAT-11 while imagining a scenario in which they had sustained a tSCI resulting in tetraplegia. The measure of their actual LS always came first, but the order of the injury scenarios was counterbalanced.

Basic demographics, ASIA assessments, and LiSAT-11 data pertaining to tSCI survivors was obtained through the RHSCIR, in collaboration with the local RHSCIR site managed by the Department of Neurosurgery at the Saint John Regional Hospital. This registry is maintained by the PSCI, but that group was not involved in any other part of this study. Demographics and ASIA examinations are typically completed shortly after the participant's admission to hospital, following a tSCI. LiSAT-11 data is first collected one year following the initial tSCI. One-year LiSAT-11 data, the ASIA data, and some basic demographic data was used in the present study.

As the RHSCIR registry does not provide a paraplegia and tetraplegia classification, tSCI survivors had to be placed into each category using the available data. Both the location of the tSCI on the spinal cord and the American Spinal Injury Association (ASIA) Impairment Scale Scores, both obtained from the ASIA assessment, were used to assign a classification of paraplegia or tetraplegia. To sort our tSCI survivors into paraplegia and tetraplegia group, we identified the level of injury in the spinal column. We also excluded anyone without an ASIA score, or anyone who had an ASIA score of "E" (normal function), from the following analyses. Those with injuries to the cervical levels were classified as tetraplegia, and those with injuries to the thoracic and lumbar levels were classified as paraplegia.

3. Results

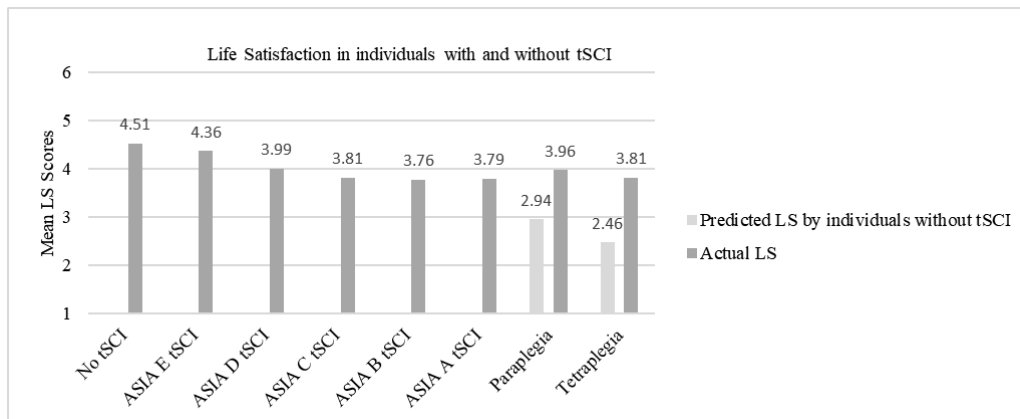
LS of individuals with tSCI compared no tSCI. To estimate the impact that tSCI resulting in paraplegia or tetraplegia has on LS, we compared the LS levels of participants from Gaudet et al. (2019) to the individuals who had sustained each type of tSCI. A 3(injury classification: no injury vs. paraplegia vs. tetraplegia) x 2 (male vs. female) factorial ANOVA, using LiSAT-11 total score as the dependent variable, was conducted. A statistically significant main effect of injury classification on LiSAT-11 scores, $F(2, 1422) = 59.42$, $p < .001$, $\eta^2 = .077$ was found. Neither the main effect of gender nor the interaction effect was statistically significant ($p > .05$). Post hoc analyses showed that both tSCI groups had lower life satisfaction than the no injury group ($p < .001$), with the tetraplegia group reporting lower LS than the paraplegia group ($p = .011$; results shown in Figure 1).

The LS of tSCI survivors compared with predicted LS made by healthy controls. To examine the accuracy of predictions made by healthy controls about the impact that tSCI might have on LS, we conducted two independent sample t-tests. The first analysis compared the levels of LS in the paraplegia group with the predicted levels of LS healthy controls believed they would have if they were living with paraplegia. The difference in LS between the groups was statistically significant, $t(912) = 17.56$, $p < .001$, $d = 1.87$. Individuals living with paraplegia reported higher levels of LS than what was predicted by participants with no injury ($M = 3.99$, $SD = 0.78$ vs. $M = 2.94$, $SD = 0.98$, respectively). The second analysis accomplished the same comparison for the tetraplegia group. Individuals living with tetraplegia reported higher levels of LS than what was predicted by individuals without an injury, $t(966) = 22.862$, $p < .001$, $d = 1.47$ ($M = 2.46$, $SD = 0.83$ vs $M = 3.81$, $SD = 0.84$; see Figure 1).

ASIA scale scores and LS. To examine differences in LS between the various ASIA classifications and individuals with no tSCI, we conducted a 6 (ASIA category, including no injury) x 2

(male vs. female) factorial ANOVA. There was a significant main effect of ASIA classification, $F(5, 1434) = 24.48, p < .001, \eta^2 = .079$, but neither the main effect of gender nor the interaction effect were statistically significant ($p > .05$). The Bonferroni test revealed that all ASIA categories except ASIA E reported lower LS than participants who did not have a tSCI. Additionally, when comparing ASIA E to all other ASIA categories, only ASIA A and ASIA B groups reported lower LS than the ASIA E group (Means for ASIA groups are shown in figure 1).

Figure 1. LS scores of individuals without a tSCI, with a tSCI but no impairment, with paraplegia, with tetraplegia, and estimates of LS for paraplegia and tetraplegia made by individuals without a tSCI.



4. Discussion

This study found that individuals with tSCI report lower levels of LS when compared to individuals without tSCI. We also found that individuals with more severe injuries report lower levels of LS. This was found both when we compared tetraplegia to paraplegia groups, as well as when we compared the ASIA impairment scale categories. These results are perhaps not that surprising, given that tSCI impacts several areas of life associated with LS. What is interesting, is how little, on average, LS appears to be affected by tSCI. In the case of both paraplegia and tetraplegia, there is less than a single point difference when compared to individuals without tSCI. A similar pattern is noted when we compare ASIA categories associated with the most and least severe forms of tSCI. ASIA A (complete injuries with no motor or sensory function) report LS levels that are less than a single point lower than the ASIA E category (incomplete injury with no effect on motor or sensory function) as well as to the group of individuals with no injury. This suggests that while physical health is a component of LS, tSCI does not always have a large impact on LS.

Using data from Gaudet et al. (2019), we also compared the levels of LS predicted for paraplegia and tetraplegia, by individuals with no tSCI, to groups of tSCI survivors. While participants accurately predicted that tSCI would be associated with lower LS, they overestimated the impact for both paraplegia and tetraplegia groups. The affective forecasting research helps to understand how our participants correctly predicted the direction, but not the degree of impact that tSCI has on LS. When people are asked to make predictions about both the valence and the specific emotions that they will feel in each situation, they tend to be accurate. When asked to predict both the duration and intensity of those emotions, however, people are less accurate (Wilson and Gilbert 2003, 2005). Participants without a tSCI perhaps considered how badly they would feel if they sustained a tSCI and reported their life satisfaction based on those hypothetical emotions. Overestimations of how happy people think they will feel in positive and negative situations are common and occur for many reasons. One such reason is immune neglect, which refers to the tendency for individuals to ignore the ability to adapt to and cope, psychologically, with negative events (Gilbert 1998). Our tSCI participants had been living with tSCI for at least one year, during this time they may have begun to adapt and cope with their circumstances. While it is possible that the estimates made by individuals without tSCI would accurately describe predictions about LS made in the initial days of sustaining a tSCI, they do not reflect the LS of tSCI survivors one year post injury. There is no way for us to test this possibility, as RHSCIR only collects LS data one year post injury. Our lower LS predictions, therefore, are likely the result of immune neglect, whereby our participants without a tSCI fail to recognize that they would adapt and learn to cope better with a tSCI over time.

As with all research, the present study has limitations. While the group of individuals without a tSCI were disproportionately female, the group of individuals with tSCI were disproportionately male. Studies in academic settings are often overrepresented by female participants (Dickson et al., 2012), while

tSCI is far more common in young adult males (Noonan et al., 2012). Although we tried to balance the design, some of the demographics of the two populations differ slightly. Secondly, because the number of individuals falling into each of the ASIA categories was extremely unbalanced, we chose not to include it as a factor in any of our comparisons of tetraplegia and paraplegia. Given that each of these categories is associated with differing degrees of impairment, a more balanced design might reveal an interaction effect between ASIA classification, paraplegia, and tetraplegia on LS. Given that injuries to the cervical spine can have a greater impact on motor and sensory function, assessing these interactions would be of value.

The present study also has implications for the care of individuals with tSCI. Estimates of LS made by people who did not have a tSCI were considerably lower than what is found in the tSCI population. Given that a tSCI can happen to anyone, it is reasonable to assume that individuals who have just sustained a tSCI believe that their lives will be less satisfying. This research shows that although there are differences in reported LS between people with and without tSCI, those differences are not as large as people assume. It should be emphasized to tSCI patients, that many people still go on to lead satisfying lives following a tSCI and that they shouldn't give up hope. There is research that has identified factors related to higher LS in tSCI survivors, and healthcare professionals could draw on that literature to ensure that they are doing everything possible to maximize LS in tSCI patients.

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POSITIVITY EFFECT IN AN ETHIOPIAN SAMPLE: INSIGHTS FROM THE DOT-PROBE TASK

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Abstract

The positivity effect, or the tendency to attend more to positive than negative stimuli, has been widely reported in the literature among older adults, however, a few contradictory findings are also present. This concept is raising substantial interest from scholars as in this age group cognitive decline is evident, and surprisingly better emotional responses are present. Different theories try to explain this phenomenon without solid paradigms for investigation as it can be seen as a relatively new concept from the past 20 years. Furthermore, little is known about the positivity effect in non-Western populations. In this study, we aimed to explore the presence of the positivity effect in an Ethiopian population using the dot-probe task with facial emotional images as stimuli. This method is a pioneer in the positivity effect field consisting of a behavioral attentional task that relies on reaction time responses. A sample of 100 Ethiopian adults was divided into three age groups: young (18-30 years old), middle-aged (31-60 years old), and older (65+ years old) adults. All participants performed a dot-probe task on a computer where the stimuli were emotional images consisting of happy, angry, neutral, and sad faces. The results of the study did not show the presence of a positivity effect or a preference for any emotional image using this paradigm. These findings suggest that further research is needed to understand the factors that may influence the positivity effect in attention in different cultural contexts.

Keywords: *Aging, positivity effect, emotion, dot-probe.*

1. Introduction

The decline of cognitive abilities in older adults has been studied by scientists and psychologists over the years, transforming this topic into a common phenomenon. On the contrary, evidence supports an association between aging and improved emotional processing, which can reflect a favorable information preference on human attention and memory (Mather, 2016). This phenomenon is called Positivity Effect: older and younger individuals when receiving the same emotional information tend to respond differently, with older individuals attempting to facilitate positive information processing and suppressing negative ones, while younger individuals do the opposite (Carstensen & DeLiema, 2018; Mather & Carstensen, 2003).

The positivity effect has its foundation in the Socioemotional Selectivity Theory (SST) (Carstensen, et al., 1999), suggesting that older adults focus on positive information as they perceive time in life as limited, and tend to prioritize goals that are emotionally more meaningful. This theory posits that age is the source of this bias and that it is motivated by emotional satisfaction. In contrast, others try to explain this phenomenon, for instance, the dynamic integration theory (DIT), proposed by Labouvie-Vief (2003), has a strong influence on this topic. The DIT suggests that older adults process positive information faster and more automatically than negative ones due to the natural cognitive decline, and as the processing of emotional information becomes a combined cognitive-emotional construct over the years, and negative information is a more difficult and complex process (Baumeister et al., 2001), the positivity effect can be explained.

Research on this positive bias has primarily focused on visual and lexical stimuli, examining age differences in attentional shifts to positive and negative stimuli and memory (Gronchi et al., 2018; Reed et al., 2014). A study conducted by Grady and colleagues (2007) found that younger individuals recognized more negative images than positive ones compared to older adults. Another study has found attentional preference towards negative facial images among younger adults in an attentional task, while older participants showed attention to positive images (Gronchi et al., 2018).

Overall, evidence shows that the positivity effect has been found across various domains, especially memory, and attention (Reed et al., 2014). However, this effect is still discussed and can be controversial as a few studies do not corroborate its existence (Murphy & Isaacowitz, 2008). While there is a significant amount of literature on the positivity effect, there has also been a lack of research done to corroborate this theory using standardized paradigms in specific domains, as well as in different countries, especially, non-developed ones. Therefore, to introduce this research in a new country, in this case, Ethiopia, is wise to use a common and one of the earliest paradigms used to investigate positivity effect which is the dot-probe task, a traditional paradigm for studying emotional attention bias (Wirth & Wentura, 2020). In the dot-probe task, participants are presented with two stimuli, followed by a dot that appears on one side of the screen, after they must respond as quickly as possible after the dot appears. The stimuli are typically presented for a duration of 500 milliseconds during many trials.

Accordingly, in this study, we aim to explore the presence of the positivity effect in an Ethiopian population using the dot-probe task with facial emotional images as stimuli. According to previous findings, it is expected that older adults will display a preference for positive images compared to the younger sample based on reaction time responses.

2. Methods

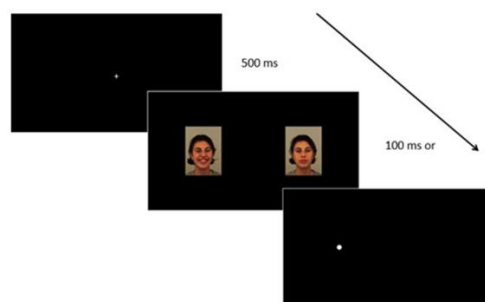
2.1. Participants

Participants were Ethiopians from the Somali region, aged between 18 and 84 years ($M=49.6$, $SD=19.42$). A total of 100 individuals took part in the study divided into 3 groups: younger adults (YA), middle adults (MA), and older adults (OA). Of the participants, 33 males and 17 females were in the older group (above 60 years old, $M=67$). Participants were included if they had normal or corrected to normal vision and be without any major health impairment that could prevent them from using a computer.

2.2. Measurements

The data was collected offline using a computer via PsyToolkit platform (Stoet, 2010, 2017). Upon agreeing to participate and following the instructions on the screen, participants are directed to demographic questions such as age, gender, education level, chronic illness, medication, and others. Subsequently, the dot-probe task (see Figure 1) starts with a cross-fixation point that appears on the screen and disappears after 500ms, followed by two picture pairs appearing on both sides of the fixation point. The experiment begins with three picture pairs for practice, followed by 140 real trials consisting of congruent (dot appearing after the emotional image) and incongruent pairs (dot appearing after the non-emotional image). These include happy-neutral, angry-neutral, and sad-neutral, congruent and incongruent face pairs, plus extra neutral-neutral image pair trials for baseline. All images were retrieved from the RADIATE database, a multiracial validated facial database for psychology experiments (Conley et al., 2018).

Figure 1. Illustration of a dot-probe task trial.



2.3. Data analysis

The main parameter used was the Reaction Time (RT) in all. Additionally, individual attentional bias (ABI) was assessed using the stimuli bias index developed by Mather and Carstensen (2003), which involved subtracting the RT of congruent trials from that of incongruent trials across all three emotional conditions to yield a score for each participant. A positive score indicated that participants spent longer RTs on incongruent trials (i.e., when the dot appeared after neutral images), indicating attention toward

the emotional image; a negative score indicated that participants spent longer RTs on congruent trials (i.e., when the dot appeared after emotional images), indicating attention away from the emotional image.

Log transformation from the RT responses was performed due to a slight skewness in the sample seeking a normal distribution of the data. To ensure a normal distribution of the data, a log transformation was applied to the RT responses. To eliminate invalid responses and reflex unwanted responses, values of RT that were below 200ms and above 2000ms were excluded from the dataset. The analysis was carried out using Jamovi 2.2.5 software. A repeated-measures ANOVA was performed to compare the mean RT for three emotional face conditions (happy, sad, and angry), and two levels of congruency (congruent and incongruent) among all groups. In order to analyze ABI scores among the groups one-way ANOVA was performed.

3. Results and discussion

Among the 3 groups, the mean ages of participants were $M_{YA}=23.4$ ($SD=3.69$, $n=24$), $M_{MA}=40.4$ ($SD=7.05$, $n=26$), and $M_{OA}=67$ ($SD=6.19$, $n=50$). The RTs of the groups showed similar responses among all conditions, without significant results (Table 1).

Table 1. Repeated Measures ANOVA analysis of the comparison between groups based on RTs of congruency and emotions.

Between Subjects Effects							
	Sum of Squares	df	Mean Square	F	p	η^2	η^2_p
Groups	0.0173	2	0.00864	0.963	0.386	0.015	0.019
Residual	0.8703	97	0.00897				

Note. Type 3 Sums of Squares

Regarding the ABI scores, which is the bias towards an emotional condition, again no significant result has been found as is possibly seen in Table 2, which means that all scores are similar among all emotional conditions. Covariates such as education, and gender did not reveal meaningful results in our analysis.

Table 2. One-way ANOVA analysis comparing the ABI scores between the groups.

One-Way ANOVA (Welch's)				
	F	df1	df2	p
ABI Happy	0.919	2	56.7	0.405
ABI SAD	0.459	2	49.1	0.635
ABI Angry	0.637	2	57.1	0.533

This study expected an attentional preference from older adults (OA) towards emotional faces as presented in other studies (Carstensen & DeLiema, 2018; Gronchi et al., 2018; Reed et al., 2014). However, there was not possible to identify a bias to any emotional image among the groups.

Numerous studies in neuroscience confirm the existence of the positivity effect, and research on this topic is increasing. As previously mentioned, some studies have failed to identify this effect (Murphy & Isaacowitz, 2008; Reed et al., 2014), and in the area of cognitive processing, particularly concerning attention to emotional stimuli, there are still unanswered questions, providing a motivational research gap for developing studies with different age group comparisons.

It is worth noting that there are many factors that can influence the presence or absence of the positivity effect in different studies, including the specific stimuli used, the age range of the participants, other methods used to measure attention, or even the population's social context. The set of stimuli can be evaluated as the RADIATE database has not been used for a study with this population. Additionally, the duration of the stimuli could be reevaluated and equally to one of the first experiments on this topic (Mather & Carstensen, 2003), aiming more attentional time to the images. However, the adoption of

500ms stimuli in the present study is a reflex of attentional controlled processing currently (Gronchi et al., 2018). The type of stimuli is also important to mention, as facial expressions may not have a higher level of valence in emotional images, suggesting that more complex stimuli could reproduce significant results, such as emotional situations and scenarios (Wirth & Wentura, 2020).

A contrary vision of the positivity effect posits that older adults are more likely to focus on negative information due to their motivation to avoid loss (Depping & Freund, 2013; Levin et al., 2021). This negative bias may be related to the lack of PE observed in some studies, including this. For example, Depping and Freund (2013) found that older adults showed a preference for negative information in memory decision-making experiments compared to younger adults. This may be because older adults need to remember negative information to avoid loss. Even though this negative bias has not been identified in the present research, it is important to reflect on other findings and theories to improve study designs for optimal findings.

While Gronchi and colleagues (2018) found evidence of PE using a similar experimental design, it is important to consider sociocultural factors that may influence how individuals attend to emotions. Fung and colleagues (2019) conducted a study comparing older adults in the United States and Hong Kong using an eye-gaze paradigm, and they found that older adults in the US demonstrated a preference for positive images compared to those in Hong Kong. It is possible that cultural differences may have played a role in the current study's lack of positivity effect findings, as it was conducted in Ethiopia, where the elderly care system in a collective society is worsening similarly to other developing countries, being associated with economic decline, social isolation, and limited access to basic services (Zelalem et al., 2020). According to Stewart and colleagues (2008), Somalis place great importance on family values and social support. Kinship is followed through generations in this culture, with elders serving as the main judges and mediators in the community, nonetheless, older adults are currently experiencing a reduction in perceived importance, likely due to significant changes in lifestyle and work environments (Noguchi, 2013).

These sociocultural aspects can influence emotional processing in older adults and may impact the current study's results. It is important to mention that the dot-probe paradigm is limited to a complex domain such as the positivity effect. And an explanation of emotional bias in aging in this specific population, which is completely different from where the current findings on this matter come from, needs a more complex approach. This study deserves to be further explored since it is the first study that investigates the positivity bias in Ethiopia.

4. Conclusion

In conclusion, our findings do not support the presence of positivity effect on an Ethiopian sample using the dot-probe task as a paradigm. This finding is in contrast to previous research that has demonstrated a bias towards positive information in older adults. The absence of the positivity effect in this sample could be attributed to cultural factors, such as differences in value systems and life experiences that influence attentional biases. Additionally, it could be possible that the dot-probe task used in this study was not sensitive enough to detect the positivity effect in older adults. Further research with larger samples and alternative methods to measure attentional biases is necessary to gain a deeper understanding of the factors that influence the positivity effect in older adults in different cultural contexts.

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AN EXAMINATION OF 2SLGBTQIA+ PSYCHOLOGICAL WELLBEING IN CANADA AND THE UNITED STATES

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Abstract

Compared to the general population, members of the 2SLGBTQIA+ community demonstrate lower mental health, psychological wellbeing, and life satisfaction (Conlin et al., 2019). An online questionnaire was administered to 534 participants across Canada (59.5%) and the United States (40.5%) to assess psychological wellbeing across sexual orientation and gender identity. Respondents were separated into four distinct categories to identify group differences: sexual minority (44.6%), gender minority (4.5%), double minority (sexual + gender minority; 26%), and non-minority (24.9%). A series of Chi-square tests and analyses of variance (ANOVA) were used to identify differences across groups and region. 2SLGBTQIA+ participants reported significantly higher anxiety, depression, and loneliness (family, social) as well as lower life satisfaction than non-2SLGBTQIA+ participants. Further, significant group differences were found on some psychosocial measures; for example, double minority participants reported the lowest satisfaction with life and highest family loneliness relative to both sexual and non-minority categories. Overall, there were no differences between 2SLGBTQIA+ participants in Canada and the United States. Results demonstrate the continued disparity between 2SLGBTQIA+ and non- 2SLGBTQIA+ populations in psychological wellbeing, with some poorer outcomes for double minority participants and limited differences between 2SLGBTQIA+ participants in Canada and the United States.

Keywords: *Psychological wellbeing, mental health, sexual minority, gender minority, 2SLGBTQIA+.*

1. Introduction

Mental health concerns are common in Canada and the United States. In both countries, approximately 20% of adults experience a mental illness or addiction each year (SAMSHA, 2021; Smetanin, 2011). Further, in the United States, suicide is the second leading cause of death. Additionally, during the COVID-19 pandemic, 25% of Canadians reported mental health problems (Statistics Canada, 2021). Members of the LGBTQ+ population demonstrate lower mental health and psychological wellbeing than members of the general population (Barry et al., 2020; Conlin et al., 2019). Using data from the 2015-16 CCHS, Hickey (2021) found significantly higher levels of depression and anxiety for lesbian, gay, and bisexual Canadians compared to the general population. Data from two large surveys conducted in the United Kingdom and Australia found that participants who identified as LGB scored lower on satisfaction of life due to both direct and indirect effects of stigmatization and discrimination (Powdthavee & Wooden, 2015). Overall, stigma, prejudice, and discrimination experienced by LGBTQ+ people can be chronically stressful and cause negative health and wellbeing outcomes (Kelleher, 2009).

Discrimination and stigmatization based on sexual orientation is predictive of psychological disorders (Chakraborty et al., 2011). A meta-analysis of 25 studies including a total of 214,344 heterosexual and 11,971 homosexual participants indicated that suicide attempts among LGB individuals were double that of the general population for lifetime prevalence and that depression and anxiety was 1.5 times higher for LGB individuals (King et al., 2008). Lastly, research indicates that sexual minorities may have a higher risk for some psychological disorders because of the detrimental effects of social stigma (Johnson et al., 2008; Mays & Cochran, 2001; Wright et al., 2000).

There also appear to be differences in the effects of sexual orientation and gender identity on psychological distress within the 2SLGBTQIA+ community. A study of 3,083 non-heterosexual and 552 non-cisgender Canadians indicated significantly greater levels of depression and anxiety among transgender and non-binary individuals (Rutherford et al., 2021). Although cisgender participants reported wanting help for depression (12%) and anxiety (26%), 47% of transgender respondents indicated

that they wanted help for depression and 49% reported needing help with anxiety (Rutherford et al., 2021). Further, transgender individuals were more likely to have received care from a registered counsellor, psychiatrist, social worker, or clinical psychologist as compared to cisgender respondents (Rutherford et al., 2021), which substantiates concerns about psychological wellness.

In the United States, a study using the health records of 6,459 patients found that almost every mental health condition, including depression, were more common among those who identified as transgender (Goodman, 2018). Further, self-harm and suicidal thoughts were significantly higher among transgender youth than cisgender youth (Goodman, 2018). It is interesting to note that researchers also found that gender-affirming therapies were associated with less body image related mental health concerns (Goodman, 2018). These findings are particularly alarming for the transgender population as laws are being enacted to restrict access to needed healthcare and mental health services.

1.1. Current study

The aim of this study was to provide a better understanding of the psychological wellness between 2SLGBTQIA+ and non-2SLGBTQIA+ individuals in Canada and the United States. The current study used data collected from an online questionnaire administered through Qualtrics to members of the 2SLGBTQIA+ community and members of the general population in Canada and the United States.

2. Method

2.1. Participants

The final sample size consisted of 534 participants ($Mean_{Age} = 26.70$ years, $SD = 9.22$); 318 Canadians and 216 Americans participated. All participants were categorized as non-minority (straight and cisgender; $n = 238$), sexual minority (non-heterosexual cisgender; $n = 139$), gender minority (heterosexual gender minority; $n = 24$), or double minority (non-cisgender and non-heterosexual; $n = 133$) based on their combined responses to questions regarding sexual orientation and gender identity.

2.2. Measures

The measures included the General Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006; Cronbach's $\alpha = .89$), the short form of the Social and Emotional Loneliness Scale for Adults (SELSA-S; DiTommaso et al., 2004; Cronbach's α scores = .82 to .89), the Satisfaction with Life Scale (SWLS; Diener et al., 1985; Cronbach's $\alpha = .87$), the Patient Health Questionnaire-9 (PHQ-9; Spitzer et al., 1999; Cronbach's $\alpha = .89$) to indicate depressive symptoms; and the RAND 36-Item Short Form Health Survey (RAND-36; Ware & Sherbourne, 1992; Cronbach's $\alpha = .78$ to .93) as an indication of overall health and quality of life.

2.3. Procedure

This project was reviewed by the University of New Brunswick Research Ethics Board. Participants were recruited from social media sites and private online groups. The sample included undergraduate students from the University of New Brunswick Saint John Department of Psychology Participant Pool. After providing informed consent, participants completed a demographic questionnaire, followed by the questionnaires, which were presented in randomized order.

3. Results

3.1. Comparing 2SLGBTQIA+ and non-2SLGBTQIA+ respondents

Members of the 2SLGBTQIA+ population reported significantly higher scores on the GAD-7 and PHQ-9 and significantly lower scores on the SWLS: Satisfaction with Life and the RAND-36 subscale of mental health (see Table 1). Compared to non-2SLGBTQIA+ individuals, 2SLGBTQIA+ respondents had significantly higher scores on SELSA-S family and social loneliness subscales.

Table 1. Differences in psychological wellness between 2SLGBTQIA+ and non-2SLGBTQIA+ respondents.

Variable	Non-2SLGBTQIA+ <i>M (SD)</i>	2SLGBTQIA+ <i>M (SD)</i>	<i>t</i>	Effect Size (Cohen's <i>d</i>)
GAD-7 (Anxiety)	15.38 (5.66)	17.19 (5.45)	3.73***	.33
PHQ-9 (Depression)	18.05 (5.75)	20.79 (6.12)	5.26***	.46
SWLS (Life Satisfaction)	23.88 (6.43)	20.24 (6.90)	-6.22***	.54
RAND-36 Mental Health	53.47 (21.16)	43.57 (18.56)	-5.65***	.50
SELSA-S (Social Loneliness)	14.21 (6.68)	15.68 (6.60)	2.51*	.22
SELSA-S (Family Loneliness)	12.21 (6.52)	16.84 (7.40)	7.45***	.66
SELSA-S (Romantic Loneliness)	17.59 (9.79)	18.38 (8.99)	0.96	.09

* $p < .05$. ** $p < .01$. *** $p < .001$.

3.2. Comparing differences within 2SLGBTQIA+ respondents

There were statistically significant differences in psychological wellness of the non-minority group and the sexual and double minority groups (see Table 2). Significant differences were found across all three minority status groups on the SWLS, with double minority participants reporting the lowest satisfaction with life. Finally, although there were no differences in social and romantic loneliness, non-minority participants reported the lowest levels of family loneliness, with double minority participants reporting the greatest family loneliness.

Table 2. Differences in psychological wellness across non-minority, sexual minority, and double minority groups.

Variable	Non-Minority		Sexual Minority		Double Minority		F
	M	SD	M	SD	M	SD	
GAD-7 (Anxiety)	15.38 _a	5.66	16.89 _b	5.77	17.80 _b	5.07	8.70 ***
PHQ-9 (Depression)	18.05 _a	5.75	20.13 _b	6.09	21.63 _b	6.18	16.26 ***
SWLS (Life Satisfaction)	23.88 _a	6.43	21.50 _b	6.99	19.05 _c	6.68	22.79 ***
RAND-36 Mental Health	53.47 _a	21.16	46.79 _b	18.83	39.61 _c	18.18	21.06 ***
SELSA-S (Social Loneliness)	14.21 _a	6.68	15.36 _a	6.62	15.37 _a	6.57	1.85
SELSA-S (Family Loneliness)	12.21 _a	6.52	15.16 _b	7.14	18.69 _c	7.59	35.37 ***
SELSA-S (Romantic Loneliness)	17.59 _a	9.79	19.37 _a	9.57	17.05 _a	8.56	2.27

* $p < .05$. ** $p < .01$. *** $p < .001$. Subscripts indicate statistically significant post hoc comparisons.

Although the gender minority group (individuals who identified as a gender minority but not a sexual minority) could not be included in the general analysis due to limited sample size, exploratory t -tests were performed to identify differences on our measures of psychological wellness between the gender minority group and double minority group. There were statistically significant differences on the SELSA-S: Social loneliness; double minority respondents reported significantly lower social loneliness than gender minority participants. Overall, the limited number of significantly different variables across the minority status categories may indicate that these two groups are generally indistinct from one another, however it is important to note the small sample of the gender minority group limits our ability to draw specific comparisons.

3.3. Comparing Canada and the United States

When comparing 2SLGBTQIA+ participants in Canada and United States using a series of t -tests, few significant differences were found (see Table 3). 2SLGBTQIA+ Americans reported significantly better RAND-36 mental health scores compared to Canadian respondents; however, participants from the United States reported significantly higher social loneliness than Canadians, with no statistically significant differences observed on the subscales measuring family and romantic loneliness. Levels of depression, anxiety, or satisfaction with life among 2SLGBTQIA+ participants did not differ significantly between Canada and the United States.

Table 3. Differences in psychological wellness of 2SLGBTQIA+ participants between Canada and the United States.

Variable	Canada (n = 133) M (SD)	United States (n = 163) M (SD)	t	Effect Size (Cohen's d)
GAD-7 (Anxiety)	17.89 (5.96)	16.63 (4.96)	1.94	.23
PHQ-9 (Depression)	21.40 (6.46)	20.29 (5.81)	1.55	.18
SWLS (Life Satisfaction)	19.83 (7.34)	20.58 (6.53)	-0.92	.11
RAND-36 Mental Health	40.88 (19.12)	45.82 (17.84)	-2.28*	.27
SELSA-S (Social Loneliness)	13.69 (6.70)	17.32 (6.07)	-4.78***	.57
SELSA-S (Family Loneliness)	16.30 (8.16)	17.28 (6.71)	-1.09	.13
SELSA-S (Romantic Loneliness)	18.34 (10.59)	18.41 (7.46)	-0.07	.01

* $p < .05$. ** $p < .01$. *** $p < .001$.

4. Discussion

Levels of anxiety and depression were significantly elevated in participants who identified as 2SLGBTQIA+, relative to the control sample of non-2SLGBTQIA+ participants. Interestingly, in this sample, there were few differences between sexual minority and double minority (sexual + gender minority) participants. 2SLGBTQIA+ participants also demonstrated significantly lower life satisfaction, with non-minority participants showing the highest satisfaction with life, followed by sexual minorities

who reported significantly higher satisfaction than the double minority group. These results of lower psychological wellbeing and greater psychological distress are consistent with previous research showing continued disparities between populations (Barry et al., 2020; Bostwick et al., 2010; Chakraborty et al., 2011; Cochran et al., 2003; Conlin et al., 2019; Diamont & Wold, 2003; Gilmour, 2019; Hickey, 2021; Roberts et al., 2010). For example, a meta-analysis of 25 studies composed of 214,344 heterosexual and 11,971 homosexual participants indicated significantly higher rates of depression and anxiety among LGB individual compared to those who were non-LGB (King et al., 2008).

At the group level, 2SLGBTQIA+ participants also reported significantly higher levels of family and social loneliness compared to non-2SLGBTQIA+, with double minority participants reporting the highest level of family loneliness than the other groups. Although only some forms of loneliness showed significant differences across groups, some research has shown significantly greater loneliness for gender diverse youth compared to cisgender (Anderssen et al., 2020). Interestingly, in a global sample of LGBTQ individuals, marginalization was significantly associated with higher social and emotional loneliness (Elmer et al., 2022). Further, greater involvement in the LGBTQ+ community was associated with higher marginalization but was also associated with lower social and emotional loneliness (Elmer et al., 2022), which could help explain some of the current results.

Lastly, Canadian 2SLGBTQIA+ participants demonstrated lower social loneliness than American participants. Interestingly, Americans and Canadians reported similar levels of depression, anxiety, satisfaction with life, family loneliness, and romantic loneliness. Consistently, similar rates of depression were reported on the Joint Canada/United States Survey of Health, however, when only individuals without health insurance were examined, significantly higher rates were found in the United States (Vasiliadis et al., 2007).

5. Conclusion

Our results demonstrate the continued disparities between 2SLGBTQIA+ and non-2SLGBTQIA+ populations, with some results suggesting that further marginalized subgroups face greater psychological difficulties. Interestingly, limited differences were found between 2SLGBTQIA+ participants in Canada and the United States. A limited sample size in some subgroups resulted in not being able to explore some 2SLGBTQIA+ populations and aggregating groups. As a result, we were not able to capture the unique experiences of these diverse populations and communities. However, we hope these results will continue to improve our understanding of the experiences of 2SLGBTQIA+ communities to support the development of policy, practitioner education, and strategies to address barriers to mental wellbeing.

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MENTAL HEALTH SYMPTOMS, ANXIETY AND DEPRESSION LEVELS OF PHYSICIANS AND DENTISTS FROM TURKEY DURING THE COVID-19 PANDEMIC: THE IMPORTANCE OF PRE-PANDEMIC PSYCHOPATHOLOGY

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Abstract

The aim of this cross-sectional online study is to evaluate depression, anxiety, stress levels and COVID-related anxiety of the physicians and dentists in Turkey during COVID-19 Pandemic. Using the snowball sampling method, data is collected via sociodemographic question form, Depression, Anxiety and Stress Scale, Beck Hopelessness Scale, COVID-19 Anxiety Scale and Obsession with COVID-19 Scale. According to DASS-42, more than half of the participants were free of significant depression and stress (59.4% and 62.1%, respectively) while approximately half was free of significant anxiety (49.8%). The physical and mental well-being of the health care workers is very important when we are facing COVID-19 Pandemic. The well-being of the care givers will effect patients speed of recovery.

Keywords: *Pandemics, COVID-19, mental health, physicians.*

1. Introduction

The coronavirus disease 2019 (COVID-19) pandemic caused by the 2019 novel coronavirus (2019-nCoV) has been affecting countries, including Turkey, since March 2020 (World Health Organization, 2020, Zhu et al. 2020). The COVID-19 pandemic is having negative effects on societies' mental health both due to pandemic itself and due to the measures taken to limit its spread (Nokhodian et al. 2020, Tian et al. 2020). Health care workers (HcWs) across the world face an immense pressure to help control the spread of the pandemic, maintain an adequate level of care for patients with other diseases and protect themselves and their loved ones from the effects of the pandemic. El-Hage et al reported that rapid spread, severity of symptoms, lack of knowledge of disease, deaths among health care workers, organizational problems including lack of required equipment, changes in daily and social routines, feeling isolated, uncertain, stigmatized along with overwhelming workload as factors negatively affecting mental health of HcWs (El-Hage et al. 2020). Previous studies conducted on Turkish HcWs have reported elevated depression, anxiety and stress levels (Erkal Aksoy and Koçak 2020, Murat, Köse and Savaşer 2020, Şahin et al. 2020, Tengilimoğlu et al. 2020, Yörük and Güler 2020). Tengilimoğlu et al. reported that the major cause of anxiety/ stress among participants was potential of contamination to their family members (86.9%). According to their results, female HcWs and those working at pandemic, emergency and working in an internal medical sciences department displayed significantly elevated depression, anxiety, stress levels (Tengilimoğlu et al. 2020). Alan et al. reported that altruism and perception of being a hero by their patients did not compensate for the negative effects of the pandemic on mental health of Turkish HcWs. Elevated levels of anxiety/stress may be related with younger age, less experience, female gender, working at emergency/intensive care units, working actively with COVID-19 patients, experiential avoidance, fear of consequences of COVID-19, comorbid psychopathology, limited social supports and lack of training (Alan et al. 2020, Nokhodian et al. 2020, Yörük and Güler 2020). On the other hand, adequate sleep and exercise, psychological resilience, social supports, emotional stability, conscientiousness may reduce mental health problems experienced by HcWs (Bozdağ and Ergun 2020, Gokdemir et al.2020).

2. Materials and methods

The present study is part of an exploratory cross-sectional online project designed to evaluate the mental health status of physicians and dentists during COVID-19 pandemic in Turkey. Between May 2020 and September 2020, 828 participants answered the questions anonymously. An electronic survey form was produced in Google Forms and the form link was distributed through social media groups established for physicians and dentists. Snowball sampling methodology was used whereby participants were encouraged to share the link with their colleagues. Informed consent was obtained from participants. Ethical approval was obtained from the Fatih Sultan Mehmet Vakif University Ethics Committee (Date: 21.05.2020, No: 9) and all the study procedures were in accordance with the Declaration of Helsinki and local laws.

COVID-19 status assessment: Participants were evaluated by questions related to COVID-19 (COVID-19 diagnosis, place of treatment, any first degree relative with COVID-19 etc).

Depression, Anxiety and Stress Scale (DASS-42): The DASS-42 was used to measure depression, anxiety, stress levels within the past week. The validation study of the Turkish version of DASS-42 reported a Cronbach's alpha of 0.92 for depression, 0.7 for anxiety, and 0.68 for stress (Lovibond and Lovibond, 1995; Bilgel and Bayram, 2010).

Beck Hopelessness Scale (BHS): This 20-item scale has three (emotional, motivational, cognitive) factors and was developed to evaluate perceived levels of hopelessness about future events (Beck et al. 1974). The Turkish version was found to be reliable and valid previously (Durak 1994).

COVID-19 Anxiety Scale (CAS) and Obsession with COVID-19 Scale (OCS): Both CAS and OCS were developed by Lee to evaluate dysfunctional anxiety and ruminations related to COVID-19. CAS includes five likert-type items while OCS consists of four items. Turkish versions of CAS and OCS were found to be valid and reliable previously (Lee, 2020a; Lee, 2020b; Evren et al. 2020).

The data was entered into a database prepared via SPSS (IBM Inc., Armonk, NY) Version 22.0. Nominal data were summarized as counts and frequencies while quantitative data were summarized either as means and standard deviations or medians and inter-quartile ranges depending on assumptions of normality. Distribution of nominal data across groups were compared with chi square tests while T test for independent groups was used for comparing quantitative data. Ordinal and logistic regression analyses were used to determine predictors of depression, anxiety and stress levels. p was set at 0.05 (two-tailed).

3. Findings

Within the specified time frame 828 participants (75.2% female) with a mean age of 41.5 years (SD = 6.7) were enrolled in the study. Specialties of participants were listed as internal medical sciences (69.9%), dentistry (12.9%) and surgical medical sciences (12.0%). Most common sub-specialties for physicians were listed as pediatrics (5.8%, n = 48), family medicine (4.2%, n = 35), anesthesiology (3.5%, n = 29), child and adolescent psychiatry (3.5%, n = 29) and psychiatry (2.7%, n = 22). Most common places of work were universities/ training hospitals (26.0%, n = 215), family health centers (22.6%, n = 187) and state hospitals (16.4%, n = 136). Two hundred ninety-four participants (35.5%) were working actively with COVID-19 patients. Thirty-seven participants (4.5%) started to live away from home during the pandemic to protect their family while another 36 (6.1%) reported that their HcW partners did the same. Most were living with their families and children at the time of participation (90.8%, n = 752). Less than half of the partners of participants (41.4%, n = 343) were HcWs themselves and almost one-fifth of partners (17.6%, n = 129) were also working with COVID-19 patients. Two hundred thirty-seven participants (28.6%) reported having chronic medical disorders requiring treatment (vs. 22.2% of partners). One hundred four participants (12.6%) reported having psychopathology requiring treatment in themselves prior to the pandemic. Most common psychopathologies before the pandemic were depressive spectrum disorders (5.6%, n = 46), generalized anxiety disorder (5.4%, n = 45), and panic disorder (1.2%, n = 10). Regardless of previous psychopathology, 199 participants (24.0%) reported requiring psychiatric support during the pandemic while only 46 (23.1%) could access it. Mean time to access psychiatric support since the start of the pandemic precautions in Turkey was 30.0 (SD = 25.8) days. Of those who accessed professional service during the pandemic, 17.4% (n = 8) received new psychiatric diagnoses. Novel diagnoses included acute stress disorder (ASD), generalized anxiety disorder (GAD), major depressive disorder (MDB), obsessive compulsive disorder (OCD), panic disorder (PD) and social phobia (SP) [GAD: n = 4, (50%); PD: n = 1, (12.5%); GAD+MDB: n = 1 (12.5%); GAD+OCD: n = 1, (12.5%), ASD+OCD+SP: n = 1 (12.5%)]. DASS-42, BHS, CAS and OCS were used in evaluations. According to DASS-42, more than half of participants were free of significant depression and stress (59.4%, n = 492 and 62.1%, n = 514, respectively) while almost half was free of significant anxiety (49.8%, n = 412). Mean score of participants in BHS was 11.4 (SD = 10.2). According to BHS cut-off scores more than half of participants (54.3%, n = 450) were free of clinically significant

depressive symptoms. Mild, moderate, severe depressive symptoms were found in 151 (18.2%), 156 (18.8%) and 71 (8.6%) participants, respectively. Mean CAS and OCS scores were 8.3 (SD = 1.4) and 8.4 (SD = 1.4), respectively. According to the CAS cut-off values, 140 participants (16.9%) reported significant anxiety symptoms related to COVID-19. Bivariate associations of sociodemographic and work-related variables with psychometric measures. In bivariate analyses, only participants specialized in internal medical sciences tended to have significant CAS scores, although this did not reach significance ($\chi^2 [8] = 15.8$, $p = 0.05$, Cramer's $V = 0.10$). Predictors of depression, anxiety and stress levels in DASS-42 scale were analyzed with ordinal logistic regression analyses. Actively working during the pandemic, working with COVID-19 patients, living with children at home, partners' actively working with COVID-19 patients, chronic diseases and premorbid psychopathology in participants and the need for mental health support during the pandemic were used as predictors. The model for DASS-42 Depression was statistically significant (AIC = 1869, BIC = 1935, Nagelkerke $R^2 = 0.075$, $\chi^2 [10] = 119$, $p < 0.001$) and could explain 7.5% of the variance in depression groups. Omnibus LR tests for premorbid psychopathology ($\chi^2 = 0.2$, $p = 0.007$) and the need for psychiatric support during the pandemic ($\chi^2 = 88.0$, $p < 0.001$). The model could differentiate no clinically significant depression from mild depression (OR = 2.6, $p = 0.011$), mild depression from moderate depression (OR = 6.5, $p < 0.001$), moderate depression from severe depression (OR = 17.4, $p < 0.001$) and severe depression from very severe depression (OR = 59.6, $p < 0.001$). The model for DASS-42 Anxiety was statistically significant (AIC = 2113, BIC = 2179, Nagelkerke $R^2 = 0.099$, $\chi^2 [10] = 175$, $p < 0.001$) and could explain 9.9% of the variance in anxiety groups. Omnibus LR tests for the need for psychiatric support during the pandemic ($\chi^2 = 142.8$, $p < 0.001$) was significant only. Chronic medical disorders in the participant ($\chi^2 = 3.1$, $p = 0.08$) and premorbid psychopathology ($\chi^2 = 3.8$, $p = 0.051$) failed to reach significance. The model could not differentiate no clinically significant anxiety from mild anxiety (OR = 1.8, $p = 0.098$). But it could differentiate mild from moderate anxiety (OR = 3.1, $p = 0.001$), moderate from severe anxiety (OR = 9.9, $p < 0.001$) and severe from very severe anxiety (OR = 27.1, $p < 0.001$). The model for DASS-42 Stress was statistically significant (AIC = 1764, BIC = 1830, Nagelkerke $R^2 = 0.096$, $\chi^2 [10] = 148$, $p < 0.001$) and could explain 9.6% of the variance in stress groups. Omnibus LR tests for actively working during the pandemic ($\chi^2 = 6.0$, $p = 0.014$), premorbid psychopathology ($\chi^2 = 5.2$, $p = 0.023$) and the need for psychiatric support during the pandemic ($\chi^2 = 107.9$, $p < 0.001$) were significant only. Chronic medical disorders in the participant ($\chi^2 = 2.9$, $p = 0.09$) failed to reach significance. The model could differentiate no clinically significant stress from mild stress (OR = 2.4, $p = 0.022$). It also could differentiate mild from moderate stress (OR = 5.1, $p < 0.001$), moderate from severe stress (OR = 16.3, $p < 0.001$) and severe from very severe stress (OR = 69.5, $p < 0.001$). The model for significant COVID-19 related anxiety (i.e. CAS above cut-off) was significant (Hosmer-Lemeshow, $\chi^2 [8] = 9.2$, $p = 0.329$), - 2LL = 211.4, Nagelkerke $R^2 = 0.210$) and could explain 21.0% of the variance. It could correctly classify 100.0% of participants with non-significant COVID-19 related anxiety and 0.0% of those with clinically significant anxiety. Predictive value of actively working during the pandemic, working with COVID-19 patients, living with children at home, partners' actively working with COVID-19 patients, chronic diseases and premorbid psychopathology in participants and the need for support during the pandemic for COVID-19 related anxiety and ruminations were evaluated with binary logistic regression analysis. The model for significant COVID-19 related ruminations (i.e. OCS above cut-off) was significant (Hosmer-Lemeshow, $\chi^2 [8] = 9.0$, $p = 0.343$), - 2LL = 555.9, Nagelkerke $R^2 = 0.107$) and could explain 10.7% of the variance. It could correctly classify 97.9% of participants with non-significant COVID-19 related ruminations and 11.1% of those with clinically significant ruminations. The need for psychiatric support during the pandemic was the only significant predictor while having a partner actively working with COVID-19 patients tended to increase the odds of COVID-19 related rumination.

4. Discussion

This cross-sectional, online study aimed to evaluate mental health symptoms, depression, anxiety and stress levels of physicians and dentists during the COVID-19 pandemic in Turkey. Most enrolled participants were female and worked in internal medical sciences. The majority were living in various metropolitan areas, located in western Turkey and more than one-third were working actively with COVID-19 patients. More than one-tenth were diagnosed with various psychopathologies prior to the pandemic and almost one-fourth reported need for psychosocial support during the pandemic, although few could access it. Most common symptoms reported during the pandemic were anxiety, tension, anhedonia. Approximately one-tenth reported severe depression and stress while approximately one-fifth reported severe anxiety related with COVID-19 according to self-reports. Depression, anxiety, stress was predicted significantly by premorbid psychopathology and the need for psychosocial support during the pandemic while COVID-19 related anxiety was significantly predicted by chronic medical disorders in the participant and the need for psychiatric support during the pandemic. HcWs across the world are forced to work under extremely difficult conditions owing to the COVID-19 virus outbreak (Greenberg et

al., 2020). The problems facing them include caring for patients with COVID-19 and those with other diseases while protecting themselves and their families from infection. The novelty of the pandemic, its severity, organizational problems, changes in daily living affect the mental health of HcWs (El-Hage et al. 2020). Previous studies on Turkish HcWs reported elevated levels of depression, anxiety, stress (Erkal Aksoy and Koçak 2020, Murat, Köse and Savaşer 2020, Şahin et al. 2020, Tengilimoğlu et al. 2020, Yörük and Güler 2020). The levels of clinically significant anxiety in previous studies conducted on Turkish HcWs varied between 7.7% and 22.6% depending on specialties of participants and psychometric measures (Şahin et al. 2020; Alan et al. 2020). According to those studies, limited availability of protective equipment, greater workload, female gender, premorbid psychopathology, working on the frontline with COVID-19 patients as a nurse or an internal medicine specialist, having chronic medical disorders and being tested for COVID-19 may be related with greater anxiety. Main sources of anxiety were potential infection of family members and themselves (Şahin et al. 2020; Tengilimoğlu et al. 2020; Yılmaz et al. 2020, Yörük and Güler 2020, Alan et al. 2020). Like those results, we found the rate of clinically significant anxiety in our sample as 16.9% (with CAS) and 19.0% (with DASS-42). Anxiety levels were associated with working as an internal medicine specialist, having premorbid psychopathology, need for psychiatric support during the pandemic and having chronic medical disorders. Most of our sample were female physicians and dentists, this may have affected our results (i.e., suppressing gender differences and differences with nurses). Our sample was skewed towards physicians who do not work as closely as nurses with COVID-19 patients and those working at the most affected institutions (e.g., city hospitals, Tengilimoğlu et al. 2020) were not sampled adequately. Also, the results may have changed had we required the participants to identify the sources of their anxiety in a forced choice format. Previous studies reported clinically significant levels of depression in Turkish HcWs between 6.2% and 31.8% depending on formation of samples (i.e., nurses reported elevated levels) and methods of evaluation (i.e., Depression, Anxiety and Stress Scale-21, DASS-42, Beck Depression Inventory, Patient Health Questionnaire-9 etc.) (Şahin et al. 2020, Tengilimoğlu et al. 2020, Alan et al. 2020, Yörük and Güler 2020). Depression risk was reported to be greater in females, nurses, frontline workers, HcWs with greater workloads, younger and older HcWs, those with poorer general health and from lower socio-economic status, those reporting premorbid psychopathology and need for psychosocial support during the pandemic (Şahin et al. 2020, Tengilimoğlu et al. 2020, Alan et al. 2020, Yörük and Güler 2020). Depression in HcWs was also associated with elevated anxiety and stress (Şahin et al. 2020, Tengilimoğlu et al. 2020). Partially supporting those results, we found the rate of clinically significant depression symptoms in our sample as 10.9% (with DASS-42) and 8.6% (with BHS). Presence of premorbid psychopathology and the need for psychosocial support during the pandemic were the only significant predictors of depression in our sample while we failed to find an effect of gender and other vocational and demographic variables on depression symptoms. Like anxiety, the discrepancies related with depression in our sample may be due to sampling and methodological bias. That is, a more heterogeneous sample of HcWs (e.g., physicians, nurses, dentists, pharmacists, assistant personnel) from more varied backgrounds may have led to differing results. Also, previous studies suggest that depression in Turkish HcWs may be related to burnout, anxiety, stress, rather than hopelessness (Şahin et al. 2020, Tengilimoğlu et al. 2020). Therefore, BHS may not be an adequate instrument to screen for depressive symptoms in such samples. Previous studies reported the rate of needing psychosocial support among Turkish HcWs during the COVID-19 pandemic between 10.2% and 42.6% (Erkal, Aksoy and Koçak 2020, Şahin et al. 2020). Supporting those results, 24.0% of our sample reported needing psychosocial supports during the pandemic while only 23.1% those reporting this need received help. Telepsychiatry may be a viable option in those interventions (Dursun et al. 2020). Our results should be evaluated within their limitations. Firstly, our results are valid for the initial phase of the pandemic in Turkey and may not be valid for the current sample of HcWs. Secondly, the use of online data collection methods may have affected our results and physicians working in rural areas and those not attending the online groups may not be enrolled. Also, nurses/ other health care personnel working in a variety of health care institutions were not adequately sampled. Thirdly, although we used reliable and valid measures, the measures we used may be affected by shared method variance (i.e. self-report), reporting and recall bias. Fourth, we did not evaluate the participants for psychopathology with clinical interviews and our rates of clinically significant symptoms depend on features of psychometric measures. Fifth, the cross-sectional nature of our study prevents hypotheses on causality. Lastly, rather than using snowball sampling we could have used stratified randomized sampling of HcWs which could have increased external validity.

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“I GAINED SOMETHING BUT I HAVE LOST MORE” – BEHIND THE SCENES OF AMBIGUOUS LOSS

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Abstract

The study explored the subjective experience of ambiguous loss as reported by work immigrants. Fifteen Georgian work immigrant women ($M_{age}=47.5(10)$) living in Italy were recruited through accessibility and snowball sampling procedure. Data were collected via adapted version of the life story interview protocol, analyzed by employing the deductive content analysis strategy and major thematic lines were identified, such as ambiguity/ambiguous loss, psychological family, resilience, boundary ambiguity and family roles, and legal status. The participants experienced loss that was either directly or indirectly related to their immigrant status. However, ambiguity accompanied not the loss experience per se, but the legal status, timeline and relational patterns of the immigrants and their families. Participants reported being unable to live day-by-day life with their families as the state of ambiguous loss and being concerned upon the fate and challenges of their family members left behind. However, the expansion of the psychological family boundaries through including either fellow immigrant workers or employer family members was repeatedly reported. As for the boundary ambiguity, mostly was not mentioned in the narratives since family boundaries in the majority cases remained clear as the transnational families reconsider roles and redistributed responsibilities among them. The main challenge, as participants stated, were the mechanisms to remain resilient in immigration. Further, the identity reconstruction was reported as the main coping strategy in this case. The status of an illegal immigrant worker served as an impediment to the identity reconstruction process.

Keywords: *Ambiguous loss, boundary ambiguity, immigration, life story narrative.*

1. Introduction

Living with someone who is both gone and not for sure – or here and gone – is a bizarre human experience that produces sadness, confusion, doubt, and anxiety. Expanding on years and even decades, this state causes even more damage to the individual, her/his everyday functioning as well as to her/his family networks and broader community. Being in ambiguity – not knowing whether person’s loved one is present or absence excerpts unique influence on human beings on both, individual and relational level. To denote this incomparable state and this ongoing, never-ending stressful experience, Boss (2006) coined the term Ambiguous Loss.

The presented study aimed at exploration of the subjective experience of being in the state of ambiguous loss in case of work immigrants. First-person life story narratives were scrutinized to observe the phenomenology of the experience as well as to trace the salient thematic lines, defining the identity, inner dynamic and behavioral patterns of the Georgian women living and working in Italy.

2. Ambiguous loss, immigration, and related experiences

The concept of Ambiguous Loss refers to ambiguous events or situations that entail a loss or separation that has no closure. Psychologically, ambiguous loss can be a problem, in that it can create feelings of hopelessness, uncertainty, and confusion that can lead to depression, guilt, anxiety, and immobilization (Boss, 2016). Structurally, ambiguous loss can be a problem when it leads to boundary ambiguity, described as “a state in which family members are uncertain in their perception about who is in or out of the family and who is performing what roles and tasks within the family system” (Boss & Greenberg, 1984, p. 536).

Boss distinguishes between two types of ambiguous loss: ambiguous presence and ambiguous absence. Here we focus on the latter. Ambiguous absence occurs when a person/family is physically

absent but perceived by her/him and/or her/his family members as being psychologically present. Immigration is named as one the most common experience of this type of ambiguous loss. In this case the person/family often becomes preoccupied with the absent relative, and it becomes unclear which roles family members play. As Drummet et al. (2003, cited in Boss, 2006) claimed, family members must stretch the family boundary enough both to psychologically retain the gone person as a viable family member and to temporarily reassign his or her responsibilities, as must the gone person herself/himself. In many cases, the ambiguity is tightly linked to the length of the separation. Both, immigrants, and their families often believe that separation is temporary, however it may last for years and decades. Solheim and colleagues (2015) reported that none of the interviewed 17 transnational family members could name a specific time when they would be reunited.

When the family member immigrates, family members in both countries may experience grief and loss due to separation (Solheim & Ballard, 2016), that, in turn, leads to less contact and support and eventually results in worry, suffering and experiences of loss (Silver, 2011).

Boundary ambiguity and redistribution of the roles and responsibilities are associated with the concept of psychological family, which implies (Boss, 2011) not only one's biological family members, but also any person who one chooses to be (either physically or mentally) with at personally important times. When a person is physically or psychologically gone out the family system, the notion of a psychological family intensifies, and serves as one of the most valuable coping tools with loneliness, depression and uncertainty, and as a motivation for movement and advancement as opposed to inaction (Boss, 2006).

Resilience is another quality which is closely linked to the ambiguous loss experiences. It is defined as flexibility in response to life pressures and tensions that includes daily life stress as well as anticipated family changes (birth, death, etc.). In case of the ambiguous loss, one's resilience depends on the ability to live comfortably and more-or-less quality life with ambiguity (Boss, 2006).

According to the theory, although immigration is accompanied with ambiguity, family members successfully provide emotional and material support beyond boundaries (Dominguez & Lubitow, 2008). Roles can be changed, implying that family members, on both sides of the border, taking new responsibilities (Boccagni, 2012). Further, reinterpretation of the situation is one of the ways leading to resilience and better well-being (Boss & Carnes, 2012). Yes, another way is find meaning in loss and reconstruct identity (Boss, 2010) to fit new reality, hence achieve greater resilience.

3. Method

The study employs social constructivism framework and interpretive paradigm. Hence, the data collection and analysis are qualitative and revolves around the subjective experiences, feelings, and interpretations reported by the research participants.

3.1. Participants

Demographics and sampling: Fifteen Georgian immigrant women ($M_{age}=47.5(10)$, range 29 – 63) were recruited via accessibility and snowball sampling procedure in Rome, Italy. The reasons of immigrations were poor economic and/or living condition of the family, difficulties in paying family debts, or the inability to provide children with the proper education. Ten out of the fifteen respondents were married, four were divorced and one widowed. The average length of immigration was 6.1 years (range 2–14 years). 10 women were illegals.

Enrolment criteria: the respondent should (a) have spent at least 1 year migration, which is enough time for the respondent to already have some experience of living in a new country, and (b) be in the destination country without some family members.

3.2. Instrument and procedures

Instrument. Georgian adapted version of life story interview (Khechuashvili, 2020; McAdams & Pals, 2006) with some modifications is a semi-structured interview containing questions about key points (high, low and turning points, positive and negative childhood, vivid memory and mystical/religious experience), challenges (life and health challenges, stories about loss and failure/regret), and future chapter, dreams/hopes and plans. Audio recorded interviews were transcribed verbatim.

Ethical Considerations. All participants read and signed written informed consent form. Research assistants answered all questions regarding research procedures, withdrawal from the study, anonymity and confidentiality, publishing, etc.

Place and time. The interviews were recorded in September 2019 in Rome, Italy, at the immigrants' regular gathering place. Each session lasted 60-70 minutes.

3.3. Data analysis

Data Analysis Strategy. Deductive content analysis strategy (Elo & Kyngas, 2008) implies the analysis of data via the already existing conceptual framework and aims to expand the model by adding new understanding to existing concepts, to test the suitability of the model by adapting to different experiences, or to generate new research questions.

Preparation stage. The whole interview was selected as a unit of analysis (Graneheim & Lundman, 2004). In the initial phases second and third authors reviewed all data to create the general context and preliminary analysis. Further, they reflect and discuss the insights and primary findings. Based on the elaborated shared perspective on the data, all three authors jointly analyzed and interpreted the data for ambiguous loss and other targeted variables.

Categorization matrix. The next step was to create a categorization matrix, i.e. a table of initial categories of coding reflecting the basic constructs of the theory being tested (Elo & Kyngas, 2008). The aim was to agree on the operationalization of the concepts. Although the basic constructs of ambiguous loss were already defined in the theory, categories for analysis have been revised multiple times until researchers achieved consensus on all discrepancies of understanding narratives (see Kohlbacher, 2006).

4. Results

The interpretation of the stories shared by the Georgian work immigrants living in Italy are presented alongside the predefined salient thematic lines, such as ambiguity/ambiguous loss, psychological family, resilience, boundary ambiguity and family roles, and legal status. All quotes are taken from the interviews. To serve the confidentiality, all names have been changed.

Ambiguous Loss. The experience of emigration involves the loss related to the physical separation from family, failure to fulfill one's roles and maintaining long-distance relationships.

It has been 8 years I have been separated from my family. It is not a short time, it is lost, and nothing can change this. It cannot be compensated. I will always be followed by the sense of wasted time. Yes, I gained something, but I have lost more. I regret (Mari, 46).

Psychological Family. Social relationships acquired in a new country, even a few friends, became part of their psychological family and, hence the second most important source of support and sharing for immigrants.

We still have a hard time here, but we manage. There are five of us, who are tightly bonded to each other. We support, encourage ...and each other stronger. We are close to each other even in the difficult times. We have created our world here (Ana, 63).

Job-related relationships also became part of a psychological family. In some cases, immigrants received a positive treatment from the employer leading to job-based support and positive outcomes. "She helped me to obtain the document letting me to work and live here legally... the proof of respect and appreciation from that family."

However, this was not the case for everybody. Some women reported range of discrimination and humiliation. "My second job was a terrible experience. I was not allowed to eat properly or bring food from outside. However, I disobeyed several times. I went to bed, I covered myself with a blanket and I ate like that," one of the participants said.

Boundary Ambiguity. The family boundaries remain clear and family members reconsider roles and responsibilities among them; However, family boundaries may become blurred and lead to conflict and alienation when there is uncertainty and family members see differently the ways of distribution of the roles and responsibilities, and what expectations they have regarding the tasks to be performed by the family member.

There was detachment with my husband, mother, and sister. I liked doing things in my way and they did not agree, that caused conflicts. They could not get used to it. The family told me that I had to come back, however, they did nothing to help me. I lived here but I was there, and I was drowning in problems. I solved one, and another problem emerged repeatedly (Inga, 47).

Another type of ambiguity and uncertainty was associated with timeline of immigration. As one immigrant stated, "It's a quite difficult to say when I'll be back... I should have gone back in three years after arrival, and unfortunately, I have no answer now."

Resilience. The resilience of participants, coupled with their real-life circumstances, such as the need of reevaluation and reconstruction their identities and obtaining the legalization paper, resulted in different levels of adaptation and higher levels of wellbeing. Namely, those with higher resilience settled down and adjusted themselves to new reality. Based on the narratives, can be claimed that resilience, as individual trait, might serve as the buffer for reconstruction of the identity and restarting the life for

immigrants. So, their stories were saturated with the themes of resilience, overcoming, flexibility, and adaptation in everyday life.

Now I find it easier to utter the word what we call our job. At first, I had a hard time saying the word out loud at all. I must admit that I had a hard time grasping this situation that I was somebody back then and I was not always who I am now. This moment was difficult, and I can't say that I overcame it (Nana, 39).

Legal Status. The right to live and work legally has several important outcomes for immigrants: To be able to proceed with identity reconstruction with more success and less stress. Another benefit lays on more instrumental level. Having a document is a way to get a better job and salary, and most importantly, it is a direct way to go back home once a year to visit the family.

My problem is that I have been working illegally for many years... If I were legalized officially, I would not be staying here for so long. I would go see my children. Having the paper helps in many ways. If you have it, you are eligible for 13th salary and paid vacation. They pay you nothing, if you are illegal... On the first place, you cannot travel abroad, to go to your country and come back... You just must wait for years that someday the law might change or new one will be introduced, and something will be changed (Ana, 29).

5. Discussion

Close reading of the transcripts of Georgian work immigrants living in Italy revealed the experienced loss either directly or indirectly was associated with being far away from the family. Research participants provided the stories of the years spent in immigration, inability to physically participate in family life and to share important moments with them. Although they spoke of loss, data do not align nicely with the theory – they have not mentioned ambiguity related to the loss. Moreover, research participants were fully aware what they have lost and what remained with them. Namely, they knew the whereabouts of their family members in the home country. They claimed that loss was associated with time – the years spent without their families. Thus, based on our data, we suggest preliminary conclusion, that immigration might not be classified as either type of ambiguous loss, as the theory states. This leads us to the necessity of further exploration and possible reconsideration of the concept of ambiguous loss, as defined in theory. However, as data showed, ambiguity is inseparable part of immigrants' life embodied in boundary ambiguity.

The inevitable changes in the responsibilities and roles after the immigration of the family member, are documented in past research (Pribilsky, 2004). The precondition for boundary clarity is the clear vision of immigrant's current role in the family. However, when the interpretations of the family and immigrant diverge, disagreement upon the distribution of roles and responsibilities is expected.

Another source of ambiguity was the uncertainty of reuniting with the families, which is also nicely fits with relevant research literature (Solheim et al., 2015). Perez & Arnold-Berkovits (2018) suggest that leaving family and friends without clear timeline of reunion is common scenario.

The psychological family consisting of the family members left behind is in the focus of daily thought and care. As Boss states (2006), the psychological family supports in difficult times when the physical family is not around. Besides, new relationships in the destination country – friends or people one works for – may become a part of one's psychological family. In the most cases, immigrants established new relationships with strong emotional bonds, however, this is not always a case in work-related relationships. Job-related connections may serve as either source of stress or support. In either case, immigrants call their employers "my family", since they live with the family as caregiver.

Being resilient in immigration appears as the main challenge in presented study. Those with showed higher levels of resiliency, reported less stress, contrary to those who were lower in resiliency. The latter respondents seemed to be more stressed and told more stories containing negative emotions. Further, after moving to Italy, highly resilient individuals reconstructed their identities and accepted all outcomes they faced.

In conclusion, research participants living and working in Italy perceive their experience of leaving the families as highly stressful. Living in emigration, far away from the family, is accompanied by sense of loss. The experienced loss is unambiguous, which challenges the theory of ambiguous loss. Instead, family boundaries and roles are marked with ambiguity. However, the boundary ambiguity does not always remain problematic as family and the immigrant renegotiate roles in the family structure and tolerate the situation considering their shared goals. Research participants keep the family present in their mental and affective life as psychological family. However, new relationships extended its boundaries. To remain resilient, one must reconstruct the one's identity in the new country, which sheds light on how successfully the immigrant is adjusted to new life and copes with challenges in everyday life. Finally, those with higher resiliency find it easier to deal with the ambiguity, the loss and the stressful experience of emigration in general.

6. Limitations

First limitation associated with sample – only women, only work immigrants and only those living and working in Italy were interviewed. Second limitations in the sample size that does not allow quantitative analysis. And third, the exploration of the phenomenology of ambiguous loss was one-sided – only on individual level and from immigrants' viewpoint. As research (Solheim et al., 2015) suggest, the alleged ambiguous loss caused by immigration manifests itself not only with the immigrants themselves but also in the family left behind. Accordingly, extending the research to the family level is highly recommended.

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RACE AND GENDER IN THE EXPERIENCE OF ANGER IN THE PSYCHOTHERAPEUTIC OF SOCIO-HISTORICAL PSYCHOLOGY

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Abstract

The Brazilian context of profound social inequality intensifies differences in the ways of living and feeling human experiences. It demands from mental health care the critical appropriation of the oppressive and exploitative structures that found and sustain capitalist society. Among the fundamental human experiences, emotions have special emphasis, especially in clinical practice. That presupposes embracement and bonding, so that understanding the particularities that determine emotional experiences is essential for clinical reasoning. Socio-historical psychology with its historical materialist base offers categories that allow the appropriation of these determinants, among them the notion of significance, meaning and experience that guide this study. Based on Socio-Historical Psychology, we understand emotions as socially meaningful experiences. Kahhale & Montreozol (2019) list some fundamental parameters for thinking about clinical management in socio-historical psychology, they are: active listening; dialogical and reflective relationship; historicity as an analytical category; potentialization and autonomy of the subject and human rights and access to the best cultural production of humanity We constructed this paper from a clinical case study (21-year-old black woman, daughter of a black father and white mother, college student, resident of São Paulo /SP/Br), a psychotherapeutic process that took place during the first half of 2020, understanding that through this format we were able to apprehend clinical processes in their concreteness, that is, as a synthesis of multiple determinations. We aim to deepen the debates about the experience of anger from an intersectional perspective, understanding the historical processes of meaning of this emotion for the female gender and for black people. The discourse analysis methodology of the therapeutic sessions and case supervisions was used, so we illustrate psychotherapy based on Social-Historical Psychology using a case study focusing on anger. The following core meanings were obtained: the client's denial of her emotions; the expression of anger; therapists' emotions. These nuclei indicated a specific knot of this condition in which black women are doubly excluded from the right to signify and express their anger. In view of this, it is fundamental that the therapists involved take ownership of these discussions at the most immediate and unique level so dear to psychotherapy, the emotions.

Keywords: *Psychotherapeutic process, emotions, socio-historical psychology, race, gender.*

1. Introduction

This paper intends to deepen a clinical case study built from a psychotherapeutic process that took place during the first semester of 2020. The client here named J., is a Black woman, 21 years old at the time, daughter of a Black father and a white mother, university student, living in São Paulo/SP/Br. During the therapeutic process of this case, two issues deeply mobilized the therapists, the client and the supervision group: the condition of the client as a Black woman in the current patriarchal and racist Brazilian society;

and the presence of an affection that was denominated anger in her verbal and behavioral expressions in the consultations. The denomination of anger was constructed in different contexts and directions as will be portrayed throughout this paper. The objective of this work of elaboration and deepening, therefore, is to analyze the clinical management of emotional-affective expressions. The intention is to apprehend the processes of signification and naming of emotions and affections, and to understand how social particularities, especially the intersection of race/gender/class, tied to our social context, determines the experience of this process.

The choice of the clinical case format makes it possible to reveal the client's main meanings, which are relevant to the objective of the study, thus allowing empirical studies to provide theoretical and practical advances in the socio-historical clinic, based on the historical-dialectical materialism method, a theory in which we are aligned in the defense of the need to overcome the appearances of clinical processes, reaching their concreteness, through the synthesis of multiple determinations. The sessions were carried out remotely through platforms such as Google Meet and WhatsApp due to the restrictions imposed by the COVID-19 pandemic. Each session lasted 50 minutes and the client J., a therapist and a co-therapist participated. The sessions were recorded and later transcribed with the client's permission.

The data that make up this clinical case study correspond to the transcripts of the sessions held, the client's psychological reports produced for the Ana Maria Poppovic Clinic at the time the case was referred, and the recordings of the supervision meetings held at the Laboratory for the Study of Health and Sexuality (LESSEX). The project was approved by the Research Ethics Committee of PUC-SP/Br and received the following protocol: CAAE 18783019.00000.5482.

The methodology used was discourse analysis, made out of the sessions and supervisions records. The analysis was based on the cores of meaning proposed by Aguiar and Ozella (2006) and supported by the methodological reflections presented by Friedman (1995) on the study of the relationship between language and emotions. The authors point to the notion of semantic field as an interpretative element of the link between referential meaning and associative meaning of signs, indicating an active process of meaning choice based on personal meanings and positioned in the confrontation between social meanings and personal experience. Rescuing the notion of semantic field in the analysis of the cores of meaning, we intend to understand that the process of meaning and management of emotions goes beyond the moment of their naming.

Next, we will present a brief theoretical review that we used to elaborate the analysis, linked to the Brazilian context and the acknowledgement of the current system of oppressions. Afterwards, an analytical description of the therapeutic process that J. was submitted to and the formulation of the analysis discussed in three cores, as well as reflections on clinical handling..

2. Theoretical foundation

The Brazilian context of profound social inequality intensifies the differences in the ways of living and feeling the experiences of people in this territory according to their specificities. Thus, it is necessary that mental health professionals think critically about this reality built through oppressive and exploitative structures that founded and sustains capitalist society. It is understood that, among human experiences, emotions have special emphasis, especially in clinical practice.

Social-Historical Psychology (SHP) has been producing theoretical foundations for clinical practice, understanding the individual as a unique, active and historical being that develops through the social relationships he establishes with his environment, interpersonally, with the world and with himself. The development of the subject in this approach occurs in a mediated way in a singular-particular-universal dialectic. From this perspective, in the humanization movement, the higher psychological functions were developed, such as consciousness, language, attention, perception, among others that result from the historical formations of the human gender, containing within themselves the characteristics of the social totality in which they are inserted (Vygotsky, 1987). Therefore, the process of constitution of the individual as a human being, occurs through the dialectic between appropriation and objectification of the cultural accumulation of humanity according to the access that a given reality allows and offers.

Thus, Social-Historical Psychology (SHP) proposes a historicized clinical practice that aims to break with the classical clinical practice built on the dichotomy subject-society, emotion-reason, etc., thus enabling an understanding that relocates the meaning of emotions in Psychology by understanding them as a historical and social phenomenon (Lane & Camargo, 1995). This implies a clinical reasoning that seeks to understand the particularities that determines emotional experiences, based on the historical-dialectical materialism, we can investigate how the various mediations that takes part in social totality affect feeling/thinking/acting on emotions. This process of reasoning and handling must be linked to the understanding that the various mediations are configured in alienation, in the structuring of the capitalist system, and its interlacing of class, gender, and race.

About emotions, which is the focus of this research, we started from Vygotsky (1999 [1925]) when the author highlights the dialectic character for the formulation around emotions. His defense is that these are not entities that are inside or outside the individual, but are built from the constant interaction between this individual and the environment, so, they can also be transformed as the subject develops continuously. With his historical materialist basis, the author offers categories that allow not only to describe, but also to explain these phenomenon, among them the notion of meaning, sense, and experience that guide this study. Based on these categories added to the other formulations of social-historical psychology, Kahhale and Montreozol (2019) list some fundamental parameters for thinking about clinical management in Social-Historical Psychology, they are: active listening; dialogical and reflective relationship; historicity as an analytical category; empowerment and autonomy of the subject and human rights and access to the best cultural production of humanity.

Therefore, when we understand that the relations that found, constitute, and develop the subject, with consciousness being related to thought and language, we understand that signification is mediated by particular aspects. To understand how these mediations are constituted we point to Lukács (2018), one of the authors who synthesizes the notion of mediation in the singular-particular-universal dialectic, taking the particularity as mediation between the universal (human kind) and the singular (individual). In other words, the particularity is a concrete and real field composed by mediations that decisively affect the way in which the singularity is constituted in the universal and this in turn is concretized in the singularity.

Thinking about this mediation in the singular-particular-universal dialectic from the theme of race relationships, Devison Faustino (2018) points out that racism would be this concrete field of mediations that determine singular experiences. From this perspective, the particularity aspect can't be taken as a characteristic of the subject, such as race, class, or gender, but needs to be understood as "structural or conjunctural forms under which singular individuals experience their generic universality" (Faustino, 2018, p. 146). This way, it refutes the colonial thinking that was producing various dichotomies that found the notion of the human and the Black as non-human. With this, the Black is reduced to an extreme of this dichotomy, as the author states in another text: "The Black (the Other) is expected to always be emotional, sensual, virile, playful, colorful, childish, banal; as close as possible to nature (animal) and distant from civilization" (Faustino, 2013, p.6).

We then understand that we are subjects within and from social relationships, in a psychophysical unity. When we think about gender, a similar movement occurs. There are studies on gender relations that bring to light this process of inferiorization and subordination in power relations in which women were placed as subjects outside history, on the margin, as the other. Historically, politics has relied on arguments that associated the position of women with subordination, in a hierarchical and naturalized vision of the relations between the sexes, producing a codification of gender with rigid meanings, much of the weight of this argumentation relied on an alleged natural difference between the sexes that would explain and/or justify patriarchal domination. This place of subjects outside history is related to the dichotomy between nature and culture fundamental in capitalist, colonial-patriarchal thinking (Scott, 1995; Haraway, 2004).

In the field of emotions in our society Lutz (1988 apud Despret, 2011) points out two central and contradictory lines are outlined, one of romantic inspiration that takes emotions as the true core of the human being, the source of life within us, and another based on Plato and strengthened by Christianity that sees emotions as an imminent danger, pathological expressions (páthos) of that which must be fought. Here again there is a dualistic and hierarchical clipping produced and sustained by colonial thought within which superior and inferior emotions are positioned, those that should be cultivated and those that should be repressed, and this positioning reflects concrete interests in maintaining capitalist exploitation. Therefore, to talk about emotions is to talk about society, is to talk about politics, about the way we organize our society and signify our experiences.

What we saw then is an intertwining between the notions of nature, culture, gender, race, and emotions, which are taken as biological and natural human components at the same time that the categories of gender and race position subjects in this spectrum and produce a hierarchy, subordination, and domination. In view of this, it was, and still is, necessary to be careful not to produce a direct and unthinking association between these positions presented here. However, both speak about a marginal position, of oppression that have been silenced and denied for much of western history, between which the relationships are complex and imbricated. Based on these references we built our analysis of J.'s case, recognizing that this configuration of our social organization most likely affects her social existence as a Black woman.

3. Results and discussion

At first, the client J. reached the psychological clinic motivated by a suspicion of ADHD and requested a neuropsychological evaluation. After the psychodiagnostic process, it was concluded that there was a lack of elaboration of her personal contents and she was referred to psychotherapy. In the first sessions of the psychotherapeutic, it was observed a certain difficulty in understanding how the clinical space worked, but, little by little, the psychotherapy was becoming more dynamic. With that in mind, we

organized the results into three cores, according to the objective of this case study: the denial of the client's emotions, the expression of anger, and the emotions of the therapists.

The first core concerns the reading of the previous professionals about J.'s process in the university clinic. In the first sessions of the psychodiagnosis, it was described in the medical records that J. was an avoidant person who did not talk about her feelings and demanded answers from the therapists only about her initial complaint - the ADHD diagnosis hypothesis. However, in our psychotherapy process we noticed in the very first sessions that the client was bringing stories of difficult experiences and verbalizing her affections from these experiences, especially anger, but also guilt and uneasiness, which was being disregarded by the previous therapists who indicated her as a person disconnected from her emotions. Therefore, it is understood that there was a denial of her affections by the previous professionals.

The second core of meaning refers to the expression of anger. A certain difficulty in expressing this feeling was observed, and during the supervisions, was noted the need to interweave J.'s racial aspects into the whole of her psychotherapeutic process. When talking about the fragile relationship she has with her father, the expression of anger appears, starting from denial. J. says she does not hold such affection, but that she feels repulsion and pity for the man who did not exercise a positive paternity; on the contrary, he was sometimes aggressive and mainly absent. It denotes that the line "*I don't keep these feelings*" (sic) may indicate an ideological aspect in its meaning, which, according to Reis (2007), there is a false and moralizing dichotomy about good and bad emotions, and added to this, the place of the affections within the family configuration, built and generalized from the bourgeois molds, created the social meaning of the family and the notions of love and control, especially in the social role of daughter.

This leads us to understand that elaborating and/or expressing a feeling such as anger (considered negative) towards one of their parents requires levels of authorization that are constantly denied in our society, so that this possibility in many cases is practically nonexistent. Therefore, it is important to think that the expressed affections, as well as the hidden ones, are not part of a natural process, but are related to the formulations of a series of determinations and violence to which the subject has been directly or indirectly submitted throughout her life.

About the third and last core, the feelings of therapists, it was identified a certain difficulty for white therapists to produce a listening capable of hearing her suffering, unfolding in an invisibilization and disqualification. According to Kahhale, Montreozol and Costa (2020) it is significant that the thoughts, speech and emotions of professionals are in a constant process of reflection in an ethical-political commitment to contribute to the mental health of those being assisted.

Throughout our process, J. was emphatic in bringing up that her need and interest was to check the diagnostic hypothesis of ADHD, her initial demand that was directly related to the reality of her moment, which was the ending of her graduation. Her affirmations were accepted and validated as she understood the institutional and professional movement previously made, as well as the guarantee that we don't corroborate with these interventions. In this way, it was understood that J.'s expressions of anger are linked to the movement of claiming a place that is useful to her and in accordance with her concrete needs.

The relationship between anger and claim is practically a consensus among Black feminists who see in emotion, and especially in anger, a transformative and political potential. According to Bello (2022, p. 37), a tradition of argumentation favorable to this emotion has been developing as a possibility to overcome oppressive situations: "in these traditions, anger plays a central role in the claim for recognition of injustices, and assumes a function as an instrument to detect injustices and to motivate social action".

As we return to the first core presented - the denial of J.'s emotions - this process of denial is an expression of the dichotomy that we have been pointing out throughout the text, the dichotomy that Vygotsky (1999) criticized, in which thoughts and affections are separated. This highlights a crucial point, if we want to think about the management of emotions in clinical practice in Social-Historical Psychology: the emotions are present in all human processes, as motivation in activity and as a founder of meaning in experiences. So that emotions are always expressed somehow in the person's ways of acting-thinking and feeling.

As we have seen above, historically there was a process of condensation of the ideals irrationality, savagery, aggressiveness in the construction of the idea of race, which intensifies even more when we think of Black women. As J. is interpreted by the professionals in training through crystallized foundations, there is a characterization of her as an aggressive, harsh, and "too objective" person, which may dehumanize her as a result. Looking at the case analyzed, we understand that J. made several movements in a process of claiming her concrete demand to be listened, and this claim was necessary because a careful and committed listening was denied to her. The therapists denied her initial demand because of the maintenance of thoughtless ideological postures throughout her process, leading to the absence of a careful look at the mediations.

There is here a mirrored mechanism that gives us a basis for reflecting the way we therapists felt about J.'s movements and demands, that is, there was a discomfort generated in front of a Black woman claiming a space different from the one she was given. The first reading could tell us that J. could not elaborate her emotions and that is why she is referred to therapy, when we received her we held this false idea. But her desire was only for technical support to help her develop her studies.

4. Final considerations

With this way of looking at the emotions, we tried to apprehend the reports of what was felt when faced with the client's speeches and attitudes and how this influenced the analyses built about the case. We conclude that the cores indicate a specific knot of this condition in which Black women are doubly excluded from the right to express their anger. From this, it is crucial that the therapists involved recognize and deeply understand these discussions, especially about the most immediate and unique level so dear to psychotherapy: the emotions.

The limits and possibilities of meanings of the emotions are redrawn from the mediations imposed by racism and patriarchy, in the face of which we cannot dodge at the risk of neglecting or invisibilizing the various forms of expression of emotions, that escape only naming it, but also show potent gaps in the static and naturalized picture that is presented to us about emotions.

When thinking about the management of emotions in clinical practice in Social-Historical Psychology, we need to break with the naturalizing ideology of emotions that continuously separate the experience of emotion as a field apart, apart from the body, the word, and consciousness. To search for this dimension as a separate thing is dangerous, because it encourages us not to look at everything that constitutes the subject. Emotions are always present - no matter if it is not explicit, elaborated, named, or integrated.

We understand that the thoughts presented here are still in an initial stage, taking into account the scarce debate about emotions in clinical practice in Social-Historical Psychology. However, we emphasize the fundamental importance of productions that can aggregate our readings and analyses producing references about the clinical management of issues of racism and patriarchy mediating the emotions.

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PREDICTORS OF WELL-BEING IN EMERGING ADULTHOOD: ROLE OF GOALS AND EMERGING ADULTHOOD TRANSITION DIMENSIONS

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Abstract

Although there has been increasing research on well-being in emerging adulthood (EA), only little attention has been paid to its connection with goal pursuit in this life period. Young adults in EA are generally expected to pursue goals which reflect the main developmental tasks in this life period, e.g. to graduate, find a job, leave parents' house, get married, have children. However, emerging adults do not necessarily incorporate and transform all those external expectations into their personal goals which they are committed to attain. To fill the gap in the research knowledge in goal pursuit and well-being in EA, the main aim of this study was to explore the role of EA transition dimensions and goals of emerging adults in explaining the variance in well-being (life satisfaction, positive affect, and negative affect) in EA. This study is a part of a broader longitudinal research project on goal-oriented behavior in EA. Currently, the second phase of the data collection is in process. Therefore, the data coming from the first phase of the research were analyzed for the purposes of this paper. A total number of 647 emerging adults aged 18-30 ($M = 23.28$, $SD = 3.39$) participated (78% female; voluntary response sampling). In Qualtrics questionnaire, they indicated if they had goals in the four areas (education, work, relationships, and personal growth; 0 = I do not have a goal in this area; 1 = I have a goal in this area) and briefly described their goals. After that, they completed a short form of the Inventory of the dimensions of emerging adulthood (IDEA-8), Satisfaction with life scale, and Emotional habitual subjective well-being scales. The regression analyses (Enter method) revealed that well-being was significantly predicted by two EA transition dimensions (experimentation – positive predictor; negativity/instability – negative predictor). The current presence of goals in the four areas did not significantly explain a variance in well-being in EA. However, t-tests revealed that emerging adults with goals in the areas of education and relationships reported significantly higher levels of life satisfaction and/or more frequent positive affect compared to their peers without goals in the two areas. The findings can be applied into psychological practice to prevent decrease in well-being and to support mental health of emerging adults.

Keywords: *Well-being, life satisfaction, positive and negative affect, emerging adulthood, current goals.*

1. Introduction

Emerging adulthood (EA; 18-29 years; Arnett, 2015) is a life period characterized by identity exploration, experimentation, negativity/instability, and feeling in-between. From the perspective of goal pursuit, young adults in EA are generally expected to focus on goals which reflect the developmental tasks in this life period, e.g. to graduate, find a job, leave parents' house, get married, or have children. However, emerging adults do not necessarily incorporate and transform all those external expectations into their personal goals which they are committed to attain. As a result, the level, in which goals associated with an adult role are accomplished, can be related to well-being of emerging adults. Surprisingly, although there has been increasing research on well-being in EA (Baggio, Studer, Iglesias, Daeppen, & Gmel, 2017; Hill, Jackson, Roberts, Lapsley, & Brandenberger, 2011; Sharon, 2016), only little attention has been paid to its connections with goal pursuit and EA transition dimensions. In a study by Baggio et al. (2017), well-being was found to be positively associated with experimentation, while negatively with identity exploration and negativity/instability. Sharon (2016) provided evidence that well-being in EA was associated with the level of fit between perceived importance of markers of adulthood and the self-rated level of their attainment. However, research evidence for the associations between goal pursuit, EA transition dimensions, and well-being is still insufficient. To fill this gap in the research knowledge, the main aim of the current study was to explore the role of the four EA transition dimensions and goals of emerging adults in four life areas

(education, work, relationships, and personal growth) in explaining the variance in well-being (life satisfaction, positive affect, and negative affect) in EA.

2. Method

2.1. Participants

In this study, 647 emerging adults participated (78% were female; age ranged between 18 and 30 years; $M = 23.28$, $SD = 3.39$). The majority of the research sample were single – in a relationship (46%) and students (37%). A purposive sampling method was used to select the research sample. The participation in the research was voluntary and anonymous.

2.2. Instruments and procedure

The participants completed online survey in Qualtrics. First, they were asked to give their consent to participation in the research study, and to answer socio-demographic questions (gender, age, marital status, and employment status). Next, they indicated if they had goals in four life areas (education, work, relationships, and personal growth; 0 = I do not have a goal in this area; 1 = I have a goal in this area) and briefly described their goals. After that, they completed a short form of the Inventory of the dimensions of emerging adulthood (IDEA-8; Baggio, Iglesias, Studer, & Gmel, 2015), Satisfaction with life scale (Diener, Emmons, Larsen, & Griffin, 1985), and Emotional habitual subjective well-being scales (Džuka & Dalbert, 2002) to measure the frequency of the positive and negative affect.

This study is a part of a Slovak longitudinal research project on goal-oriented behavior in EA. Currently, the second phase of the data collection is in process. In the current study, the data coming from the first phase of the research (November 2021 – March 2022) were analyzed.

2.3. Statistical analyses

The data were analyzed in IBM SPSS Statistics 25 and Jamovi 2.3.21. Multiple regression analyses (Enter method) were used to identify the significant predictors of life satisfaction (Model 1), positive affect (Model 2), and negative affect (Model 3) in EA. A total number of 10 predictors were analyzed in the three models (Step 1: age and gender; 0 = male, 1 = female; Step 2: four EA transition dimensions; Step 3: presence of goals in four life areas: education, work, relationships, and personal growth; 0 = I do not have a goal in this area; 1 = I have a goal in this area).

According to a sample size calculator (Soper, 2022), a minimum of 160 participants was required to observe a medium effect size (0.15) at the statistical power level of 0.8, and at probability level of 0.01 in the multiple regression model with 10 predictors. Therefore, the number of participants was sufficient for the analyses. With regard to the number of 10 predictors in regression models, the results were interpreted as significant at probability level of 0.005 (Bonferroni correction).

3. Results

The greatest amount of variance in life satisfaction ($\Delta R^2 = .185$, $p < .001$), positive affect ($\Delta R^2 = .239$, $p < .001$), and negative affect ($\Delta R^2 = .272$, $p < .001$) was explained by the four EA transition dimensions. More specifically, well-being was best predicted by experimentation and negativity/instability (Table 1). Negativity/instability was the strongest predictor of life satisfaction ($\beta = -.338$, $p < .001$), positive affect ($\beta = -.378$, $p < .001$), and negative affect ($\beta = .475$, $p < .001$). Experimentation was the second strongest predictor of life satisfaction ($\beta = .284$, $p < .001$), positive affect ($\beta = .329$, $p < .001$), and negative affect ($\beta = -.242$, $p < .001$).

Positive affect and negative affect were also significantly predicted by age ($\beta = -.116$, $p = .004$) and gender ($\beta = 0.120$, $p < .001$), respectively. This indicates that, during the life period of EA, increasing age is connected to decreased frequency of the positive affect, and that women tend to experience increased frequency of the negative affect. However, age and gender together explained only small amount of variance in the positive and negative affect ($R^2 = .017$, $p = .010$; $R^2 = .036$, $p < .001$; respectively).

The current presence of goals in the four areas did not significantly contribute to the explanation of the variance in well-being in EA ($\Delta R^2 = .011$, $p = .104$ for life satisfaction; $\Delta R^2 = .010$, $p = .111$ for the positive affect; and $\Delta R^2 = .005$, $p = .391$ for the negative affect). However, t-tests revealed that emerging adults with educational goals reported significantly higher frequency of the positive affect compared to their peers without goals in this area ($t = -2.893$, $p = .004$; $M = 3.95$, $SD = 0.96$; $M = 3.66$, $SD = 1.05$; respectively). In addition, emerging adults with relationship-related goals reported significantly higher levels of life satisfaction and more frequent positive affect compared to their peers without relationship-related goals ($t = -2.489$, $p = .013$; $M = 4.46$, $SD = 1.32$; $M = 4.16$, $SD = 1.36$; respectively for

life satisfaction; and $t = -3.206$, $p = .001$; $M = 3.98$, $SD = 0.98$; $M = 3.69$, $SD = 0.98$; respectively for the positive affect).

Table 1. Predictors of life satisfaction, positive affect, and negative affect in emerging adulthood.

Predictors of life satisfaction	B	SE	95% CI		β	t	p
			LL	UL			
Step 1 ($R^2 = .006$, $p = .201$)							
Gender	0.145	0.131	-0.112	0.401	.044	1.107	.269
Age	-0.027	0.017	-0.060	0.006	-.065	-1.580	.115
Step 2 ($\Delta R^2 = .185$, $p < .001$)							
IDEA-Experimentation	0.567	0.082	0.405	0.729	.284	6.871	<.001
IDEA-Negativity/Instability	-0.566	0.069	-0.702	-0.430	-.338	-8.168	<.001
IDEA-Identity Exploration	-0.005	0.082	-0.167	0.157	-.003	-0.062	.951
IDEA-Feeling In Between	0.080	0.086	-0.088	0.248	.044	0.938	.349
Step 3 ($\Delta R^2 = .011$, $p = .104$)							
Goals-Education	0.108	0.136	-0.160	0.375	.033	0.793	.428
Goals-Personal Growth	-0.244	0.112	-0.465	-0.024	-.088	-2.176	.030
Goals-Relationships	0.171	0.117	-0.058	0.401	.059	1.467	.143
Goals-Work	0.138	0.120	-0.099	0.374	.047	1.145	.253
Predictors of positive affect							
Step 1 ($R^2 = .017$, $p = .010$)							
Gender	0.102	0.092	-0.079	0.283	.043	1.110	.268
Age	-0.035	0.012	-0.058	-0.011	-.116	-2.919	.004
Step 2 ($\Delta R^2 = .239$, $p < .001$)							
IDEA-Experimentation	0.484	0.058	0.369	0.598	.329	8.313	<.001
IDEA-Negativity/Instability	-0.466	0.049	-0.562	-0.369	-.378	-9.503	<.001
IDEA-Identity Exploration	-0.031	0.058	-0.145	0.083	-.024	-0.535	.593
IDEA-Feeling In Between	0.057	0.060	-0.062	0.175	.042	0.941	.347
Step 3 ($\Delta R^2 = .010$, $p = .111$)							
Goals-Education	0.104	0.096	-0.085	0.292	.044	1.082	.280
Goals-Personal Growth	-0.067	0.079	-0.222	0.089	-.033	-0.845	.398
Goals-Relationships	0.131	0.082	-0.031	0.292	.061	1.585	.114
Goals-Work	0.129	0.085	-0.038	0.295	.059	1.516	.130
Predictors of negative affect							
Step 1 ($R^2 = .036$, $p < .001$)							
Gender	0.248	0.077	0.097	0.399	.120	3.228	<.001
Age	0.007	0.010	-0.013	0.026	.026	0.679	.497
Step 2 ($\Delta R^2 = .272$, $p < .001$)							
IDEA-Experimentation	-0.306	0.049	-0.402	-0.211	-.242	-6.298	<.001
IDEA-Negativity/Instability	0.503	0.041	0.423	0.584	.475	12.307	<.001
IDEA-Identity Exploration	0.079	0.049	-0.017	0.174	.070	1.618	.106
IDEA-Feeling In Between	0.004	0.051	-0.096	0.103	.003	0.073	.942
Step 3 ($\Delta R^2 = .005$, $p = .391$)							
Goals-Education	-0.048	0.080	-0.205	0.109	-.024	-0.601	.548
Goals-Personal Growth	0.089	0.066	-0.041	0.219	.051	1.344	.180
Goals-Relationships	0.039	0.069	-0.096	0.174	.021	0.571	.568
Goals-Work	-0.106	0.071	-0.246	0.033	-.057	-1.504	.133

Note. B = unstandardized regression coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit; β = standardized regression coefficient.

4. Discussion and conclusion

The current study was aimed to investigate the ability of EA transition dimensions (identity exploration, experimentation, negativity/instability, and feeling in-between) and presence of goals in four life areas (education, work, relationships, and personal growth) to predict well-being (life satisfaction, positive affect, and negative affect) in EA. The results of the regression analyses revealed that, after controlling for the demographic variables (gender, age), EA transition dimensions together significantly explained the greatest amount of the variance in all three domains of well-being (life satisfaction, positive affect, and negative affect). More specifically, the relative contribution of EA transition dimensions to the prediction of life satisfaction, positive affect, and negative affect was 18%, 24%, and 27%, respectively. This indicates that individual perceptions of the life period of EA and emotions associated with transition to adulthood (Arnett, 2015) play important role in well-being of emerging adults and should be taken into consideration when exploring mental health in EA.

However, among the four EA transition dimensions, only experimentation (i.e. the perception of EA as a life period full of possibilities and exploration; Arnett, 2015; Baggio et al., 2015) and negativity/instability (i.e. the experienced levels of stress and pressure during EA; Arnett, 2015; Baggio et al., 2015) were significant predictors of well-being of emerging adults. In line with the findings of the study by Baggio et al. (2017), the current research has provided evidence that experimentation was positive predictor of well-being, while negativity/instability was negative predictor of well-being. This means that increased experimentation and decreased negativity/instability were associated with increased levels of life satisfaction and the positive affect, and decreased level of the negative affect in emerging adults.

Moreover, experimentation was the strongest predictor of the positive affect, while negativity/instability was the strongest predictor of the negative affect. This finding is not surprising considering the operationalization of the constructs. The positive affect reflects the frequency of joy, happiness, pleasure, and energy, while the negative affect points to the frequency of fear, anger, guilt, shame, sadness, and pain (Džuka & Dalbert, 2002). Therefore, if emerging adults perceive this life period as full of possibilities and exploration (experimentation dimension; Arnett, 2015; Baggio et al., 2015), they will experience increased frequency of the positive emotions as a result. On the other hand, if they feel stressed and under pressure (negativity/instability dimension; Arnett, 2015; Baggio et al., 2015), an increase in the negative affect will follow. In addition, negativity/instability was stronger predictor of well-being (life satisfaction, positive affect, and negative affect) than experimentation, which indicates that the three domains of well-being are more determined by emotions experienced during EA than by the cognitive evaluations of this period of life.

Apart from EA transition dimensions, the positive affect was also predicted by age, while the negative affect was predicted by gender. However, the demographic variables together explained only small amount of the variance in the two domains of well-being (1-4%). In this study, female gender predicted increased frequency of the negative emotions. This finding is rather inconsistent with previous research studies, which have reported higher well-being in women (Conley, Kirsch, Dickson, & Bryant, 2014; Dluhosch, 2021; Matud, Bethencourt, Ibáñez, Fortes, & Díaz, 2022). One of the possible explanations is that those studies were predominantly focused on non-emotional aspects of well-being: satisfaction with relationships (Conley et al., 2014), life satisfaction (Dluhosch, 2021), or purpose in life and personal growth (Matud et al., 2022).

Next, increased frequency of the positive emotions was related to decreased age of emerging adults. Younger emerging adults can experience more positive emotions because this period of life offers many possibilities and exploration (Arnett, 2015). Further, they can experience more freedom and less responsibility in comparison to older emerging adults, who can feel to be more under pressure when facing expectations about fulfilling adult roles. However, to the best of our knowledge, there is lack of research studies exploring the role of age in relation to well-being in EA. Therefore, it is difficult to compare this finding with previous research on EA. Nevertheless, research studies on general adult samples have reported positive associations between age and well-being (Bruine de Bruin, Parker, & Strough, 2020), and the lowest levels of the negative affect in older adults compared to young adults and middle-aged group (Windsor & Anstey, 2010). Due to inconsistencies in the research findings on gender differences in well-being in EA and the lack of research on age-related changes in well-being in EA, further research is needed to analyze the effect of demographic characteristics on well-being in EA.

Last, the current study has provided evidence that the presence of goals in the areas of education, work, relationships, and personal growth did not predict well-being in EA. Nevertheless, emerging adults with educational and relationship-related goals reported significantly higher levels of life satisfaction and/or more frequent positive affect compared to their peers without goals in the two areas. The role of goal pursuit in relation to well-being in EA should be thus further explored. Rather than the presence of the specific goal itself, well-being in EA can be related to other aspects of goal pursuit, such as goal characteristics. In

this context, Sharon (2016) has pointed to the role of the perceived fit between goal importance and goal attainment.

The current study contributes to the research knowledge about well-being in EA (Baggio et al., 2017; Hill et al., 2011; Sharon, 2016). It has provided evidence that EA transition dimensions predict well-being (life satisfaction, positive affect, and negative affect) in emerging adults, and that age and gender are associated with the positive and negative affect, respectively. However, the presence of goals in four life domains (education, work, relationships, and personal growth) did not predict well-being in EA. Further research is needed to explore the role of goals in relation to well-being of emerging adults more comprehensively, for example with a more detailed focus on goal characteristics and their interactions.

There are also limitations to the study, which do not allow to generalize the research findings. First, the research sample was not representative of the population of emerging adults, although the number of participants was adequate for the purposes of the analyses. Second, self-reported research measures could have biased the responses of participants. Despite the limitations, the research findings have some implications into the psychological practice. They can be utilized in counselling to prevent decrease in well-being and to support mental health of emerging adults.

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PERSONALITY AND CUED ASSOCIATIONS INFLUENCE ALCOHOL AND CANNABIS USE IN ADOLESCENTS (AGED 13 – 17)

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Abstract

Early transitions to alcohol and cannabis use are associated with a variety of negative consequences including reduced physical and mental health, substance use disorders, educational and social problems. Youth aged 13 to 17 is a vulnerable time for initiation, escalation, and problems associated with use. This research focuses on specific personality traits: Sensation-seeking (SS), Impulsivity (IMP), Anxiety sensitivity (AS), and Negative thinking (NT) and cued associations known to have a direct relationship with adolescent substance use. We report here the predictive value of personality and its interaction with substance use associations including longitudinal transitions to initiation of use, increased frequency and quantity of use, and abuse. *Method:* Canadian youth (N=1552) from grades eight to ten were surveyed in Spring 2018, Winter 2018, and Spring 2019. All students received questions about alcohol and cannabis use including past year use, quantity and frequency of use, and abuse (AUDIT and CUDIT). Personality in Grade 8 students was assessed in Spring 2019 using the Substance Use Risk Profile Scale (SURPS), which reliably measures SS, IMP, AS, and NT traits. Cognitive associations with alcohol and cannabis use were measured in each survey. Two types of associations were assessed: behavioral associates and outcome expectancies. In the behavioral associate tasks, students responded with the first behavior that came to mind when presented a specific emotional or situational cue. The number of alcohol-related (e.g. get drunk) or cannabis-related (e.g. smoke pot) comprised the behavioral associates score. Alcohol and cannabis use cues each generated four open-ended outcomes that were subsequently self-rated for amount of liking (Likert scale) and category (e.g. social, emotional). *Results:* Personality had strong effects on both concurrent alcohol and cannabis use and problems. Both cognitive measures also strongly predict concurrent alcohol and cannabis use and problems. Personality also predicted the level of liking and category of expectancy outcomes as well as the number of behavioral associates. Longitudinal mediation analysis across the three waves revealed the prospective predictive power of both personality and cognition measures on initiation of use and problems. In addition, a latent construct with the cognitive associations as indicators mediated the effects of personality on both use and problems. *Conclusion:* Specific personality trait and cognitive associations are useful as both early indicators and as targets for prevention of transitions to alcohol and cannabis use in early adolescence. The specific findings should inform cognitive behavioral approaches to early prevention efforts.

Keywords: *Alcohol and cannabis use, personality, cognition, adolescents, early transitions.*

1. Introduction

Adolescence is a time of vulnerability, experimentation, and susceptibility to alcohol, and cannabis use (Smith & Anderson, 2001). Early substance use is related to many problems in adolescents including academic problems, substance use problems, and delinquent behavior, and interference with developing brain systems (Coffey & Patton, 2016; Wiers et al., 2007). Targeting adolescent alcohol and cannabis use, then, may prove to be cost effective and particularly valuable for preventing use and its related consequences.

1.1. Personality and substance use

Specific personality traits are useful in identifying youth vulnerable to problematic substance use (Castellanos-Ryan et al., 2013; Krank et al., 2011). The Substance Use Risk Profile Scale (SURPS) was developed to identify four personality traits that predict the risk of adolescent substance use and abuse: impulsivity, negative thinking, anxiety sensitivity, and sensation seeking (Krank et al., 2011; Woicik et al., 2009). Impulsivity, the inability to inhibit specific behaviors, is associated with increased use and misuse of many substances (Krank et al., 2011, Castellanos-Ryan et al., 2013). Negative thinking, the tendency for one to experience increased feelings of despair, is associated with a greater risk of substance

use in numerous studies in adults (Castellanos-Ryan & Conrod, 2012) and adolescents (Krank et al.; 2011). Anxiety sensitivity, the fear of anxiety-related physiological arousal and sensations and the potential loss of control over oneself (Castellanos-Ryan et al., 2013), predicts drinking motives and alcohol use problems in undergraduate students (Stewart et al., 1999; Woicik et al.; 2009), but is associated with lower levels of substance use in adolescents (Krank et al., 2011). Finally, sensation seeking, the tendency to pursue stimulation and novel experiences, is associated with alcohol-related problems (Conrod et al., 2000) and of hallucinogen use (Krank et al., 2011). Despite these findings, many studies examining the connection between personality traits and substance use do not comment on or postulate the mechanism through which personality impacts the trajectories of substance use in youth.

1.2. Automatic cognitions using cued associations

Dual-processing theories suggest that decisions are influenced by two distinct cognitive systems with different methods of information retrieval: System One and System Two (Kahneman, 2011). System One is spontaneous, fast, and often operates without conscious awareness, whereas System Two operates at a conscious level of awareness, and is slower, reflective, and effortful (Kahneman, 2011). The automatic associative processes of System 1 influence decisions, judgements, and behaviors rapidly and without conscious awareness (Krank & Robinson, 2017). Research also shows that these automatic cognitions can lead to cognitive biases, which may also have impacts on future substance use (van der Vorst et al., 2013). Specifically, spontaneous memory association and outcome expectancy biases correlate with increased substance use (Fulton et al., 2012; Stacy & Wiers, 2010). Such cognitive biases can arise from social influence before an individual initiates substance use (Pilin et al. 2021; van der Vorst et al., 2013.) This paper sought to demonstrate that these findings can be extended to include personality as a mediator of adolescent substance use.

Automatic cognitive processes are engaged using indirect methods that ask for quick open-ended responses and do not ask the participant to consciously deliberate their answer. Word association tasks are indirect methods that use ambiguous single-word prompts or multi-word behavioral prompts that could be associated with substance-related cues (Krank et al., 2011; Krank & Robinson, 2017; Pilin et al., 2021; Stacy et al., 1994; Stacy, 1995). If the participant has strong automatic associations with the prompt and a substance, it is likely that these associations will be triggered automatically and will be reported on the measure spontaneously. More direct assessments, such as outcome expectancies, are also affected by automatic and unconscious influences (Ames et al., 2012; Krank & Robinson, 2017). Indeed, automatic influences from associative memory strongly impact judgements and decision-making (Kahneman, 2011). The outcome expectancy measure we use here emphasizes associative memory influences by encouraging top of mind responses and strongly predicts the growth trajectories of both alcohol and cannabis use in adolescents (Fulton et al., 2012).

1.3. Acquired-preparedness model

The Acquired-Preparedness Model (APM) describes how personality relates to substance use. The APM suggests that an individual's personality traits shape their learning experiences which then influence behavior, potentially leading to substance use (Smith & Anderson, 2001). The APM explains that personality traits may impact learned outcome expectancies, which then influence substance use behavior (Smith & Anderson, 2001). The present study examines the potential effects of personality on automatic cognitions and subsequent use (c.f. Pilin et al., 2021; van der Vorst et al., 2013).

2. Design and objectives

The purpose of this study was to test the hypothesis that cued and self-generated alcohol and cannabis associations mediate the effects of personality on use in longitudinal study of young adolescents. We test the mediation of personality (SURPS) measured at Time 1 by automatic cognitions measured at Time 2 on future substance use and problems at Time 3.

3. Methods

3.1. Procedures

The data used here was from a large longitudinal study of students enrolled sequentially in Grade 8 and surveyed twice each year over four years. Individual data from each wave was linked to allow longitudinal analysis. All measures were obtained on computers using Qualtrics. All procedures were approved by UBC Behavioral Research Ethics Board. The present analyses used SPSS and AMOS (Version 28). Mediation analysis used three consecutive waves (cf. Pilin et al. 2021).

3.2. Participants

Grade eight to ten students (N=1552) from a school district in western Canada completed Waves Four (Time 1 - May 2018), Five (Time 2 - November 2018), and Six (Time 3 - May 2019).

3.3. Measures

Alcohol and cannabis use (past year use) and problem use (AUDIT and CUDIT) were measured in all waves. Personality scores for impulsivity (IMP), negative thinking (NT), anxiety sensitivity (AS), and sensation seeking (SS) were obtained using the SURPS in Wave four. Cued association measures were obtained in Wave five including outcome expectancy liking (OEL, Fulton et al., 2012) and ambiguous word associates (WA, Pilin et al. 2021; Stacy et al, 1997; van der Vorst et al., 2013). For both cannabis and alcohol OEL scores, students were cued to list four things that would happen if they used and to indicate how much they would like or not like each outcome on a five-point Likert scale (-2 not like a lot, -1 not like, 3 neither, 1 like, 2 like a lot). Average Likert ratings over four ratings were used to create alcohol (AOEL) and cannabis (COEL) scores. For the WA task, adolescents were asked to write the first word that came to mind in response to a set of words with ambiguous meaning (e.g., Draft, Shot, Weed, etc.). Students subsequently rated each response for their perceived relation to alcohol or cannabis. Sums were calculated to obtain alcohol (AWA) and cannabis (CWA).

4. Results

4.1. Personality and associations predict alcohol and cannabis use and problems

Personality predicted future alcohol and cannabis use. In addition, both cognitive measures strongly predicted alcohol and cannabis use and problems. Personality also predicted the level of liking and the number of behavioral associates. Personality also modified the pattern of categories of cued responses (not shown).

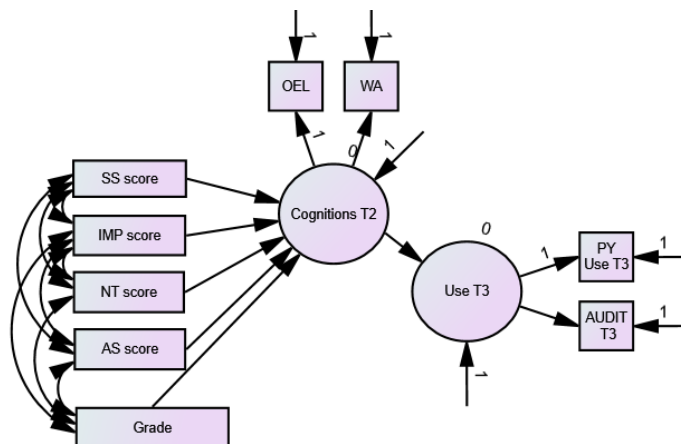
Table 1. Shows the concurrent relationship between Grade level, SURPS scores, and cued associations. Values represent log likelihoods with significance as indicated (* > .05; ** > .01; *** > .001). Past year use was analyzed using a logistic regression. A negative binomial analysis was used with AUDIT and CUDIT scores.

	Grade	SS	AS	Imp	NT	OEL	WA
Alcohol use	1.10***	1.10***	.87***	1.06*	1.15***	1.15***	1.71***
AUDIT	1.75***	ns	.65*	1.18**	ns	2.14***	1.23*
Cannabis use	1.11***	1.14***	.87***	1.06*	1.15***	1.12***	1.08***
CUDIT	1.45*	1.85*	.650*	2.02*	1.86*	1.93***	1.41***

4.2. Substance use associations mediate personality effects on the growth of use and problems

Longitudinal mediation analysis across the three waves revealed the prospective predictive power of cognition measures on initiation of use and problems. In addition, a latent construct with the cognitive associations as indicators mediated the effects of personality on both use and problems (see Figure 1). The Cognitions latent construct in this model uses indicators from the two types of association tasks measured at Time 2. The Use construct at Time 3 uses both past year use and AUDIT or CUDIT for alcohol and cannabis respectively. Separate models were analyzed for alcohol and cannabis.

Figure 1. This diagram shows the final model for both alcohol and cannabis. Only significant paths are shown. Note that all direct effects of personality and grade were not significant for either alcohol or cannabis use at Time 3.



Evidence for the mediation in both alcohol and cannabis models is found in both the absence of direct effects of personality on future use and the significance of indirect effects. Only the latent cognitions construct at Time 2 directly influences use at Time 3. Although personality and grade have direct effects on the cognitive construct, they do not have any direct effect on use at Time 3 when the mediator is included. However, personality scores and grade all have significant indirect effects through the cognitive constructs on both cannabis and alcohol use at Time 3.

Table 2. Standardized direct and indirect effects on alcohol and cannabis use. Confidence intervals and point estimates were obtained using bias corrected bootstrapping. All significance levels reached at least $p < .01$ with the exception of the indirect effect of AS ($p < .05$).

Source	Direct effects				Indirect effects	
	Alcohol cognitions	Cannabis cognitions	Alcohol use T3	Cannabis use T3	Alcohol use_T3	Cannabis use T3
Grade 2018	0.341	.291	-	-	0.283	.218
NT_score	0.259	.333	-	-	0.215	.249
IMP_score	0.195	.178	-	-	0.162	.133
AS_score	0.162	-.117	-	-	-0.134	-.087
SS_score	0.275	.278	-	-	0.228	.208
Alcohol cognitions	-	-	0.829	-	-	-
Cannabis cognitions	-	-	-	.748	-	-

5. Discussion

This study provides strong support for the acquired preparedness model (Smith & Anderson, 2001). In fact, the analysis supports full mediation of personality effects by cued association tasks. Specifically, this approach suggests that risky personality traits change the things learned about substance use and modifies our associative memories. In particular, sensation-seeking, impulsivity, and negative thinking each contributes to learning more positive outcome associations with substance use and more cued associations with substance use. This learning translates into greater substance use in the future. By contrast, but consistent with our previous findings, anxiety sensitivity appears to exert a protective effect on immediate use transitions in this population with more negative outcome associations with substance use and fewer cued associations with substance use. As in two previous mediation studies (van der Vorst, 2013; Pilin et al., 2021) increased age effects are also fully mediated by cognitions. This somewhat surprising finding strengthens the hypothesis that what is learned about substance use is critical to the trajectory of substance use during this vulnerable developmental phase.

The particular associative tasks used in this study were chosen for several reasons. First, they are unobtrusive. Thus, for example, the outcome expectancy task (Fulton et al., 2012) allows unique responses from participants and does not confront naïve youth with suggestive outcomes that might only be relevant to regular or heavy users. This method assesses not only preexisting expectancies but also perceived desirability of these consequences. The latter part of this is especially important as the same consequences may be perceived as either negative or positive by different individuals. For example, “alcohol will make me sleepy” could be incentive to use for some or a deterrent for others. Second, the nature of these tasks is such that they are likely to tap into more fast, automatic and even unconscious processes (System 1, Kahneman, 2011). These tasks elicit rapid responses without requiring significant deliberation as participants are instructed to complete the task as quickly as possible. As such, the WA task is considered to be an indirect measurement of substance use – related memory associations. Word association tasks have been found to be among the most useful assessments of association (Stacy & Wiers, 2010). Finally, there is a synergistic relationship between outcome expectancies and memory association. The latent construct using these measures is more predictive than either measure separately largely due to an interaction between these two predictors. Outcome expectancies measure response – outcome associations which are different from cue – behavior associations. Memory associations derive from an association between the environment, context, or experience and the substance (van der Vorst et al., 2013). Each has a separable role in the translation of associations to behavior.

6. Conclusion

Adolescents learn quickly from many sources contributing to an extensive associative network that powers many of the judgements and choices we make (Kahneman, 2011), This perspective has important implications for the development of effective prevention programs (Krank & Goldstein, 2006). Such programs should target the learned associations that contribute to risky substance use choices. One

example of a program that does target individual learning experiences is Preventure (Conrod, 2016; Conrod et al., 2000). Preventure is a brief targeted program that focuses on personality specific experiences and trains positive alternative behaviors such as coping skills. Evidence to date suggests that this approach is effective in preventing or delaying adolescent substance abuse (Conrod, 2016). Our results suggest directions for future developments of even more effective prevention approaches.

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THE EXPANDED SOCIO-HISTORICAL PSYCHOLOGY CLINIC OF SEXUALITY: REASONING AND MANAGEMENT IN INDIVIDUAL AND GROUP CARE

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Abstract

The present work develops from the academic research in the Laboratory of Health and Sexuality Studies (LHSS). We acknowledge the need to expand the debate and the performance focused on clinical assistance to Socio-Historical Psychology's (SHP) critical perspective. This shift in perspective enhances the likelihood of questioning the heteronormative social standard. We identify the Expanded Psychology Clinic as a way of changing patterns of the heteronormative status quo, creating other possibilities of gender identity and sexual practices that are not considered abject. Our clinical practice oversees (or monitors) individuals and groups of people living with sexually transmitted infection (STI) in conversation circles/discussion groups where sexuality is the main topic. This study found little research in Socio-Historical Psychology that could help define parameters for a critical perspective of clinical practice. Studies done on SHP clinical approaches to psychological suffering that could be related to sexuality were also scarce. This project developed case studies and discussion groups (conversation circles) about health and sexuality. The general objective is: set the SHP parameters and propose scientific reasoning and clinical management to understand issues related to sexuality, like sexual activities and gender identity; evaluate the clinical practice criteria. Method: we are developing case studies and online discussion groups (conversation circles). Results: This study evaluates the dialectical and ambiguous construction of the client and group's subjectivity through their speech and the conflicts contained in it, which repeat social contradictions. The case studies and groups define a challenge for the clinic in the dialogic deconstruction of hegemonic models of masculinity, femininity, and heteronormativity.

Keywords: *Expanded clinic, conversation circles/discussion group, sexuality, mediation, psychotherapy.*

1. Introduction

This paper presents a summary of the work developed by the Laboratory of Health and Sexuality Studies/ Pontifícia Universidade Católica de Sao Paulo/Brazil, Nowadays we have been studying sexuality and gender human rights, in Socio-Historical Psychology (PSH) from the perspective of Expanded Clinic.

We have been developing case studies and discussion groups (circles of conversation) about health and sexuality with the following theoretical-methodological parameters from historical and dialectical materialism: who is the subject; subjectivity; historicity; sexuality; gender relations; mediation; narratives

1.1. Subject

The Socio-Historical view of Psychology conceives humans as historical beings that constitutes their movement over time, forged by social, cultural and relationship conditions. The individual-society relationship is seen as a dialectical relationship, in which one constitutes the other (Kahhale, 2009). The psychological phenomenon, all internal elements, arises from the relations of men with their physical and social world. Social character is a condition inherent to people, and even though we consider certain needs biological, they are also mediated by society and governed by social rules and conventions.

1.2. Subject and subjectivity

The subjective dimension of reality is the category that characterizes the dialectical relationship between the individual and society. Although reality exists independently of the subject, the individual acts in the world, adding subjectivity to objectivity. Therefore, "one must speak of an objective-subjective process that constitutes social reality" (Gonçalves, 2019, p. 112). Thus, the subjectivity-objectivity dialectic is paramount for this understanding and the subjective dimension is the subject's expression concerning his concrete lived experiences. The discussion of the subjective dimension of reality allows us to expand fragments and emancipatory spaces. Autonomy must be intersubjective, achieved through a network of sociability to achieve the autonomy of each subject, which can only be achieved through the autonomy of all.

1.3. Historicity

The category of historicity presents the historical character of human development. The human being develops in the environmental circumstances of a social, cultural, and economic context, determined by the historical period in which they are inserted. In the current historical period, under the neoliberal perspective, the effects of historical context on individuals are disregarded by culture, which results in naturalization and individualization of social inequalities, making it difficult to construct these collective tools of emancipation (Gonçalves, 2019). According to Pereira and Sawaia (2020), Gonzalez Rey shows that psychology should promote health through the ethics of the subject, the transformation of individual and social subjects into activity to produce new alternatives under objective conditions that delimit human actions. These authors also affirm that groups are spaces where people can build development zones, experimenting with who they are and might become (Martins, 2007; Pereira & Sawaia, 2020, Zanella, Lessa & DaRos, 2002).

According to Kahhale and Montrezol (2019), a psychologist oriented by socio-historical psychology must place the subject as an active being, producer, and product of his reality; it must act as a mediator, by taking the subject to self-knowledge and self-analysis. In the context of a capitalist society, the clinic must be engaged in social commitment and be a collective production plan.

1.4. Sexuality

We will then analyze sexuality from the perspective of Socio-Historical Psychology. The first determination of sex would be in principle genetic or biological. However, it is constituted in the individual not only as a genetic issue but, mainly, as an expression of the social, cultural, and historical conditions in which this individual is inserted. "Social sex - therefore, gender - is one of the structuring relationships that places the individual in the world and determines, throughout their life, opportunities, choices, trajectories, experiences, places, interests." (Kahhale, 2002, p.179)

1.5. Sexuality gender

The gender category, or gender relations, is tied to a socio-cultural construction of the constructs of women and men in a given society. (Scott, 1994,1995; Louro, 2007, 2009). How societies organize themselves for sexual reproduction and the social reproduction of work establish the "guidelines" of the relations between men and women and among themselves. In contemporary societies, these relations result in asymmetric relationships. As such, gender starts from the differences perceived between the sexes, which then results in social and cultural meanings as power relations.

Since sexuality is a historical device, it is involved in multiple discourses about sexes. Discourses that regulate and establish knowledge, that produce "truths", crossed by the projection of "Man" and "Woman" by society and are clearly expressed in the various social institutions and in the mechanisms that seek, through different ways, to bring men and women closer to a certain ideal. That ideal drives both the formation of gender identities and the desired sexual identities (Scott, 1994,1995; Louro, 2007, 2009).

Sexuality is a symbolic and historical process, which expresses the constitution of the subject's identity and how they practice intimacy (public vs. private), as well as the meaning of norms, morals, and group ethics (group in which it is inserted). Sexual expression is a multidetermined, dynamic, and historical process both individually and collectively. (Kahhale, 2002, 2009). Another important aspect is that sexuality fulfills not only the social function of reproduction of the species, but also the function of the search for "personal", individual pleasure. The matter of pleasure, although it has always accompanied sexuality, was not always explicit in its relation to the dominant morality. In our Western society, sex and pleasure were separated, reunited only by the bond of love. Pleasure is seen as authorized when there is love involved, while sexuality is reduced to an individual question, breaking away from social and historical realities. Sexuality is conceived as something that belongs to the natural individual and must be contained by societal rules. Pleasure is an experience of the singular individual, but their references, possibilities,

limits, stimulus, and impediments are in social relations and culture; it is from this place that each will withdraw the elements to build their identity.

1.6. Mediation

The concept of mediation must be taken as procedural, in which an intermediary element intervenes in a relationship. Such intermediation is semiotic, since the mediated process is not by pure reality "in itself", but practiced by a reality full of meanings. Approaching the context as already signified implies that it was "built throughout the social and cultural history of the peoples" and that from this construction we produce individual and proper meanings through the process of significance (Berni, 2006, Pino, 2000, Leontiev, 2004, Vigotski, 1987a, 1987b).

1.7. Narratives

The narratives contemplate the subject of the action and with it, their subjectivity revealed through these forms of communication of culture. Each subject narrates their story from their subjectivity since they see the object from its place in the world and selectively builds their narrative, marking their trajectory according to their conception of the world and their perception of themselves (Sformi, 2008, Striquer, 2017). How these narratives act as management in a clinic where the client-therapist dialogue is constant, in addition to investigating how the narrators' subjectivities and meanings present themselves in their narratives, focusing this analysis on the particularities of issues related to gender, sexuality, and corporeality.

2. Method

We have been developing case studies (21 at moment) and discussion groups (circles of conversation) online (30 at moment). Individual assistance takes place weekly or fortnightly according to the evolution of the client. The discussion groups take place every week for an hour and a half, on the Zoom platform coordinated by 4 researchers. In general, it counts with the participation of 15 to 20 people. Participants are adults registered through the Instagram account @camisanodiminutivo, managed by the researchers. The project was sent and approved by the Research Ethics Committee of Pontificia University Catholic of São Paulo/Brazil.

This study starts from the epistemological principles of historical-dialectical materialism that support the Socio-Historical view of Psychology. To account for the multiple aspects involved in the development of clinical practice in SHP, we aimed to analyze, at first, some categories in depth: subject and subjectivity, historicity, identity, and gender identity, mediation (instruments and therapist and the group coordinator), and narratives.

3. Results

Regarding case studies and round conversation, we can observe male clients, for example, that have become aware of historical and material processes involved in their development as a subject and in relation to their way of thinking as non-heterosexual men, but that are still surrounded by some privileges of masculinity. The dialectic between hegemonic patterns of masculinity and affective choices is expressed in the way the homoaffective relationships are built, with various difficulties in sexual practice. These cases pose a challenge to the clinic in the dialogical construction and the deconstruction of the hegemonic models of masculinity and the affections and desires placed in homoaffective relationships.

To the present moment, we have made 30 rounds of online conversation with the following themes in the conversation groups: what is sex; STI: care and stigma; masturbation; sexual education; sexual education of children and adolescents; pornography; LGBTQIA+ pornography; non-monogamous relationships; lack of libido; hypersexualization of the Brazilian black population and fat women also have sex.

The analysis of the data shows the presence of the historicity category as one of the aspects that permeate the individual and social life of clients. This category was noticeable in the issues of race, gender and sexuality, social class, and meritocracy.

4. Conclusion

Coordinating (individuals or groups) requires listening in a qualified way, which in turn requires attention to the content and affections involved in the subject's speech. Mediating dialogues enables the group to a development zone, promoting interactions, collaborative actions and exchanges of experience,

which happen due to a horizontal organization of the relationships, as well as an understanding that the coordinator does not define the path or the answers to the questions.

To have a critical view of the social context implies having knowledge about the concrete context of the participants' lives, through understanding that individual suffering is the product of historical and social context; in turn, this highlights the dialogue that questions truths recognized as immutable.

We can conclude that the challenge of the expanded clinic requires reflective and dialogical work to deconstruct the hegemonic models of masculinity and femininity, sexuality, and the affections and desires placed in affective relationships involving sexual diversity. And promoting the empowerment of people and access to human rights.

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BASIC EMOTIONS AND THEIR VICISSITUDES: ASSESSING SUBCORTICAL ACTIVATION PATTERNS WITH THE MCMI-IV

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Abstract

Theodore Millon's (2011) evolutionary theory describes a model of the affective profile underlying the personality of an individual human being. The general affective patterns which an individual exhibits are characteristic of one's personality, and specific instantiations of these affective patterns influence motivation and behavior at a given moment in time. Among clinical populations, this affective profile may be measured and described using the Millon Clinical Multiaxial Inventory, Fourth Edition (MCMI-IV). In this paper, I propose that the components of Millon's model may be correlated with the basic affective systems identified and described by Jaak Panksepp (1998) and others. Panksepp's work serves as a primary theoretical and empirical basis for the burgeoning fields of affective neuroscience and neuropsychanalysis. I suggest that investigating the correlation between Panksepp's basic affective brain systems and Millon's personality profiles will provide insight into the neurological factors influencing the etiology of clinical syndromes. An investigation such as this promises to open new avenues for the neuropsychological assessment of subcortical functioning. In this paper, a method is proposed for interpreting MCMI-IV personality profiles as describing the arousal and inhibition of the primary affect systems identified by Panksepp, and the ways in which motivational forces mutually influence and interact with these processes. An illustrative case is reported in which the fluctuating mood states of an individual with bipolar disorder are interpreted as being structurally and functionally determined by personality patterns, which are themselves characteristic patterns of arousal and inhibition of basic neural affective systems. Hypotheses are presented which indicate potential areas of future research relating to the ways in which basic affect systems form interacting functional clusters.

Keywords: *Affective neuroscience, neuropsychological assessment, MCMI-IV, clinical psychology, neuropsychanalysis.*

1. Introduction

Affective neuroscience is a developing branch of empirical research which has established that numerous "primary" affect systems, which predispose organisms to enact specific behaviors under certain conditions, have arisen over the course of the evolution of the mammalian brain (Panksepp, 1998; see also, LeDoux, 2012). It has been proposed that these primary affective processes constitute a fundamental level of personality functioning (Davis, Panksepp, and Normansell, 2003). Such a position is consistent with the evolutionary theory of personality developed over the course of many years by Theodore Millon, which forms the theoretical basis for the widely used Millon Clinical Multiaxial Inventory, Fourth Edition (MCMI-IV) (Millon, Grossman, and Millon, 2015). Millon's (2011) theory proposes that the personality is a stable psychological structure which mediates between physiological and environmental stimuli on the one hand and characteristic behaviors, including psychopathological syndromes, on the other. However, Millon does not provide a detailed account of the physiological determinants of personality, despite quite clearly maintaining that they make essential contributions. Therefore, if we accept the validity of Millon's theory—which we do implicitly when we utilize the MCMI-IV in clinical practice—it is natural to be interested in investigating the nature of the physiological factors which determine the structure of the personality. I propose that certain theoretical affinities exist between Millon's theory and the models of primary affect systems supported by work in affective neuroscience, which is to be expected if we accept that both have empirical support. In what follows, I provide an overview of these topics and explore ways in which results obtained from the MCMI-IV might be interpreted as providing information about the functioning of the neural systems which underly primary affective processes.

2. Primary affect systems

It is a basic tenet of affective neuroscience that the brain contains innate networks subserving mechanisms for a variety of behavioral responses, and that, ultimately, every behavior of which an organism is capable is subserved by functional combinations of these networks. The behavioral potential of the human organism is immeasurably great, and any attempt to construct a functional taxonomy of human behavior will necessarily be approximate and incomplete. Nevertheless, affective neuroscience—as well as numerous other contributions from network neuroscience and related fields—has identified a limited number of neural systems which subserve evolutionarily determined functionality. All possible behaviors must be the result of various learned associations between the functionality of these basic systems, and these systems must interact efficiently in order for the organism to function optimally. Needs which arise in the body stimulate specific hypothalamic nuclei, in turn causing the stimulation of more broadly distributed subcortical networks. The complex, conditioned activation and interaction of these networks motivate the organism to act in such a way as to satisfy salient physiological needs. The satisfaction of needs results in the cessation of the autonomic stimulation which motivated the behavior. All motivation has its origins in the activation of these basic systems, which are in turn stimulated by afferent autonomic communications signaling the allostatic states and needs of the organism as a whole.

The primary basic emotion networks posited by Panksepp (1998) are SEEKING, RAGE, FEAR, LUST, CARE, GRIEF, and PLAY, which have been described and elaborated in the extant literature. In brief, SEEKING is a generalized arousal system primarily consisting of ascending dopamine structures; it is largely coextensive with the classical “reward system” (Wright and Panksepp, 2012) and is activated whenever the allostatic state of the body requires the organism to actively engage the environment in order to obtain satisfying resources. RAGE, which is mediated by a descending network including the medial amygdala, medial hypothalamus, and periaqueductal grey (PAG), is activated in response to frustrated efforts to secure desired resources and causes the organism to become confrontative and aggressive. FEAR is responsible for the recognition of and reaction to external threats to the organism; it is closely related to RAGE both anatomically and functionally and is mediated by a similar descending network from the central amygdala through the medial hypothalamus and PAG. (Together, FEAR and RAGE are believed to mediate the well-known fight-or-flight responses of the threatened organism). LUST, which mediates sexual behavior, is highly sexually dimorphic (although less so in humans than in other mammals); in males it is centered in the preoptic hypothalamus and manifests in motivated approach behaviors, whereas in females it is centered in the ventromedial hypothalamus and manifests as expressive receptivity. The CARE network mediates non-sexual bonding and attachment, originally between mother and infant, and is widely distributed across the subcortical brain; essential nuclei include the bed nucleus of the stria terminalis, preoptic area, ventral tegmental area (VTA), and PAG. GRIEF (formerly termed PANIC) is an independent system which generates dysphoric affect under circumstances of social isolation and relational loss, thereby providing, among other adaptive benefits, powerful negative reinforcement for social affiliation and attachment; subcortical nuclei instantiating GRIEF largely overlap with the CARE system, although with the inclusion of the dorsomedial thalamus and with less participation from the dopaminergic structures of the VTA. Lastly, PLAY is a diverse system with evolutionary origins in rough-and-tumble play but which, in humans, subserves a broad range of affiliative social behaviors, social learning, and the psychic representation of interpersonal boundaries; unlike the majority of primary affective systems, which are organized primarily around hypothalamic processes, PLAY is mediated to a significant extent by networks centered around the dorsomedial and parafascicular nuclei of the thalamus, with abundant contributions from other regions associated with movement and somatic posture including the vestibular system, the cerebellum, and the basal ganglia.

3. Millon’s evolutionary theory

Separately, Millon (2011) developed a theory which uses an evolutionary framework to explain the development, structure, and functioning of the human personality. This theory posits that the mature human personality consists of a network of interacting patterns of behavioral dispositions which I propose may be characterized as being similar to transference positions or cognitive-behavioral schemas. Larger crystallized patterns of behavior are unique to the individual and are considered to be relatively stable dimensions of the personality. These gross personality structures, however, are constituted by more basic systems which Millon describes as consisting of three interacting polarities, which represent the fundamental level of personality functioning. The three polarities are determined by (1) whether the individual is motivated more by seeking pleasure or avoiding pain, (2) whether the individual is

motivated more to passively adapt to or actively modify the environment, and (3) whether the individual is motivated to respond more to the needs of the self or the needs of others. It can be surmised on the basis of neuroscientific findings (see, e.g., Kernberg, 2015) that the pleasure-pain and active-passive polarities relate primarily to subcortical arousal and motivational states, whereas the self-other polarity relates to the distribution of cortically based associative processes which constitute the objects of these subcortical motivational drives. Additionally, it is notable that Millon's tripartite model is explicitly derived from that posited by Freud (1915), and the noted corroboration of this model by recent developments presents promising possibilities for reinterpreting and elaborating Freudian instinct theory in the light of modern neuroscience.

Dynamic interactions between Millon's (or, rather, Freud's) polarities give rise to structural and functional characteristics which describe the cognitive, emotional, and behavioral dynamics that are typical of each higher-order personality dimension, as well as the affective and motivational context under which each personality dimension becomes activated. Moreover, the present author suggests that there is a *prima facie* correspondence between the above referenced putative localization of these polarities in the brain (see reference to Kernberg, 2015, in previous paragraph) and the localization of the basic networks described by Panksepp's affective neuroscience. This proposal suggests that there is an inherent affinity between the biophysiological orchestration of the organism as proposed by affective neuroscience and the biopsychological orchestration of the personality as proposed by Millon's evolutionary theory, and, further, that this inherent affinity underlies the phenomenological ontology of dual-aspect monism that has been posited by many researchers in recent decades and centuries, including pioneers in the field of neuropsychanalysis (see, e.g., Solms and Turnbull, 2011).

4. Clinical applications

The MCMI-IV is a widely used and psychometrically validated instrument for assessing the dominant patterns of personality exhibited by individuals in clinical populations. The Millon personality dimensions may be thought of as cognitive-behavioral schemas, which may remain characteristically (and, in the extreme form, pathologically) activated so long as the requisite motivational arousal of the individual permits. However, changing circumstances in both the environment and the internal milieu will prompt a transition from one schema to another more suited to the developing situation. (Note that it is hypothesized that these transitional processes occur in accordance with a model proposed by Lisa Feldman Barrett and colleagues [see, e.g., Barrett, 2017], in which behavior is orchestrated by a process of prediction and error correction; this unfortunately cannot be elaborated further here). For example, the Apathetic-Asocial-Schizoid personality dimension (MCMI-IV Scale 1) is characterized by emotional impassivity, interpersonal disengagement, and apathetic mood (Millon, 2011, p. 281). The affective profile of the schizoid personality indicates marked indifference to both pleasure and pain (hypothesized here to involve downregulation of affectivity in general and perhaps primarily of SEEKING with respect to pleasure and of GRIEF with respect to pain). This broad suppression of affect leads to a strong tendency to passively conform to the prevailing circumstances (yielding the additional downregulation of FEAR and RAGE) and a lack of motivation to pursue interpersonal contact with others (yielding the additional downregulation of CARE, PLAY and LUST). Any circumstance in which this kind of attempt to regulate the basic affective systems (through downregulation) becomes ineffective will lead to a transition to an alternative schema which is more adaptive to the prevailing context. In the case of a severely disordered personality which has no alternative personality positions available, the individual is presumably liable to decompensate into a borderline or psychotic state of functioning (such an individual is predicted to show elevations on the MCMI-IV's Severe Personality Scales). Given the empirically supported presumption that the MCMI-IV provides a reliable estimate of one's characteristic behavioral schemas and the affective circumstances under which each schema will become activated, this author hypothesizes that the MCMI-IV will provide information about the distributed activations of the various systems described by affective neuroscience when specified circumstances obtain.

Consider the case of a 31-year-old man who was measured by the MCMI-IV to have high elevations on the Antisocial (BR 83), Histrionic (BR 80), and Narcissistic (BR 75) scales, with somewhat lower but still notable elevations on the Masochistic (BR 70) and Negativistic (BR 65) scales. Additionally, he scored highly on Bipolar Spectrum (BR 90) as well as on Alcohol Use (BR 98) and Drug Use (BR 88). The personality structures which underly this individual's manic and depressive mood tendencies are hypothesized to be represented by two clusters of the personality scales noted above: the manic patterns being structured by scales 4A, 5, and 6A, and the depressive patterns being structured by scales 8A and 8B; note also that this hypothesized depressive constellation appears to be a rather atypical agitated-dysphoric depression that is quite unlike a more familiar melancholic depression). This hypothesis is based in part on the prior hypothesis that the scales constituting the "manic" cluster are

likely to entail moderate or higher activation of the SEEKING system, whereas the scales of the “depressive” cluster entail weak activation of the SEEKING system, as well as higher activation of aversive affects such as GRIEF, FEAR, and especially RAGE (directed toward the other in the Negativism schema and toward the self in the Masochism schema; note that these dynamics in particular appear to be quite complex and are deserving of extensive treatment in their own right).

I hypothesize that when this individual is experiencing manic mood states, he will exhibit behavioral tendencies consistent with the Histrionic, Narcissistic, and Antisocial scales as described in Millon’s theory. These states are distinct, but are all three characterized by features that are consistent with a steadily activated SEEKING system, as indicated by a pleasure polarity in the average range, leading to self-stimulated activity in the interest of satisfying internally motivated desires. Furthermore, the activity associated with scales 4A and 6A are consistent with SEEKING arousal; the passivity associated with scale 5 is accounted for by the hypothesis that in this case the SEEKING system has taken the individual’s self-representations as its object, thus remaining activated without any apparent motivation to act efficaciously upon the environment. Affective systems beyond SEEKING are likely to be more selectively activated across these three schemas. For example, the characteristics of the Histrionic schema suggest that, when engaged, the individual will be actively involved in pursuing goals and warding off frustrations, both of which will be prioritized with respect to interpersonal relationships along the CARE-PLAY-LUST axis. Given the moderate elevations of this individual’s depressive cluster, it seems plausible to speculate that these affiliative activations are maintained largely as a defense against the aversive effects of GRIEF, FEAR, and perhaps RAGE (although, as noted by Panksepp [1998, p. 194], the characterization of RAGE as strictly aversive is dubious). The three schemas in this individual’s manic cluster represent three positions which he can assume in an ongoing defensive chess game. When his manic constellation is “checkmated” by his FEAR and GRIEF systems, a transition occurs in which he shifts from the manic position to the depressive position, in which dysphoric affect reigns supreme and frequently gives way to RAGE, which is internalized and, as noted above, is turned either against the other (in the Negativistic position) or against the self (in the Masochistic position).

The transition from one schema to the next within the manic cluster is likely influenced, if not fully determined, by the orientation toward interpersonal interaction (Millon’s self-other polarity). When this individual is motivated, for complex personal reasons derived from the conditioned association of numerous basic affective systems and environmental contingencies, to seek interaction with others, this will be actively pursued and characterized by a continuum of social approach behaviors, ramping up to dramatic, attention-seeking behaviors and gregariousness, likely as the strength of the GRIEF and FEAR responses against which one is defending increase. The primary defensive response is to upregulate affiliative affective systems (CARE, PLAY, LUST) in proportion to the aversive affect against which he is defending. These systems are activated and directed, with increasing superficiality, toward readily available sources of gratification in the environment. An abrupt shift is expected, however, when this individual’s motivated interest switches to himself, likely after a desired object has become unavailable. When motivated, or required, to pursue his own goals—a motivation which is incompatible with his shallow histrionic displays of interpersonal charm—one of the other noted schemas will be engaged depending on whether the specific motivated behavior requires an active or a passive stance.

The Narcissism schema is likely activated subsequent to a threshold arousal of GRIEF when a desirable external object for the above-mentioned Histrionic drives is unavailable, and the affiliative affective systems (CARE, PLAY, LUST) become activated in conjunction with neural instantiations of the self-representation rather than the now-downregulated (because sensorily and predictively absent) object representations. In other words, the individual shifts affective attention (or, we might say, cathexis) from other to self in order to maintain both activation of the positive affect system and defensive inhibition of the painful GRIEF system. This leads to a self-satisfied inertia which likely appears to others to be a downregulation of affect, although the subjective experience of the individual almost certainly remains highly affectively vibrant. Behaviors motivated by the Antisocial schema, on the other hand, likely appear to others to be a loosely connected series of random and impulsive acts, although the subjective experience of the individual is again one of perfect internal coherence in accordance with the salient motivations of the self—again rising to the pathological exclusion of the other. Although the individual in the example case shows no evidence of violent or aggressive acting out—as is consistent with the absence of remarkable elevation on the Sadistic scale (BR 45)—the Antisocial scale, characterized by impulsive and irresponsible behaviors and active arousal, is likely associated with high activation of the SEEKING and PLAY networks, under the special condition of taking the self as their object alongside the total neglect of the other. Collateral activation of the RAGE network also cannot be ruled out, at least under certain circumstances. Thus, it is quite likely that this schema is the most closely associated, in our example case, with this individual’s high levels of substance abuse, and in conjunction with the Narcissistic schema may explain why he was willing to disclose these issues so openly.

Alternately, Antisocial activation may simply represent high SEEKING arousal in the interest of the self-complex, with a blatant disregard both for considerations of the other as well as for aversive stimuli encountered in the pursuit of such motivational aims.

It should be noted that in the Histrionic and Narcissistic positions especially, this individual will frequently be able to tolerate some level of aversive stimulation, and at low levels of dysphoric arousal these schemas are likely to give the appearance of a relatively adaptive socialization and confidence. Increasing dysphoric affect, however, will require an ossification of the manic defenses, resulting in maladaptive histrionic or narcissistic behaviors. When these become untenable, a transition into the Antisocial schema, with its characteristic downregulation of sensitivity to GRIEF, will permit the individual to maintain an indifference to the aversive stimulation, especially of the sort that is interpersonally mediated. As noted, however, there may be times when this defensive move is itself untenable, as when the aversive context is such that it simply cannot be ignored, which will of course lead to a decompensation into the state of agitated depression.

5. Conclusion

In conclusion, Millon's evolutionary theory clearly endorses the perspective that ingrained personality patterns provide the soil out of which behavioral manifestations emerge, whether these behaviors are adaptive or pathological. I have described how I have used results obtained from the MCMI-IV to construct models of individual functioning in clinical cases, with reference to identified subcortical brain networks. As described by the findings of affective neuroscience, the brain processes underlying personality functioning are alternately activated and inhibited on the basis of subcortically originated affective arousal, the vicissitudes of which will continue to provide the basis for productive research for many years to come. However, while the basis in Millon's theory provides a strong advantage to the MCMI-IV over other presently available instruments, this was not the intended purpose of the MCMI-IV. This instrument therefore has numerous imperfections and shortcomings with respect to these goals. Among these shortcomings are that the guidelines for interpretation provided by the test publisher limit interpretability to only the most highly elevated scales, which appears to be somewhat arbitrary and makes little practical sense. Moreover, the interpretability of low scale scores is ambiguous. Nevertheless, the theoretical and empirical foundation of the MCMI-IV is strong, and its broad range of personality dimensions provides the test with high practical utility. I believe that the field of clinical psychology would benefit from the development of a new instrument which is theoretically grounded in an integration of Millon's personality theory with the tenets of affective neuroscience that have been described. The first step in realizing such an integration, prior to constructing such an instrument, must be to clearly elaborate the structure of and interactions between the cortical and subcortical networks which contribute to Millon's three polarities. A thorough overview of recent developments across the neurosciences reveals that such an objective is very much within reach at present. The subsequent development of an assessment instrument which is designed to measure the activations and interactions of these networks will allow the field of clinical psychology to remain relevant and even indispensable in a rapidly evolving clinical landscape by demonstrating the foundations of its constructs and theories in measurable physiological processes which can inform both psychiatric and psychotherapeutic treatments.

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SAFFRON SPICE OF LIFE FOR MENTAL HEALTH

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Abstract

Background: Herbal medicine have been widely used to treat anxiety and depression since ancient times. Among the most researched botanical medicine for mental health are: St.Johns Wort, Valerian, Passionflower, and Saffron. This review aims to mainly assess Saffron (*Crocus Sativus*) efficacy for optimization of mental health. Even if antidepressants are the first line treatment for depression many people do not respond as expected to them which calls for finding alternative treatment to support population mental health needs. This study aims to compare safety and efficacy of botanical medicine including *Crocus Sativus* (Saffron) versus medical drugs in improving mental health symptoms.

Objectives: to assess the efficacy, tolerability, and safety of saffron (herbal, plant-derived) compared to placebo or conventional drugs for psychological conditions.

Selection criteria: from Medline (Pubmed) it was selected a list randomised, double-blind controlled trials, clinical trials from 2017 to 2022.

Data collection and analysis: this systematic review aimed to compare the efficacy and safety of pharmacological and non-pharmacological treatments for major depressive disorder (MDD), post partum depression, attention deficit/hyperactivity disorder, mild cognitive impairment, anxiety. Primary outcomes were efficacy (response rate) and safety (overall risk of adverse events) of botanical medicine.

Main results: a systematic review with network meta-analyses and randomised controlled trials were identified from published sources through searches in PubMed. The primary outcomes were efficacy (treatment response) and safety. In analyzing the interventions Saffron studies suggest improvements in mental health and overall health.

Author conclusions: Some patients do not respond well to pharmaceuticals and can not tolerate the side effects of drugs. In trying to find alternatives medications herbal medicine is considered. Literature reveals clinical evidence for various phytomedicine along with good safety. The potential benefits of saffron in mental health is suggested by several studies still more evidence is needed. The quality of evidence for does not provide concerns regarding potential harms and suggest safety in using Saffron.

Keywords: *Saffron, mental health, psychologic, anxiety, depression.*

1. Background

The number of people with depression and anxiety have been increased in the last couple of years and it is still a challenge to treat. Even if antidepressants are the first line treatment for depression many people do not respond as expected to them which calls for finding alternative treatment to support mental health needs. Moreover, we have an increased number of people who prefer a natural approach to mental health because of the concern of short term and long term side effects of the prescription drugs. At the same time, we have a large population that are not compliant with the anti- depression prescription. There is a continuing search in finding more alternative solutions support the needs of a genetically diverse population challenged with mental health issues.

The objective for this research was to assess the efficacy, tolerability, and safety of saffron (herbal, plant-derived) compared to placebo or conventional drugs for psychological conditions.

As criteria from Medline (Pubmed) it was selected a list randomized, double-blind controlled trials, clinical trials from 2017 to 2022. Search criteria key words include: *saffron, mental health, psychologic, anxiety, depression.*

The data collection and analysis aimed to compare the efficacy and safety of the non pharmacological treatments more exactly Saffron in major depressive disorder (MDD), post partum depression, attention deficit/ hyperactivity disorder, anxiety and mild cognitive impairment.

Several randomized double-blind studies were chosen from different settings, conditions and age groups challenged with anxiety and depression. For example, Saffron efficacy was tested after chemotherapy, in youth anxiety, in comparison of saffron vs fluoxetine in moderate postpartum depression, in cognitive function in elderly, in post-menopausal hot flashes, in saffron vs citalopram in major depressive disorder.

Saffron (*Crocus sativus* L.) is a medicinal plant, originally cultivated in the East and Middle East.

Saffron is collected from the stigmas of flower plant. The most important constituents are crocins and crocetin which are forms of carotenoids. Saffron has been valued for the antioxidant and anti-inflammatory properties. Saffron main constituents are Crocin (glycosylated carotenoids) which has been associated with neuroprotective effects. Some studies that Crocin have been reporting neuroprotective effects and depression protective. Some of the benefit effects have not been fully understood but still reported. It is suggested that the anti depressive effect of Crocin-I is due to the suppression of neuroinflammation (IL-1 β) in reducing the oxidative damage (Cerdá-Bernad et al., 2022). A study showed that crocin-I might play an antidepressant effects in a model of chronic corticosterone (CORT)-induced depression. It was found after the oral dose of Crocin-I of 40mg/kg induced accumulation of nicotinamide in the liver and improved synthesis of NAD⁺ and SIRT3 deacetylase to increase superoxide dismutase 2 and glutathione reductase (Xiao et al., 2019).

2. Conclusion

The potential benefits of saffron in mental health is suggested by several studies and still more evidence is needed. The quality of evidence for does not provide concerns regarding potential harms and suggest safety in using Saffron. Crocin is one of the main glycosylated carotenoids of saffron, studies suggest beneficial activities and has been reported to be associated with neuroprotective effects. In this paper the biological action of crocin was explored for the on depression-like through investing the mechanisms of actions including but not limited to neuroinflammation and oxidative damage. It is suggested that the antidepressant activity of crocin-I was probably achieved through the suppression of neuroinflammation (IL-1 β) and oxidative stress in the mouse hippocampus. Some studies suggests crocin-I could reduce the levels of oxidative damage markers (reactive oxygen species and malonaldehyde) to rescue impaired mitochondrial function. However, still the full mechanism of action is not fully understood and more studies are needed (Cerdá-Bernad et al., 2022).

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YOUNG CHILDREN'S SPONTANEOUS EMOTION VOCABULARY DURING AN EMOTIONAL VALENCE RATING TASK

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Abstract

Emotional vocabulary development represents a growing field of interest. Studies show that children use emotional words starting from the age of two (Izard & Harris, 1995; Michalson & Lewis, 1985). Between 3 and 5 years, children develop their ability to name basic emotions (e.g., joy, sadness, surprise, disgust, anger, fear). Li and Yu (2015) observed that 2–13-years-old Chinese children comprehend positive emotion words earlier than negative and neutral ones. This result is probably link to the fact that *valence* is an early key dimension in emotion conceptual representation (Nook et al., 2017). If many studies investigated emotion words comprehension, only few studies investigated spontaneous vocabulary young children use to refer to emotions in reaction to emotional and non-emotional stimuli. The present experiment measured the use of emotional vocabulary during an emotional valence rating task of words, pictures, words-pictures combined. More precisely, 178 young French children aged 4-, 5- and 6-years-old were observed while rating stimuli. These ratings were made using a three points emotional valence rating scale (negative, neutral, and positive) based on AEJE scale (Largy, 2018). The 90 words, 90 pictures, 90 words-pictures combined were divided in sets of 15 stimuli. Each child rated all sets of stimuli in separate sessions in random order. Children's utterances containing emotion words were recorded. The content form of these emotional words produced was analyzed thanks to EMOVAL software (Leveau, Jhean-Larose & Denhière, 2011). EMOVAL is an automatic evaluation of emotional valence and arousal of texts, sentences using a 5656 root-words meta norm in French and in English. It also extracts emotional semantic topics from texts and sentences. First, analyses highlighted that young children use more positive emotion vocabulary compared to negative one. This result is congruent with the positive bias observed while young children rated emotional valence of stimuli (Syssau & Monnier, 2009). Like comprehension of emotional words, the use of positive emotion vocabulary occurs earlier in the development than negative one. Second, it was found that with increasing of age, the use of emotion vocabulary enhanced. If children aged 4 used topics that refer to primary emotions, children aged 5 and 6 used larger and more complex emotional topics. Discussion focused on the understanding of children's daily emotional language environments, and the implications of these for early educators and teachers.

Keywords: *Emotional vocabulary, development, EMOVAL, emotional stimuli, preschooler.*

1. Introduction

Emotion word comprehension represent a growing field of interest and has received considerable attention in developmental studies (Baron-Cohen et al., 2010; Ridgeway et al., 1985). Emotional word was regarded as essential in understanding of emotion experience, recognizing emotion stimuli (e.g.: faces, voices) (Izard & Harris, 1995). Most research focused on basic emotion words (e.g., happy, angry, sad, afraid, and disgusted) (Ekman & Friesen, 1971), some on larger range of emotion words including complex and mixed terms (Baron-Cohen et al., 2010; Ridgeway & Waters, 1985). For example, Ridgeway and Waters (1985) used a list of 125 emotion words and revealed developmental changes in children aged 1.5–6 years old. Baron-Cohen et al. (2010) suggested a much wider range of 336 emotion words to underlie developmental trajectories of emotion word comprehension in children. This study showed that during childhood, there are considerable changes in emotion word comprehension. Between 4 and 11 years old, the size of the emotional lexicon doubled every 2 years. This study also allowed emotion terms to be ordered developmentally with respect to their level of difficulty (from basic or common emotions like *happy*, *afraid* to more complex ones like *touched*, *bored*). Besides, emotion word comprehension was influence by the valence of the word. Li and Yu (2015) observed that Chinese children (aged 2- to 13-year-old) comprehended earlier and better positive emotion words than negative

and neutral words. In addition, they observed a disadvantage in negative emotion words compared neutral ones with the increase of age. All put together, these studies showed that different emotion category may have developmental trajectories and different sensitive periods.

As early as two years of age, young children can label emotional expressions (Izard & Harris, 1995). This ability keeps developing during childhood (Denham, 1998). Bretherton and Beeghly (1982) interviewed mothers of 2-year-old children about their emotional vocabulary. They observed that over 60% of the children were familiar with the basic emotional terms such as *happy*, *mad*, or *angry*. Besides, Children's mother declared that their children were able to use basic emotional terms in their own language. Ridgeway et al. (1985) reported that most of 3-year-old (75%) use emotion words to express feelings, states and preferences (e.g., *good*, *happy*, *surprised*, *loving*, *mean*, *sad*, and *angry*). Young children are first using emotion words to refer to their own emotional state at about 2-year-old. Then, emotional vocabulary is used with reference to others' feelings, states, and by 3–3.5 years of age, children are using emotion words for characters in reference to story or imaginary ones (Reilly et al., 1990). Grosse et al. (2021) measured the production of emotion words by 4- to 11-year-old children using a vignette test. They found that with increasing of age, children produced more and more emotion words. They also revealed one clear criterion—the differentiation of positive versus negative emotions. Indeed, Nook et al. (2017) showed that *valence* is a crucial dimension for children's emotion representations. First, children develop a mono-dimensional structure only base on emotional valence (negative, positive). Then, they develop a common bi-dimensional representation including *emotional valence (negative, positive)* and *arousal (calming, exciting)* strating 6- to age 25-year-old. More recently, Sabater et al. (2022) also showed that positive emotion-laden words (e.g., cake, rainbow) are earlier learnt than negative and neutral ones. Additionally, valence of stimuli is known to influence individual's emotion recognition (Eyben et al., 2010), and cognitive processing (Carmona-Perera et al., 2013).

2. Objectives

Given the growing interest in emotional development, there is a small amount of research that deals with the vocabulary children use spontaneously in reaction to verbal and visual stimuli. The purpose of the present study was to examine preschool children's spontaneous use of emotional words uttered during a valence rating task of emotional and non-emotional stimuli. Preschoolers were observed during the valence rating task and their emotion-related utterances were recorded. The content form of these emotion words was analyzed thanks to EMOVAL software (Leveau, Jhean-Larose & Denhière, 2011). EMOVAL is an automatic evaluation of emotional valence and arousal of texts, sentences using a 5656 root-words (nouns, verbs, adjectives, adverbs) meta norm in French and in English. It also extracts emotional semantic topics from texts and sentences. This emotional topic extraction included words that relate to basic emotions (e.g., fear, anger, sadness, etc.), emotion blends (e.g., sorry, embarrassed, etc.), general hedonic tone (e.g., kindness, nerviness, etc.), and words that refer to physiological states (e.g., pain, sleep). Emotional vocabulary is analyzed by two kinds of emotional extraction on EMOVAL. First, we analyzed the emotional valence of children's utterances. Second, we analyzed the emotional topics extract from children's utterances.

3. Methods

3.1. Participants

178 French children participated in the study: 57 four-years-old children (27 girls and 30 boys, mean age: 4-year-old and 6 months, $SD=0.33$); 60 five-years-old children (28 girls and 32 boys, mean age: 5-year-old and 7 months, $SD=0.31$) and 61 six-years-old children (31 girls and 30 boys, mean age: 6-year-old and 1 month, $SD=0.39$). The children were recruited from a variety of school located in Region Centre Val de Loire in France. This area included a broad range of socioeconomic strata. All children were native French speakers.

3.2. Materials

The emotional valence rating test contained a set of 90 words, 90 pictures, and 90 word-pictures combined. These stimuli were divided into three emotional categories (i.e., 30 negative, 30 neutral, and 30 positive for these three conditions). These stimuli are divided into four semantic categories: animal/insects (e.g., rabbit), objects (e.g., fork), food (e.g., cherry) and people (e.g., dentist). Stimuli are only connotative emotion-laden words or pictures (e.g. cake, spider), they relate to emotions without explicitly referring to affective states. Words were selected based on age of acquisition (0- to 4-year-old) defined by Alario and Ferrand (1999), and subjective frequency defined by Bonin et al. (2003). Pictures

were selected from among the emotional databases compiled by Bonin, Méot, Aubert, Malardier, Niedenthal and Capelle-Toczek (2003), Bonin, Peerman, Malardier, Méot and Chalard (2003), and from the identification and denomination norms (3-year-old) developed by Cannard, Bonthoux, Blaye, Scheuner, Schreiber and Trinquart (2006).

3.3. Rating scale

The most widely used emotional valence rating scale in the field is the Self-Assessment Manikin and its updates (SAM; Lang, 1980) based on previous work from the Semantic Differential scale (SDS; Mehrabian & Russel, 1974). This non-verbal tool using drawn characters consisted in a 9-point scale (very unpleasant to very pleasant). For young children, the number of points in the scale must be chosen according to the age and developmental specificities. Following the procedure developed by Syssau and Font (2005), a 3 points scale (i.e., negative, neutral, and positive) was used. To keep the rating task simple for the young children, the 3 points scale were labelled, using drawn faces showing respectively: a sad mouth and eyes, a straight mouth and eyes and a smiling mouth and eyes. Drawn faces were selected from AEJE scale (Largy, 2018). AEJE scale is a French tool adapted specifically to the understanding of young children and non-readers ones.

3.4. Procedure

Words, pictures, word-pictures stimuli sets were divided into 18 sets of 15 stimuli. All 4, 5 and 6-year-old children were divided into two groups according to the modality of stimuli presentation (words only and pictures only vs. words and pictures combined). In the first condition: Two kinds of session were administrated. Words only sessions during which words were read by the experimenter and pictures only sessions during which only pictures were presented by the experimenter. In the second condition, words and pictures combined, the experimenter read the word and presented the corresponding picture at the same time. The children were tested individually in a quiet room in their school. Each session lasted approximately 2 minutes. Around two sessions for each child were conducted over a period ranging from 1 hour to 1 day. At the first rating testing session, the experimenter showed the drawn faces and said, “This person is sulking, is unhappy”, “This person doesn’t care, is indifferent” and “This person is smiling, is happy”. Then three practices items were reviewed. Children’s utterances containing emotion words were recorded during the task.

4. Results

4.1. How many emotion words do children produce across the 3 age groups?

925 emotional related words were recorded ($M=5,19$ per child, $SD=2,07$). 178 utterances were recorded for 4-year-old ($M=3,12$), 375 utterances for 5-year-old ($M=6,25$), and 372 for 6-year-old ($M=6,09$). To test for age effects in the number of emotion words produced, we conducted a one-way-ANOVA with as between-subject factor age and as dependent variable the number of emotion word produced. Results showed that age is a significant factor in the number of emotion words produced. Bonferroni corrected post hoc comparisons showed especially that, the mean number of emotion words differed between 4- and 5-year-old ($p < .05$) and 4- and 6-year-old ($p < .05$).

4.2. Which kind of stimuli occurs emotion words in children?

To examine the influence of stimulus’ nature: modality (verbal, visual and visuo-verbal) and emotional valence (emotional: positive, negative, and, non-emotional: neutral) on children’s emotion words, we used a repeated measures analysis of the variance: a 3 (age) X 3 (modality) X 3 (valence) as within-subject factor and children’s number of emotion words as dependent variable. If modality and emotional valence didn’t influence significantly the number of emotion words, we observed an interaction effect between modality and valence of the stimulus on the number emotion words [$F(4,1)=4,19$; $p < .003$]. More precisely, planned comparisons analysis revealed that children produced more emotion words while rating positive words than neutral words [$F(1,50)=4,57$; $p < .04$]. Planned comparisons also showed that children produced more emotion words when they rated negative words-pictures combined than neutral ones [$F(1,50)=19,59$; $p < .000$] and positive ones [$F(1,50)=13,74$; $p < .003$].

4.3. How are emotion words distributing between positive and negative valence?

EMOVAL software evaluates children’s emotion words according to their valence. To examine how emotion words are distributed into positive and negative valences, we performed chi-squared analyses. The table 1 summarizes the number and proportion of positive and negative words produced by children.

Table 1. Distribution of spontaneous vocabulary between negative and positive valence.

Age	Positive		Negative		Emotion words	Total words
	No.	%	No.	%		
4-	119	66,85%	59	33,14%	178	231
5-	236	62,93%	139	37,06%	375	520
6-	259	69,62%	113	30,37%	372	498
Total	614	66,37%	311	33,62%	925	1249

Concerning emotional valence differences, chi-squared analyses underlie that children cross the three-age group produced more positive emotion words (614) than negative ones (311) [$\chi^2(1) = 66,97$, $p < 000$]. More precisely, at- 4 children produced 119 positive words than 59 negative ones out of 178 [$\chi^2(1) = 13,66$, $p < 000$]. At 5-, they produced 236 positive words than 139 negative ones out of 375 [$\chi^2(1) = 16,85$, $p < 000$]. Finally, 6-year-old children produced 259 positive words than 113 negative ones out of 372 [$\chi^2(1) = 38,87$, $p < 000$].

4.4. Which kind of emotion words do children produce?

To examine how emotion words are distributed into different emotional topics, we used EMOVAL software. The software extracts the emotional topics and their occurrences from children's spontaneous utterances. We found that with increasing age, emotional topics become more differentiated. Children aged 4, produced 5 emotional topics which are love (e.g., "I love cats"), good (e.g., "Honey is so good"), upset (e.g., "Once I fell off the bicycle, and it hurts me"), fear (e.g., "The spider is big! I'm scary!"), and aggressiveness (e.g., "The whip is mean"). At 5-, children produced 19 emotional topics, then at 6-, they produced 17 of them. For example, children aged 5- and 6-year-old produced emotional topics like softness (e.g., "The cat is so soft"), desire (e.g., "I want the cake! It's so yummy!"), comfort (e.g., "Shots are not so bad, they heal"), irritation (e.g., "I don't like it when I'm tired because I get cranky"), terror (e.g., "Once I had a nightmare, I yelled, daddy!"), displeasure (e.g., "Bees sting, you must be careful, they have poison"). Besides, emotion words become more complex into a same emotional topic with age. For example, in the topic aggressiveness, children aged 4 produced two different words which are "mean" (méchant) and "angry" (colère). At 5- and 6-, they produced six different words into this topic: "mean" (méchant), "angry" (colère), "annoying" (chiant), "irritating" (agaçant), "exasperating" (soûlant), "maddening" (énervant).

5. Discussion

The present study aimed to shed some insight on children's spontaneous emotional vocabulary. First, our results show that there are considerable changes in emotion vocabulary utterances between 4- and 6-year-old: The use of emotional words doubles during this period. In parallel, emotional words become more differentiated (the number of emotional topics increase with age) and more complex (there is a wider range of emotional words into a same topic). These results agree with previous developmental studies on comprehension and production of emotional vocabulary (Baron-Cohen et al., 2010; Grosse et al., 2021). The main finding of this study is the role of emotional valence in the spontaneous emotion words children produced. When children produced vocabulary in reaction to emotion laden stimuli, most of their utterances are positive rather than negative. This finding is in line with evidence showing that children learn words denoting positive feelings, and emotions earlier than negatives ones (Baron-Cohen et al., 2015; Li & Yu, 2015). Our study also highlights that young children produced more positive emotion words in verbal, visual, and visuo-verbal context.

Regarding possible explanations about a positive advantage in emotion word use in children daily life, there are evidence showing that adults mostly use positive words in their interactions with young children (Ponari et al., 2018). For example, out of a corpus of 50 words most frequently addressed to young children, more than half are positive, none are negative (Ponari, 2018). Our results have also an implication regarding the role of language development in emotional understanding, especially in recognizing emotions in themselves and others (Beck et al., 2012). Indeed, emotional words are a starting point of meaning of emotions, emotional experiences, and interactions (Fabes et al., 2001). To conclude, we selected the five high ranking stimuli that occur emotional utterances in our study: cat, spider, cake, bee, horse. We believe that these stimuli can be useful to the educational community. Early childhood educators and teachers face daily challenges about young children's cognitive, social, and emotional needs. Our findings suggest that early educators can foster children's emotional competences by promoting the use of emotional vocabulary during everyday activities.

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WHAT DOES ONE CHILD DO FOR ANOTHER IN POST-PANDEMIC TIMES? RESULTS OF A SURVEY

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Abstract

In 2022, a group of 20 researchers carried out, in schools of São Paulo, Brazil, an interventional and qualitative study of 13 ASD children in inclusive education aged 2 to 6 years. These researchers were guided by psychoanalytic references and instruments and had a question in their minds: what does one child do for another? The research was based on the “Function of Siblings”, a notion theorized by J. Lacan about peer relationships. According to this author, peer relationships are a source of identifications and collaborate in the psychic constitution of the subjects involved. The objective of the research was then to investigate the accuracy of the APEGI instrument in detecting and following-up the effects of the Function of the Sibling on the changing of the subjective position of children with ASD in schools. As this study was held in a post-pandemic moment, the research also intended to be an auxiliary in the direction of allowing a relaunch of the role of the siblings in the school – a role that was absent during the pandemic. The APEGI (Psychoanalytic Monitoring of Children in Schools, Groups and Institutions) is an instrument that allows the recording of the psychic movements of children in general, and was validated in previous research. The researchers organized small groups to monitor the interactions between a child in inclusive education and their peers, and were guided in their intervention by the principles of Therapeutic Education, a set of interdisciplinary treatment practices based on psychoanalysis. In APEGI there are 5 axes, which intersect and reciprocally determine each other in their function of producing the constitution of the subject. The methodology of the research was predominantly the case study, with a secondary survey of quantitative elements from the study of monitoring indicators. After an average of 9 months, 26% of indicators of the first axis, the “Function of the Siblings”, previously absent became present. In the other 4 axes, the portion of indicators which became present were: 19% in “Paternal Function”; 18% in “Presence of a Subject”; 16 % in “Body Image” and 10% in “Play and Fantasy”. Articulated to qualitative evaluations, these results show that the follow-up was effective and well detected by APEGI. They point to a partial post-pandemic school reintegration of those children, due to an encounter of their peers and to a consequent change in their subjective position.

Keywords: *Psychotherapy, special education, peer relationships, post pandemic times.*

1. Introduction

In 2022, a group of 20 researchers carried out, in schools of São Paulo, Brazil, an interventional and qualitative study of 13 children in the autistic spectrum – ASD children – and in inclusive education, aged 2 to 6 years. These researchers were guided by psychoanalytical references and instruments, and had a question in their minds: what does one child do for another?

To carry out this study, and to investigate the accuracy of the APEGI instrument – Psychoanalytical Monitoring of Children in Schools, Groups and Institutions (Kupfer and Bernardino, 2022) – in detecting changes on the subjective position of the children, the researchers knocked on the doors of many schools and organized small groups to follow the interactions between a child in inclusive education and its peers in a general education classroom. The duration of this follow-up was 9 months on average, a period in which 10 meetings were held. Group interventions followed the principles of Therapeutic education, a set of theoretical-practical operators supported by the contributions of psychoanalysis to education (Kupfer, 2000; Lerner et al, 2016).

As this study was held in a post-pandemic moment, the research also intended to be an auxiliary in the direction of allowing a relaunch of the role of the siblings in the school – a role that was absent during the pandemic – by seeking to identify the impasses in the social bond that generate effects of exclusion, as well as investigating and elaborating possible interventions to dissolve them in favor of inclusion. The main objective was then to demonstrate that the APEGI instrument could be able to detect and follow the effects of the function of the sibling on the changes of the subjective position of children with EE in schools in post-pandemic times.

2. The research context: challenges faced in post-pandemic times

The covid-19 pandemic was, as has been said on numerous occasions and in abundant literature on the subject, a socio-political-sanitary crisis, which suspended the exercise of social mobility and deeply interfered in the fabric of social and historical processes, which produced disastrous effects on the psychic health of the survivors, as Birman (2022) wrote.

With children it wasn't any different. The closure of schools in Brazil, which was very necessary for health reasons, had a profound impact not only on student learning, but on their development in general and on their psychological development, having been particularly harmful for children with ASD, or with EE¹, which is the term that will be used in this article. By living restricted to family life, all the children lost, for two years, the opportunity to enjoy the formative dimension of the school, and particularly its subjective dimension.

Thus, there were several losses. Some two-year-old children, surprised by the pandemic and forced to stay at home, went to school for the first time when they had already turned four, having then postponed the passage from the familiar environment to the social environment provided by the school and having been deprived of the necessary alternation between the public and the private fields of life.

Children in inclusive education, especially EE, were the first to drop out of school at the beginning of the pandemic, and the last to return.

The time spent at home because of the pandemic wasn't so harmful to EE children: comfortable with screens, they found a stability they didn't have at school. For this very reason, the post-pandemic return was even more difficult for them. Thus, contrary to what many researchers assumed, who feared the emergence of major disturbances for children with autism during the pandemic, this did not happen. But the post-pandemic effects, those are worthy of note.

In addition, when starting the study, the researchers came across the high absenteeism of children, either because they had a cold and it was feared that they had covid, or because they were subjected to frequency rotations, imposed by the school, in order not to have too many children in one classroom.

Because of all of these difficulties, the intervention had special relevance: it enhanced the way the subjectivity of the children was perceived and helped the schools in their support during the post-pandemic times. Meeting other children was therapeutic, especially for children in inclusive systems.

3. The function of the siblings

It is known that relationships between peers are important because affective relationships are produced there and are, therefore, a source of reassurance for children. But thanks to the psychoanalytic theory, it is possible to understand that in these relationships much more important and structural processes operate: the siblings are a source of identification and participate in the psychic constitution of the subjects involved there. Therefore, peer relationships gain even greater importance for children with EE, for whom the psychic constitution is not assured and the identification processes are not in progress.

Identifications are understood here as psychic processes that produce an I/Other differentiation, insofar as they allow the child to perceive the slightest difference between him and the other when he incorporates the trait of the other "that I don't have". For children with EE, this differentiation has not yet been conquered, but it may occur with the help of the similar, a kind of mirror, another very close and very similar to oneself (Lacan, 1938/2001), a mirror from which the difference is noticeable. In these children, often only imitation movements are observed that are not incorporated as their own traits and do not contribute to the formation of self-knowledge.

¹ The denomination "child with structural obstacles in the psychic constitution" (EECP in Portuguese, or SOPC in English) is being proposed here in substitution to the denomination ASD, and it designates the children in risk of evolution towards the serious psychopathologies of the childhood, such as the infantile psychoses and the autism.

Bernardino (2020) takes up the issue of identification present in the relationship between peers in Lacan's work, experienced with colleagues in schools, to point out the importance of the other in the constitution of the self. If there is an identification with the other, often experienced as the self, in a specular way, there is also, on the other hand, a desire to destroy the other in order to preserve the self. In the game between resembling and differentiating oneself, between wanting to be like the other and also willing to destroy him, the subject situates himself in the world little by little. The similar, therefore, helps to define one's own image: "I am what the other is not".

The function of the siblings operates for children in general, and had already been pointed out by Freud (1916-1917/1976), who noted the importance of the entry of siblings into the life of the child subject, when there is an expansion of his Oedipus complex into a family complex, an expansion that is experienced, initially, as a loss of his place towards his parents. Feelings of hatred and rejection may be awakened initially, and later, they should be replaced by compassion and fraternal feelings.

4. The therapeutic education

The researchers were guided, at the schools, from beginning to end, by the principles of therapeutic education, systematized by Kupfer (2000) to face the need for psychoanalytical operators who would especially guide work in schools.

Therapeutic education is a set of interdisciplinary treatment practices based on psychoanalysis, articulated with educational practices. It relies on the partnership with schools and seeks to find the conditions for the possibility of an education that targets the subjectivity of the child.

For Lerner *et al.* (2016), Therapeutic Education considers education in its function of subjectivation and not only in that of teaching, as it considers the subject of the unconscious and the operations that constitute it. Based on this concept of work, "educating and treating are in a relationship of continuity, insofar as we make an offer of a bond, we sustain the encounter of the child with their peers within a symbolic field and we aim at changes in the subjective position of the children." (p. 261)

For the research, some guidelines directed the researchers' interventions. Among them, the following stand out: Guiding the games so that there is shared play, without actively and excessively interfering; Following and recognition of the identifications, of the connections of the EE child with the other children; Naming and recognition of desire; Offering occasions or activities that allow the presentation, by the children in the group, of ways that constitute childhood, for children with EE (such as, for example, the presentation of the use of fantasy for a child with EE that usually does not use fantasy in its life).

5. The APEGI instrument

The APEGI (Psychoanalytic Monitoring of Children in Schools, Groups and Institutions) is a guide that helps researchers read 5 theoretical axes considered central to follow the subjectivation of children from 2 to 6 years old. This instrument includes the follow-up of the "function of the siblings" and pays special attention to its establishment in the classroom group.

IN APEGI, the 5 axes intersect and mutually determine each other in their function of producing the constitution of the subject. They are: presence and recognition of the subject; playing and fantasy; the paternal role; body image and the function of the siblings.

The APEGI is already validated and has been used with relative extent, but it does not have, on the other hand, been used especially for monitoring the intervention for children in inclusive education. So, this research was a good opportunity to verify how the APEGI can go beyond the reading of subjectivation and also guide possible interventions in the direction of promoting the inclusion of children with EE.

At the end of APEGI, there are monitoring indicators for each of the 5 axes. If some of these indicators are marked as absent, they are signaling problems or arrests in psychic development. If, on the other hand, the indicators become present after a period of intervention – if they are made present – they will be signaling that the march of the constitution of the subject is being resumed.

Some indicators are considered to be more accurate in pointing structural obstacles in the constitution of the subject, and they are called IEE (SOI). If they are absent, the child will be quoted as a child with EE. When the indicators become present, when there is a "presentification" of them, after some time in which the child is followed, we can assume that the subjective constitution is relaunched.

6. Results

The percentage analysis of the “presentification” movements of the follow-up indicators showed that 25.8% of the previously absent indicators of the “Similar Function” axis became present. In the other 4 axes, the share of indicators that were present was: 18.8% in “Paternal Role”; 17.9% in “Presence of a Subject”; 16.4% in “Body and its Image” and 10.4% in “Play and Fantasy”.

The analysis of the axes reveals that the Function of Siblings was the one that had the most positive impacts. In fact, the emphasis of the research is really on this axis, and these numbers show that the intervention showed its effects, especially if we compare the results with the changes found in the other axes, in which the movement was smaller, but which occurred, in all way, since the axes are intersected and determine each other. In general, after the interventions, improvements were observed in the children's condition; for the most part, there were gains.

Quantitative results would be enough to confirm the hypothesis that the APEGI can be a good tool for monitoring interventions aimed at subjective change in children in inclusive education, considering the group of children in the research. But after the intervention, would these children have found more inclusion in their schools? Would the post-pandemic effects have found a decrease after the intervention in schools? To reflect about this, the qualitative results are more expressive. Going through the reports written by each researcher about the child they accompanied followed, we can extract, among many others, some aspects that can help answer these questions.

George, a child with EE, loves to play tag. The researcher proposes the game, and Samuel, a member of the group of children, introduces a symbolic game into it: he shouts “police”. The researcher captures this word, unfolds it by introducing its complement: “thief”. Now George calls his friends to play tag by shouting “police!”. His friends answer him and the game is relaunched. The body ceases to be just movement. Samuel was there to introduce the game, and the researcher was there to “fish” it and give value to the work of the peer. This fragment of report shows that the coordinator of Georges’s group, in this post-pandemic context, has done more than to be a symbolic reference, as all coordinators do. It can be said that the children were waiting for their fellow, “en souffrance”, as Lacan recalls, regarding a letter that remains at the post office waiting to be delivered. So, the researcher “delivered this letter”, by mediating the relationship between peers, by addressing to the children the lines that would otherwise have been lost, without a receiver to receive them.

In the post-pandemic, schools were still overwhelmed with the challenges that arose with the need to adapt and the staff was less capable to appropriately listen to the subjective reactions from children with EE. The researchers then took it upon themselves to do so. They functioned as a qualified Other, listening to the lines captured there in the small groups, or giving them the necessary holding.

In the first meetings, John hardly explored the toys in the ludic box; he sat with his back to everyone (researcher and children) and preferred to play with plastic letters, turning them between his fingers. At times he would look in the corner at the children who were playing house, creating stories with puppets and drawing. Despite not seeming to be totally oblivious to the environment, he did not interact, he manipulated his penis, made sounds, chatted his teeth, jumped. One day the kids were trying hard to include him in the game by pretending to bite him with a frog puppet. John did not interact with the children, but turned his body sideways towards them. Suddenly, he sought the researcher's lap and sat there for about 10 minutes. So, seated and with his body leaning against hers, he faced the other children who continued to play. He liked being tickled on his back. At the next meeting, John was interested for the first time in looking at what was in the ludic box. Then he showed signs that he wanted to play tickle. He laughed a lot when he was tickled and this scene was repeated several times. Colleagues, seeing the fun game, wanted to participate and also went to tickle John, who soon laughed with them too. This game was followed by other body games with colleagues and the researcher. John jumped around the room, climbed on the chair, on the table, and seemed to seek contact and containment. He ran out of the room and the researcher brought him back. Then he repeated the action more times, slowly, making it easier for his colleagues to catch him, who, when they saw him leave, were ready to go get him and, bringing him back, tickled him more.

The passage through the researcher's body, whose function was to provide a contour and a holding for the child's body in which the mirror stage did not seem to operate, was fundamental. He lended his body to the child, offering him a support anchor and a starting point for the child's opening to his friends, source of identifications. John's APEGI showed a “positivation” of the indicator “the child answers when a child calls him”, an EE indicator.

Mary presented, in the first application of the instrument, 8 missing indicators, one of which was an indicator of a structural obstacle (IEE), and 6 indicators under construction, pointing out that there were structural obstacles in the subjective constitution. She was an impulsive child, without contact with her peers, showing great psychomotor disorganization. After ten months of follow-up, a significant

change was identified, especially with regard to the similar function. She started to be called by other children to play, built friendships and started to include the others in the game. There was a specific game where the children hid the wolf, and it was Mary who warned the others about the approach of danger, making a long howl. In the second application, no more EE indicators appeared.

7. Discussion

Some children who were participating in the study began to play with their peers, and here the numbers also come to our aid. By observing the indicators of the function of the similar, it can be noticed that there were more indicators becoming present in the following: the child has friends; the child is called to play. Considering the total number of appointments, these indicators accounted for 13.3% each of all appearances in this axis.

But here, it is interesting to look at the indicators that are expressive of inclusive movements. In this sense, the indicator “the child is called to play” is quite expressive. There is still no dissimulation in children of this age; if they call the EE child, it is because they are considering including her or him. When answering, the child with EE talks about a subjective movement that was absent before and that is being installed, that is, he is also including his fellow.

The inclusion of our group of children with EE started, and showed signs of evolution over time. Thus, it is possible to perceive that a follow-up such as the one proposed by the research could be maintained in the school. If there is room for it, it could perhaps be an instrument capable of reducing the exclusion of children with EE.

From the results of the research, we emphasize that identifying what does not go well in the subjective constitution without the use of diagnostic classifications offered an opportunity for schools to sustain their place as an instrument of inclusion and subjectivity offer. The schools also bet on the children's subjectivation process, reaffirming that the strength of inclusion is in the bond between the children.

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AN INTERDISCIPLINARY APPROACH TO THE CONSTRUCTION OF FACIAL COMPOSITES IN THE MEXICAN POPULATION: AI, ANTHROPOLOGY AND PSYCHOLOGY

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Abstract

We present an interdisciplinary approach to the construction of facial composites that could overcome some of the cognitive limitations that are frequently found in eyewitness/forensic recognition. We take advantage of the extensive anthropological research carried out on the facial characteristics of the Mexican population that produce the CARAMEX database, and combine it with the most recent methodologies of artificial intelligence and image processing to construct a large database of synthetic faces. Additionally, we present preliminary results on a corpus of basic linguistic/verbal facial descriptions obtained with subsamples of CARAMEX faces, to be used as the initial seed for the evolution and gradual convergence on a target facial composite.

Keywords: *Facial composite, holistic criterion, AI algorithms, anthropometry, Mexican population.*

1. Justification

Face recognition in forensic settings has ample space for improvement. The most common technique used by police departments around the world is the construction of facial composites, in which crime victims or eyewitnesses provide a verbal description of a suspect's facial features to a forensic art expert to deliver a graphic representation of the suspect's face. However, the ability to identify a person from a facial composite, even when the face is familiar, ranges from 5 to 20% (Bruce, et al. 2002; Frowd, et al. 2007; Klum, et al. 2013; Zahradnikova, et al. 2018); in part, this is probably due to the fact that the traditional way of constructing facial composites follows a feature-by-feature logic that by itself does not capture the complexities of human facial recognition. Thus, although it is possible to direct attention to individual features of a face, such as the eyes or the mouth, other facial features modify the perception of the focused feature in a holistic way (Meltzer & Bartlett 2019; Tanaka & Farah 1993; Tanaka & Sengco 1997). For example, it has been shown that it is much easier to identify a feature in a familiar face (e.g., a nose) if the feature is embedded in the context of a full face, than when the same feature is shown in isolation (Tanaka & Farah 1993; Tanaka & Simonyi 2016).

Also, the verbal descriptions that form the basic input for the construction of facial composites might interfere with the recognition of a briefly observed unfamiliar face by altering or modifying the mental representations of the face, a phenomenon that is known as verbal overshadowing (Baker & Reysen, 2020; Brown, Portch, Nelson & Frowd 2020; Meissner & Brigham, 2001).

In the last two decades, efforts to improve the construction of facial composites have led to the development of different semi-automatized systems that try to overcome the problems mentioned above (e.g., relying on a more holistic or "natural" way of perceiving faces; less dependence on verbal descriptions) using artificial intelligence and/or advanced image processing techniques (Frowd, 2021; Zahradnikova, et al. 2018). Unfortunately, forensic face recognition rates are still unsatisfactorily low.

In our own effort to come up with more efficient ways to create composite faces and improve forensic face recognition, we have used Artificial Intelligence (AI) image processing techniques and convolutional neural networks (CNN) on a representative sample of the facial variability of the Mexican population (see description of the CARAMEX database below), to create a more dense face space of real and synthetic faces that could serve as a search map for the recognition process.

Additionally, we collected linguistic/verbal descriptions of facial features from a sample of CARAMEX faces to explore ways to refine the search in the face space using natural language algorithms to standardize the descriptions. In parallel, the linguistic/verbal descriptions will be used to build a corpus of facial descriptors that could be used to facilitate a victim's or eyewitness' description of the face of a suspect with less overshadowing or induced memory distortions.

Thus, we present here both the results of the application of an AI image processing and CNN on CARAMEX faces to build a large database of synthetic faces, and some preliminary results of the linguistic/verbal facial descriptors that we plan to use to guide a search in the face space. For these two tasks, working with the CARAMEX database provided both an statistically and anthropologically relevant referent for facial recognition, given the sampling process and the anthropometric techniques used to generate it.

2. Method

2.1. CARAMEX face database

This face database consists of a large sample of facial photographs of individuals from different populations in Mexico. This database was collected between 1993 and 1997 within "La cara del mexicano" (The Mexican face) project using a standardized protocol described in detail previously (Serrano et al., 2000; Farrera et al., 2016), in which photographs were taken at a constant distance of 2 m between the subject and the camera, constant lighting, and the head oriented to the Frankfurt horizontal plane. The entire database was used to generate the composite faces, while randomly selected subsets of faces were used as stimuli for the linguistic/verbal descriptor task.

2.2. Linguistic informants

To build the basic corpus of facial descriptors, 49 students (41 females and 8 males aged from 18 to 25 years old, mean = 21.44, SD = 2.36) provided linguistic/verbal descriptions of a randomly selected subsets of 50 faces. They were recruited through messages posted in the social media of the Psychology Department (i.e., facebook, twitter) and through direct invitations to participate in the study in classrooms at the university.

3. Procedure

3.1. Facial composites

The generation of synthetic faces (portraits) was done in two stages. The first stage involved the syntactic analysis of text files that contained the spatial information of 1) face-shape landmarks and 2) the markers of other face features, of about 1400 frontal images from the CARAMEX collection. In the second stage, clipping areas were set in the original CARAMEX faces to cut and superimpose them on the images of 29 anthropometrically defined face-shape templates to make corrections in terms of scale, position and brightness. On a first approximation, the corrections were made averaging height and width of the faces to be matched with respect to the size of the features, in the case of the positions, and the overall average brightness and contrast of all the facial features on the face-shape templates. All the corrections were performed with the computer vision library OpenCV (see Figure 1).

After all the images were corrected and aligned, we obtained a set of approximately 38,000 synthetic faces from all the possible combinations of facial features within the clipping areas (after discarding some combinations with images that were too dark or that did not scale well).

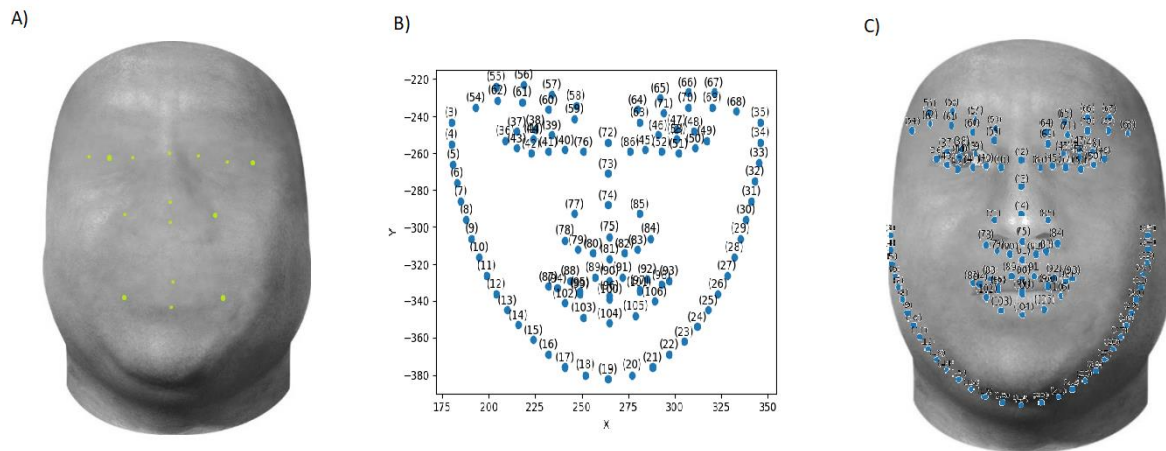
3.2. Classification test with a convolutional neural network

The synthetic faces were used to train and test two convolutional neural networks in a classification task, one supervised and the other unsupervised. For the supervised classification we used the 29 face-shape templates as the criterion.

3.3. Facial linguistic/verbal descriptors

For each participant, fifty faces were selected at random from the CARAMEX database and placed on an internet platform to display them one at a time; the participant saw the face at the center of the screen, and a set of six text boxes on the right in which they could type their personal description of face shape, eyebrows, eyes, nose, mouth, and other distinctive features. Although the description of the set of 50 faces could be done in different sessions according to the participant's available time, they were asked to complete it in one week.

Figure 1. Examples of: A) a face-shape template from CARAMEX collection, with landmark detection by OpenCV library; B) landmarks detected by OpenCV on a random face from CARAMEX collection, acting as delimiters for clipping areas; and C) a synthetic face from combination of features from many faces over the face-shaped template.



4. Results

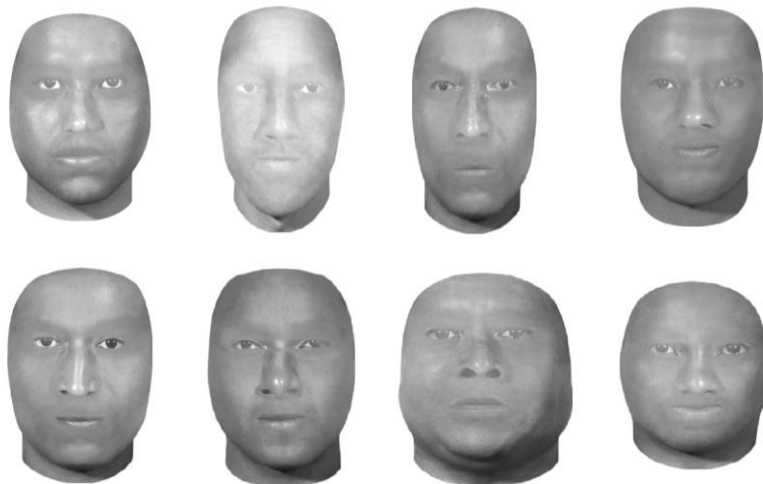
4.1. Synthetic faces database

As mentioned in the methods section, we generated a set of 38,00 facial composites (see figure 2 for some examples).

4.2. Results from the CNN classification task

We tested the accuracy and precision of the two supervised and unsupervised convolutional neural networks using the set of generated images. In the first net, the accuracy obtained was 0.9109 and loss of 0.1691, meanwhile, the unsupervised obtained an accuracy of 0.7794 and loss 2.5819.

Figure 2. A few examples of the synthetic faces generated from a combination of features of CARAMEX faces.



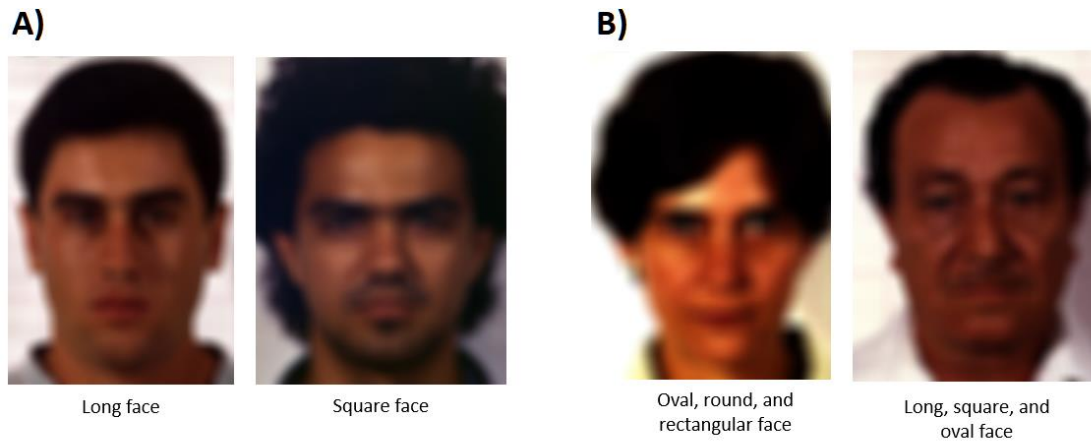
4.3. Corpus of linguistic/verbal facial descriptions

The linguistic/verbal descriptor task resulted in 1331 descriptions. Facial descriptors with a close meaning were considered synonymous (for example, “chica” and “pequeña” or “tupida” and “poblada” in Spanish). These standardized descriptors were analyzed with descriptive statistics.

In this corpus, 457 out of the 1331 descriptions refer to the shape of the face, 443 to the mouth, 1236 to the eyebrows, 437 to the eyes, and 565 to the nose. Round facial shapes (n = 152), medium-sized mouth (n=215), bushy eyebrows (n=498), small eyes (n=134), and broad nose (n=134) were the most frequently observed in this corpus, while trapezoidal facial shapes (n=1), heart-shaped mouths (n=1), unibrows (n=7), slant eyes (n=4) and upturned noses (n=7) were least frequently observed. Next, using

only faces described by more than three people ($n = 12$), we compared the standardized descriptors to the observed facial variation. Despite the small sample size, we can observe that some facial features can be described using a single descriptor (Figure 3A), while others require multiple descriptors (Figure 3B).

Figure 3. Examples of facial descriptions generated for face shape using a single descriptor (A) and multiple descriptors (B). The faces are blurred to protect the privacy of the participants.



5. Conclusions

Despite increasing efforts to improve facial composite construction, forensic face recognition rates remain very low. In this contribution we propose an interdisciplinary and novel approach for the generation of facial composites that, unlike previous approaches using artificial intelligence and/or advanced image processing techniques, introduces both relevant anthropometric variability in the generation of facial composites, and a corpus of linguistic/verbal descriptors to guide a search process.

We showed here the first steps towards this goal: the generation of a database of 38,000 facial composites, and a preliminary linguistic/verbal corpus of facial descriptors obtained through crowdsourcing. Further refinement of the facial composites as well as a larger corpus of linguistic/verbal descriptors will certainly be required.

In future work, we plan to use genetic algorithms to evolve the faces in this database and generate an optimal facial composite in terms of its degree of similarity to the suspect face. Likewise, we also plan to use natural language processing to take advantage of the information in the corpus to guide the evolution through the face space, in order to find an optimized solution that best matches a suspect's face and the victim's or eyewitness' description of said face. With this work we hope to improve the most subjective forensic technique that is routinely carried out in criminal investigations, that is quite susceptible to cognitive biases in both the construction of a facial composite and in the recognition process, with very high social costs (e.g., Cardozo, 2009).

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COMPARATIVE STUDY OF ENVIRONMENTAL MORAL JUDGMENT WITH SPECIFIC TEACHING ON SUSTAINABLE DEVELOPMENT

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Abstract

Many researchers have focused on the development of moral environmental judgement in children (Hansla & al.; 2008; Persson, & al. 2015). The pioneer, Kahn (2002, 2003, 2008) identified three types of environmental, and moral reasoning: homocentric, bio-centric, and isomorphic. Our study asks about the influence of teaching on moral reasoning in relation to the environment for children of 1st grade and 2nd grade who had a specific education (N=60) to sustainable development or without specific education (N=56). We assume that students in schools with an education in sustainable development will be more bio-centric than those without. For that, we created stories, including an environmental dimension to identify the type of reasoning of children. Student's t test indicates that bio-centric reasoning is dominant for all children, however, teaching contributed to more bio-centric reasoning. Student's t test shows that children without specific teaching in both grades had significantly more difficulty in making moral judgments and reasoning on the proposed stories. These results support the importance of environmental education in the development of moral environmental reasoning.

Keywords: Elementary school-age children, teaching sustainable development, environmental moral judgment, reasoning.

1. Introduction

Kahn & al. (1995, 2002, 2003, 2006, 2008, 2009) study the development of environmental moral reasoning in children. The reasoning is seen here as a judgment. It distinguishes three types of reasoning: 1. Homocentric reasoning suggests that humans can take advantage of the environment to serve their interests for their well-being (both physical and psychological) with an esthetic dimension. 2. Bio-centric reasoning suggests that the environment has a moral status. There is a relationship between nature and taking care. 3. Isomorphic reasoning, which is the link between humans and nature. Nature has the same moral considerations as man, which would mean, for example, "why kill animals when they have the same rights as us?" (Kahn, 1995). Children thus establish relationships between animals and our own rights.

Thereafter, Kopnina (2014) considers environmental problems to be social dilemmas. It involves sophisticated moral conceptions based on notions such as rights, liberty, justice, equality, and respect. Every living being has value and deserves to be considered morally. Next, Otto and colleagues (2017) see environmental education as a tool to address environmental issues. They also establish a link between involvement in environmental education and children's ecological behaviors. Environmental education of children is therefore of great importance.

2. Methodology

Population: For our study, we interviewed a total of 116 children (M=6 years and 6 months, SD = 0.28, 58 girls, 58 boys). 56 children came from schools without any specific teaching on sustainable development and 60 children had specific teaching on sustainable development. The children grew up in the Parisian suburbs where the experiments took place.

Material: To access children’s knowledge and judgments on sustainable development, seven stories were presented to children including different areas: destruction of nature, behavior towards animals, pollution and selective recycling. It is a stimulating and innovative tool to access children's knowledge and judgment. It is a challenging and innovative material for accessing children’s knowledge and judgments. Sustainability is never explicitly mentioned in the stories.

Experiment: Prior to the interviews, teachers were asked about the content of their teaching. The experiment was divided into two stages: the researcher read the different stories and then asked the child to judge them. He then proceeded with a semi-structured interview in which the child was asked to explain his answer. The experience was carried out individually. The average interview time was 13.5 minutes per child.

Data coding: The speech and choice of children were grouped into several response categories. Classes were determined by independent judges (Kappa coefficient: 0.99). This allowed the identification of the different types of responses of children associated with their choices. Criteria were similar to those set out by Kahn (2002).

3. Results

In the first stage, we identified four answer categories: bio-centric, homocentric, isomorphic, and I don't know (Cf: Table 1).

Table 1. Percentage of children's responses.

Reasoning	1st grade without teaching	1st grade with teaching	2nd grade without teaching	2nd grade with teaching
Bio-centric	36,51	53,92	45,32	54,19
Homocentric	27,51	30,88	31,53	28,08
Isomorphic	10,58	7,83	12,32	14,78
I don't know	25,40	7,37	10,84	2,96

We can see that the majority of children use bio-centric reasoning independently of teaching. However, this reasoning increases with specific teaching. Table 2 provides an example for each of the reasoning according to age and education.

Table 2. Examples of responses.

Reasoning	1st grade without teaching	1st grade with teaching	2nd grade without teaching	2nd grade with teaching
Bio-centric	It destroys nature, plants give us air.	Because it's not right to kill nature.	It's not good because it pollutes the earth and the earth will be sick after.	Because you don't have to destroy the forests to make money. Nature is more important.
Homocentric	Because at least you can see the animals.	Because after people, they have no food.	Because at least there will be more room for people.	That's good, it can be useful.
Isomorphic	Because the fish need to live and have water and to be able to breathe. Then for fishermen it is necessary to keep them to eat them.	So he's not all wet. But if he goes on foot, he could take an umbrella.	I'm saying if it's a car that's not electric, it doesn't do nature any good. It's not good for nature even if for us it's better	Maybe they felt better in their country than in the zoo. Even if people come to see them

In the second stage, statistical analyses (student t-test) were conducted to test the impact of teaching on the type of reasoning used. The analyses reveal a significant negative difference for the answer I do not know for the 1st year $t(-1.842)$, $p < .05$; and a significant positive difference in the 2nd year $t(3.053)$, $p < .05$.

4. Discussion

In the present study, we assumed that children in schools with sustainable development education will have more bio-centric reasoning than students without this teaching. The results showed that the two groups of children had essentially bio-centric pro-environmental reasoning, which confirms the hypothesis of Kahn and his collaborators. The significant difference in the answer "I do not know" indicates that the child without specific teaching does not have access to the representation of the story and does not have knowledge related to environmental issues.

The development of moral environmental needs knowledge that special education can provide. (Otto and colleagues, 2017)

5. Conclusion

Children are predisposed to environmental ethics; teaching can strengthen it. The answer "I don't know" must be considered and it proves that environmental education is needed to provide knowledge for a pro-environmental morality. In future studies, cross-cultural perspectives and longitudinal studies could be developed with international collaboration.

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ANXIETY, DEPRESSION, COPING AND NEEDING HELP AMONG ISRAELI HIGHER EDUCATION STUDENTS DURING OMICRON/COVID-19 WAVE

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Abstract

Students in higher education have faced abrupt changes following the breakout of the COVID-19 pandemic. The fifth wave of the pandemic, also known as "the Omicron wave," created new challenges for students in Israel. The goals of this study are to examine: 1) the level of depression, anxiety, and coping during the progression of the pandemic. 2) whether perceived academic achievements and needing help are good indicators of depression, anxiety, and coping during the pandemic.

The sample included 9,038 students from five research universities in Israel, of which 63.4% were women, 36.0% were men, and 0.6% were other. The median age was 26. The study design was a cross-sectional survey. GAD7 and PHQ-9 measured anxiety and depression, respectively. A one-item self-report question measured the level of coping (on a scale from 1 "not at all" to 10 "to a great extent"). Data collection was carried out through an anonymous online survey from January 30 to April 23, 2022. A quarter and almost 40% of the participants reported anxiety and depressive symptoms, respectively, within the clinical range. The level of perceived coping was moderate. The rates of anxiety and depression in this wave of the pandemic were higher than in previous one. Lower academic achievements were associated with anxiety and depressive symptoms and lower coping levels. Needing help variables were good predictors of anxiety, depression, and less coping.

In conclusion: the findings indicate that academic achievements were found to be a significant predictor of anxiety, depression, and perceived coping even at this progressive phase of the pandemic. A simple measure of self-reported needing help serves as a good and quick screening indicator for vulnerable groups. The provision of services for higher education students should be an integral part of maintaining and supporting effective academic activity.

Keywords: *Omicron/COVID-19 pandemic, higher education, depression, academic achievements, needing help.*

1. Introduction

The new variant of the coronavirus, B.1.1.529, known as Omicron, was discovered in Israel on November 26. By mid-December 2021, a fifth wave of COVID-19, also known as the Omicron wave, has been declared (https://www.gov.il/BlobFolder/reports/daily-report-2021226/he/daily-report_daily-report-2021226.pdf). By this time, more than half of the population in Israel was vaccinated by at least two doses, only a few governmental social distancing restrictions (such as indoor masks wearing) were left, and the universities had already returned to teaching in the campuses. Nonetheless, by mid-January 2021, many universities and colleges returned to online teaching following a solid governmental recommendation and deep pressure from the students' union. This study was conducted among research university students in Israel during the Omicron wave and towards its end (by late April 2022).

Previous studies conducted among students in higher education revealed that students are a vulnerable group to depression, anxiety, and other mental health difficulties (Tasso, Hisli Sahin, & San Roman, 2021; Wathélet et al., 2020). They also struggled with the unplanned and rapid transition to online learning (Procentese, Capone, Caso, Donizzetti, & Gatti, 2020). Less is known about more positive aspects of students' mental health, such as their perceived coping with the pandemic, especially in more advanced phases. Moreover, contextual indicators for negative and positive aspects of mental health, such as perceived academic achievements and personal assessment of their needing help, have not been addressed to our best knowledge. Perceived academic achievements have often been acknowledged as an outcome of anxiety and depression in general and during COVID-19 (Giusti et al., 2021). Much less is

known about students' academic achievements and challenges as predictors of their mental health. As for needing help- in times of global crisis such as the COVID-19 pandemic, rapid screening tools are essential to identify and treat vulnerable groups. Preliminary studies conducted by the authors suggest that a higher rate of needing help predicts a higher level of psychological distress and a lower level of perceived coping with the crisis (Schiff, Pat-Horenczyk, & Benbenishty, 2022). In that case, such questions may serve as a preliminary screening tool for mental health difficulties in situations of mass crisis.

2. Objectives

Assess the level of depression, anxiety, and coping during the progression of the pandemic. Habituation theory would predict that depression and anxiety decrease and perceived coping increase along the progression of COVID-19 because individuals adjust to stressors created by the pandemic. In contrast, sensitivity theory would predict that depression and anxiety increase and the level of coping decrease because former stressful events create more vulnerability to further stressful ones (Zagefka, 2022).

Examine whether perceived academic achievements and needing help are good indicators of depression, anxiety, and coping during the pandemic.

3. Methods

3.1. Participants

The study sample size was 9,038 students from five (of 8) research universities in Israel, of which 63.4% were women, 36.0% were men, and 0.6% were other. Arab Israeli students comprised 4.8% of the sample, whereas the majority were Israeli-Jewish students. The median age of the respondents was 26 (Mean=29.03, SD=8.51). Approximately 60% (59.6%) of the students were in undergraduate programs, and the rest were in graduate programs.

3.2. Design

We used a cross-sectional survey research design.

3.3. Data collection

Following ethical approval from the respective universities, we constructed an online questionnaire using the Qualtrics program and delivered it as a link to all students. The dean's office of each university distributed the questionnaire linked in Hebrew to all students in their academic institute via their institutional e-mail addresses. Three reminders were also sent. We first presented informed consent, and only students who marked "agree" were referred to the questionnaire, which was anonymous. Data collection occurred during the Omicron wave of the pandemic in Israel, from January 30, 2022, to March 23, 2023. During that time, Israel enforced facial mask-wearing in public indoor places and highly recommended social distancing. However, no other governmental restrictions were held.

3.4. Measurements

The Generalized Anxiety Disorder-7 measured anxiety (GAD-7; (Spitzer, Kroenke, Williams, & Löwe, 2006) (dependent variable; Cronbach's $\alpha = .93$). The *Patient Health Questionnaire-9* measured depression (PHQ-9; (Kroenke & Spitzer, 2002; dependent variable; Cronbach's $\alpha = .91$). A cut off score of 10 was defined as a clinically significant level for both depression and (Rudenshteyn et al., 2021). *Perceived coping*- similar to the 1-item measure used in Eddy et al. research (Eddy, Herman, & Reinke, 2019), we asked one question that reflects a general assessment of coping with the COVID-19 pandemic (dependent variable): "Please rate yourself on a scale ranging from 1 to 10 regarding how you feel you are coping with the coronavirus pandemic." Rates ranged from 1, "not coping at all in the crisis," to 10, "coping extremely well." *Students' need for help*- similar to our previous studies (Schiff, et al., 2022), we asked one general question: "Following the coronavirus outbreak, some students feel they need help in overcoming these experiences. "Do you feel that you need help?" Response options included 0 (not at all), 1 (maybe a little), and 2 (yes, I need help). We added three more specific questions in areas of needing help: educational, emotional, and financial issues with similar response categories (Cronbach $\alpha = .74$). *Perceived academic achievements*- we asked one question: During COVID-19, "My academic achievements were good." Responses were recorded on a five-point scale ranging from 1 = *not at all* to 5 = *very much*. *Health Status*(control variables) was measured by: a 1-item self-rated

health (SRH; (DeSalvo et al., 2006) measure with a five-point scale (1 = *poor* to 5 = *excellent*). We included an additional question on the number of times students were infected by the COVID-19 virus, with response categories ranging from 1 "not infected" to 4 "three times or more."

4. Results

Almost a quarter (24.9%) of the students scored at the clinical level for anxiety (score ≥ 10), and almost 40% (38.6%) scored at the clinical level for depression. Compared to previous studies conducted by the authors among students in higher education during different phases of the pandemic, the rates of anxiety and depression in this study (the Omicron wave) were higher than in the previous waves of the pandemic. Specifically, 19.7% and 34.6% of the students experienced anxiety and depression at the clinical level during the second wave of the pandemic in Israel that occurred between June and October 2020. The rates of anxiety and depression two months after the dwindling of the third wave of the pandemic (that occurred between December 2020 and March 2021) were 20.6% and 32.5%, respectively.

Table 1 shows that the level of perceived coping (on a scale from 1 "not at all" to 10 "to a great extent") was moderate (Mean=6.90, SD=2.22) and was similar or lower to the level of perceived coping found by the authors during the second wave of the pandemic (Mean=6.79, SD=2.07) and following the dwindling of the third wave of the pandemic (Mean=7.16, SD=2.04). As for needing help from the university authorities, over 50% (13.9% reported "yes, I need help" and 39.7% reported "perhaps some help") reported needing help in general due to the Omicron virus outbreak. The level of needing help among students who sought help (e.g., were ready to transfer their personal details to the university Dean of students to be approached for assistance) was significantly higher than among those who did not seek help (Mean=4.49, SD=2.05 among help seekers vs. Mean=2.29, SD=2.07 among those who did not seek help. $t(5641)=31.678, p<.001$).

Table 1 shows that higher academic achievements were associated with less anxiety and depression and better perceived coping with the virus. Perceived needing help (index of all helping domains indicated above) was strongly positively associated with a higher level of anxiety and depressive symptoms, and negatively associated with the perceived level of coping ($r = -.43, p<.001$). These associations are preserved after adjusting for background (gender and age) and health (self-rate and the number of times of COVID-19 infection) characteristics, as shown in Table 2. Specifically, when *anxiety* level served as the predicted variable, the complete model explained 34% of the variance ($F(6,5347)=458.73, p<.001$). Background (gender and age) and health variables, entered in the first step (not presented in the Table due to lack of space), explained 16% of the variance ($F(4,5349)=262.16, p<.001$), and perceived academic achievements and needing help, entered in the second step, explained an additional 18% of the variance (F change (2,5347)=712.41, $p<.001$). Significant direct associations between perceived academic achievement and anxiety symptoms ($\beta = -.12, p<.001$) and between needing help and anxiety symptoms ($\beta = .39, p<.001$) were found. After controlling for background and health characteristics, higher perceived academic achievements were associated with a lower level of anxiety, and a greater needing for help was associated with a higher level of anxiety. Similarly, when the level of *depressive* symptoms served as the predicted variable, the complete model explained 41% of the variance ($F(6,5354)=612.12, p<.001$). Background and health variables, entered in the first step, explained 20% of the variance ($F(4,5356)=323.82, p<.001$), and perceived academic achievements and needing help entered in the second step explained an additional 21% of the variance (F change (2,5354)=957.42, $p<.001$). Significant direct associations between perceived academic achievement and depressive symptoms ($\beta = -.18, p<.001$) and between needing help and depressive symptoms ($\beta = .40, p<.001$) were found. After controlling for background and health characteristics, higher perceived academic achievements were associated with a lower level of depression, and a greater need for help was associated with a higher level of depression. Finally, the complete model for perceived *coping* with the COVID-19 pandemic explained 27% of the variance ($F(6,5354)=322.70, p<.001$). Background and health variables, entered in the first step, explained 13% of the variance ($F(4,5356)=201.60, p<.001$), and perceived academic achievements and needing help explained an additional 14% of the variance (F change (2,5354)=491.11, $p<.001$). Significant direct associations between perceived academic achievement and perceived coping ($\beta = .18, p<.001$) and between needing help and perceived coping were found ($\beta = -.29, p<.001$). After controlling for background and health characteristics, higher perceived academic achievements were associated with greater perceived coping, and greater need for help was associated with worse perceived coping.

5. Discussion

The level of anxiety and depression found in this study was lower than that among university students in Shanghai during the Omicron wave (Yin et al., 2022). The level of anxiety (depression was not measured in that study) in the present study was higher than among individuals in north America and western Europe using the same measurement tool (Shan et l., 2022). The present study findings do not support the habituation theory, as the level of anxiety and depression increased with the progression of the pandemic, and the moderated level of coping has not changed. Thus, our findings suggest that the habituation hypothesis may be a fallacy, as previously found (Zagefka, 2022), and that, like other disasters (Stein et al., 2018), ongoing exposure to global disasters may induce greater vulnerability rather than adjustment.

Perceived poor academic achievements were found to be a significant predictor of anxiety, depression, and lower level of perceived coping. These associations remained true when controlling for gender, age, and health status. Previous studies conducted during COVID-19 revealed that anxiety and depressive symptoms are significant predictor of poor academic achievements (Giusti, et al., 2021). The results of the current study imply that the reverse direction holds true as well: During a time of global stress such as COVID-19, poor academic performance may contribute to a higher level of anxiety and depression, while high academic achievements are good predictors of better perceived coping with the pandemic. These results emphasize the vulnerability of students during the pandemic, who had to rapidly adjust to a completely different learning and social environment (Gonzalez-Ramirez et al., 2021).

Similar to the authors' previous work in a different context (Schiff & Pat-Horenczyk, 2014), perceived needing help was a good indicator of students' psychological distress and less perceived coping with the pandemic even after controlling for background and health factors. Needing help was also associated with seeking help supporting the validity of the former measure.

Study limitations include a cross-sectional design that rules out the prediction of causality. Thus, while needing help and academic achievement may predict mental health distress and less coping, the reverse may also hold true; those who experience greater distress also experience lower academic achievements and feel they need help. Longitudinal research design may respond to the latter alternative interpretation of the study results.

In conclusion, the results point to the vulnerability of students in higher education during the pandemic. Nonetheless, a moderate level of coping was also revealed. The perseverance or even deterioration of psychological distress and perceived coping among a portion of students indicate that their distress will not disappear by itself and that help should be provided to them. A quick screening that includes one question of perceived coping and four simple questions of whether they need help may serve as a preliminary screening tool that can trace the most vulnerable group among higher education students and provide professional support to this group during a massive crisis, and perhaps thereafter.

Table 1. Descriptive Statistics and Pearson Correlations of Main Study Variables.

	Mean	SD	1	2	3	4	5	6	7
1 Anxiety	6.19	5.71	--						
2 Depression	8.88	6.89	.822***	--					
3 Coping	6.90	2.22	-.510***	-.529***	--				
4 Needing help	2.73	2.24	.514***	.554***	-.430***	--			
5 Academic achievement	3.29	1.11	-.316***	-.379***	.328***	-.374***	--		
6 Self-rate health	4.34	0.74	-.347***	-.390***	.326***	-.293***	.196***	--	
7 Infected by COVID-19 (0 to 3 times or more)	1.32	0.64	.008	.030*	-.004	.038**	-.030*	-.079***	--

Note: * $p < .05$ ** $p < .01$ *** $p < .001$; Needing help sum of 4 items (range from 0 to 8). Inter-item reliability 0.74

Table 2. Hierarchical Regression Results Analysis for Anxiety, Depression, and Coping.

Variable	Anxiety			Depression			Coping		
	B	SE B	β	B	SE B	β	B	SE B	β
<i>Step 2^a</i>									
Constant	13.066	.579	--	19.518	.671	--	3.697	.240	--
Academic achievements	-.632	.061	-.124***	-1.101	.071	-.177***	.352	.025	.176***
Needing help	.973	.032	.386***	1.224	.037	.397***	-.287	.013	-.290***
R ²	.340***			.407***			.266***		
ΔR^2	.176***			.212***			.135***		

Note: * $p < .05$ ** $p < .01$ *** $p < .001$ a Only step 2 is presented due to space limitations

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TEACHERS' LIFE SATISFACTION: THE ROLE OF CALLING AND JOB CHARACTERISTICS

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Abstract

In order to live a calling at work a person should be intrinsically motivated for it. Whether living a calling would lead to greater life satisfaction may depend on various external circumstances including work potential to satisfy basic conditions such as salary and job security as well as opportunities for professional growth.

The aims of the study were to assess: a) the mediating role of living a calling in the relationship between calling motivation and life satisfaction; b) the moderating role of job characteristics in the relationship between living a calling and life satisfaction.

Four hundred primary school teachers (96% female) from Croatia participated in this study. Their teaching experience ranged from 0-43 years, 20 years on average. The following self-report measures were used: the Calling Motivation Scale (Duffy et al., 2015), the Living a Calling Scale (Duffy et al., 2012), the Job Satisfaction Scale (Hackman & Oldman, 1975), the Satisfaction with Life Scale (Diener et al., 1985).

In line with the hypotheses, the findings revealed that calling motivation was positively related to living a calling ($b = .66, p < .001$). Living a calling then led to life satisfaction to a higher extent when conditions for professional growth were provided ($b = .19, SE = .09, 95\% CI [.02, .37]$). Calling motivation showed no direct effect which means that living a calling completely mediated the relationship between calling motivation and life satisfaction ($b = .51, 95\% CI [.35, .70]$).

It can be concluded that stimulating work environment providing for professional growth is important factor for teachers' life satisfaction who are living their calling at work.

Keywords: *Calling motivation, job characteristics, life satisfaction, living a calling, teachers.*

1. Introduction

Teachers' well-being has various positive outcomes both for them as well for their students. Teachers with higher well-being less frequently leave their profession and are more satisfied with their job and their life (Kern et al., 2014). Further, their students have better academic performance (Klusmann et al., 2016), higher motivation for learning (Sutton & Wheatley, 2003) and higher final grades (Caprara et al., 2006). Given the importance of these positive outcomes, understanding the well-being of teachers is a highly important goal. Recently, within the framework of Work as a Calling Theory (WCT; Duffy et al., 2018) perceiving and living a calling have been recognized as important antecedents of well-being.

Definitions of calling include a sense of purpose, meaning, personal fulfillment, the desire to help others and contribute to the greater good (Dik et al., 2009; Steger & Dik, 2010). Individuals with a calling find their work rewarding and fulfilling. Work represents one of the central domains of their lives and they invest much in their professional identity. The positive link between perceiving a calling and life satisfaction has been established across many professions including teacher population (Jurčec, 2019; Jurčec & Rijavec, 2015; Song et al., 2016).

However, having a calling is not the same as living a calling. Although people can view their work as a calling that does not necessarily imply that their calling has been fulfilled and that they are actually living it. Both having a calling and living a calling are positively related to well-being outcomes, however a growing number of research shows that living a calling is consistently correlating more strongly with these outcomes (Duffy et al. 2017).

In order to live a calling at work a person should be intrinsically motivated and willing to invest a great amount of effort to pursue his or her calling (Duffy, Autin et al., 2015). This motivation may lead to living a calling and consequently to higher well-being. However, whether living a calling would actually lead to higher well-being may depend on various external circumstances. These circumstances

include work conditions and resources such as salary and job security as well as opportunities for professional growth. Individuals who experience job insecurity or barriers for their professional growth at work may report different relations of living a calling to well-being outcomes.

Based on the above-mentioned research, we assume that teachers with higher motivation to live their calling are more prone to actually live a calling, which in turn, increases their life satisfaction. Further, we assume that the link between living a calling and life satisfaction is moderated by job characteristics including satisfaction with salary and job security as well as by opportunities for professional growth. In other words, living a calling lead to life satisfaction to a higher extent if good work conditions and opportunities are provided.

2. Objectives

The central aim of this study is to examine the relationship between motivation for calling, living a calling, job characteristics and well-being in primary school teachers. The first aim of the study was to asses the mediating role of living a calling in the relationship between calling motivation and life satisfaction; the second one aimed to test the moderating role of job characteristics in the relationship between living a calling and life satisfaction.

3. Method

3.1. Participants and procedure

The sample consisted of 400 primary school teachers teaching students from the 1st to 4th grade (96% female) from all regions of Croatia, out of whom 96% were female. An average length of service was 20 years. Online questionnaires were administered by email. The teachers participated voluntarily and anonymously.

3.2. Instruments

Calling Motivation Scale (CMS; Duffy, Bott et al., 2015) is a 3-item measure of the degree to which participants feel motivated to pursue a calling in their career (e.g., *No matter how difficult, I will try to achieve my career calling*). Participants rated items on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The total score is calculated as the mean of the scale items. Higher scores indicate a higher pursuit of a calling. Cronbach's alpha reliability was .88.

Living a Calling Scale (LCS; Duffy et al., 2012) is a 6-item measure used to assess the degree to which participants perceive that they currently live their calling (e.g., *I am currently working in a job that closely aligns with my calling*). Participants rated items on a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score is calculated as the mean of the scale items. Higher scores indicate a stronger living of a calling. Cronbach's alpha reliability was .94.

The Job Diagnostic Survey (JDS; Hackman & Oldman, 1975) is a 14-item measure used to assess affective reactions to the job comprised of facet-specific measurements such as security (e.g., *How satisfied are you with the amount of job security you have*), salary (e.g., *How satisfied are you with the amount of pay and fringe benefits you receive*), social (e.g., *How satisfied are you with the chance to get to know other people while on the job*), supervision (e.g., *How satisfied are you with the degree of respect and fair treatment you receive from your supervisor*), and growth (e.g., *How satisfied are you with the feeling of worthwhile accomplishments you get from doing your job*). Participants rated items on a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores for five specific satisfactions are calculated as the means of the sub-scale items. Higher scores indicate higher job satisfaction. Mean inter-item correlations of two-item subscales were .34 (security) and .83 (salary). Cronbach's alpha of three-item subscales were .63 (social) and .74 (supervision), and of four-item scale was .76 (growth).

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item measure of the degree to which participants generally feel satisfied with their life (e.g., *The conditions of my life are excellent*). Participants rated items on a 7-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The total score is calculated as the mean of the scale items. Higher scores indicate higher life satisfaction. Cronbach's alpha of this scale was .88.

4. Results

4.1. Descriptive statistics and correlations

The descriptive statistics and intercorrelations of all measured variables are presented in Table 1. Descriptive data showed that all variables, except salary satisfaction, were rated above theoretical average

point of the scale, with the highest ratings for calling motivation and living a calling. All correlations were in the predicted positive directions.

Table 1. The descriptive statistics and intercorrelations of calling motivation, living a calling, specific job satisfactions and life satisfaction.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Calling motivation	-	.77**	.27**	.27**	.38**	.31**	.46**	.32**	.03
2. Living a calling			.38**	.33**	.44**	.39**	.54**	.41**	.10*
3. Security satisfaction				.30**	.43**	.46**	.54**	.35**	.32**
4. Salary satisfaction					.39**	.42**	.52**	.34**	-.10*
5. Social satisfaction						.61**	.73**	.38**	-.09
6. Supervision satisfaction							.61**	.37**	-.09
7. Growth satisfaction								.45**	.00
8. Life satisfaction									-.09
9. Work experience									-
Mean	4.39	4.32	3.65	3.08	3.94	3.83	3.95	5.28	20.10
Std. Deviation	0.73	0.73	0.94	1.12	0.60	0.78	0.62	1.12	11.05

Note. * $p < .05$; ** $p < .01$

4.2. Mediation model

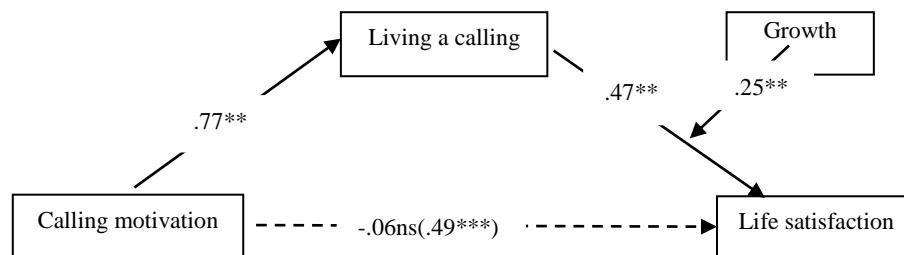
The hypothesized regression models were tested using PROCESS macro for SPSS (Hayes, 2018). Monte-Carlo (bootstrapping) approximation was obtained with 5000 bootstrap resamples (the 95% confidence).

Mediation analysis was performed to examine proposed role of living a calling. Calling motivation positively predicted living a calling ($b = .66, SE = .11, p < .001, 95\% CI [.44, .87]$), and living a calling positively predicted life satisfaction ($b = .77, SE = .03, p < .001, 95\% CI [.71, .84]$). Results indicated that whilst the total effect of calling motivation on life satisfaction was significant ($b = .49, SE = .07, p < .001, 95\% CI [.35, .64]$), the direct effect was not ($b = -.01, SE = .11, p > .05, 95\% CI [-.23, .20]$). Living a calling fully mediated the relationship between calling motivation and life satisfaction (Indirect effect $b = .51, SE = .09, 95\% CI [.35, .70]$). Work experience served as a covariate ($b = -.01, SE = .00, p < .01, 95\% CI [-.02, -.01]$). The model explained 19% of the variance in life satisfaction ($R^2 = .19, F_{3,396} = 29.94, p < .001$).

4.3. Moderated mediation model

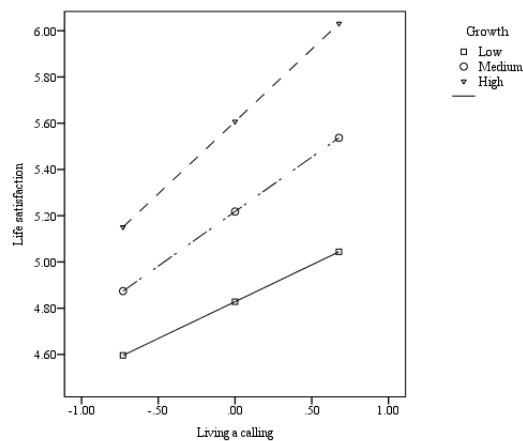
Five moderated mediation models were examined to test the moderated effect of each specific aspects of job satisfactions on the mediation model. In sum, although results indicated significant main effects of living a calling ($b = .47, SE = .11, p < .001, 95\% CI [.25, .69]$), job security ($b = .36, SE = .06, p < .001, [.24, .48]$), salary ($b = .22, SE = .05, p < .001, [.12, .31]$), social ($b = .48, SE = .09, p < .001, [.29, .66]$), supervision ($b = .32, SE = .07, p < .001, [.18, .46]$), and growth ($b = .63, SE = .09, p < .001, [.45, .82]$) on life satisfaction, interaction effects occurred merely between living a calling and security ($b = .15, SE = .06, p < .05, [.07, .28]$) and between calling and growth ($b = .25, SE = .09, p < .01, [.08, .42]$). Only for model containing growth as moderator index of moderated mediation was significant ($b = .19, SE = .09, [.02, .37]$). Final model is presented in Figure 1. Tests of the indirect effect at -1SD ($b = .25, SE = .10, [.05, .45]$), the mean ($b = .36, SE = .09, [.19, .55]$), and +1SD ($b = .48, SE = .11, [.27, .70]$) of the moderating variable were significantly different from zero. In Figure 2, the slopes of interaction showed that the indirect effect was stronger at higher levels of growth. The proposed moderated mediation model explained 27% of the variance in life satisfaction ($R^2 = .27, F_{5,394} = 29.53, p < .001$).

Figure 1. Moderated Mediation of Calling Motivation on Life Satisfaction.



Note. Work experience served as covariate. Growth as interaction term growth x living a calling. Numerical values represent unstandardized path coefficients (b). Total effects in parenthesis. P-values: * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 2. Interaction Effect of Living a Calling and Growth on Life Satisfaction.



5. Discussion

This study proposed a model linking calling motivation with well-being. We hypothesized that living a calling operates as a mediator between calling motivation and life satisfaction. The results confirmed the hypothesis showing that living a calling completely mediated the relationship between calling motivation and life satisfaction.

Further, it was proposed that job characteristics moderate the relationship between living a calling and life satisfaction. Only growth satisfaction in job was significant moderator. Results support the conclusion that the indirect effect of calling motivation on life satisfaction through living a calling depends on conditions for professional growth.

The model including calling motivation and living a calling as mediator explained 19% of satisfaction in life, while the model including also the growth as moderator of the link between living a calling and life satisfaction explained 27% of satisfaction with life. The results empirically confirmed the WCT theory (Duffy et al., 2018) in the context of teacher profession, and the amount of the variance explained suggested the important role of the variables in the models, especially the role of living a calling for the theoretical understanding of job motivation. Namely, although perceiving a calling for being a teacher is a theoretical precondition for investing efforts into teacher profession, i.e., for having a calling motivation, and calling motivation facilitates living a calling, only living a calling will lead person to have higher satisfaction with life, and especially in the context of high professional accomplishments.

The fact that the aspects of job satisfaction, i.e., job security, satisfaction with salary, satisfaction with social contacts in relation to job, the degree of respect and fair treatment received from supervisor, and opportunities for professional growth, were all related to higher life satisfaction, is in line with the spillover model of job and life satisfaction which suggests that satisfaction in one life domain spills over into other domains (Loscocco & Roschelle, 1992). However, this research showed that only growth satisfaction in job moderated the effect of living a calling suggested the key role of this variable for satisfaction with life. Teachers with higher level of living of calling, i.e., those who have professional identity and their job responds with their calling, should be supported by their organizations for additional opportunities for education, growth in career and professional accomplishments.

As per the relationship between job satisfaction and life satisfaction, our model relies on the causal relationship between the two variables in terms that job satisfaction has impact on the life satisfaction (e. g., Rice et al., 1985). However, there is also a perspective that life satisfaction influences job satisfaction (e.g., Judge & Watanabe, 1993), or that the relationship between job satisfaction and life satisfaction is spurious, resulting from common influences from environmental or personality variables (Judge et al., 1998).

This study has some limitations. First, the study is correlational and no causal inferences can be made, and further longitudinal studies are needed. Second, future studies should include core evaluations of personality and self-esteem in the model in order to examine the role of calling motivation and especially living a calling in a broader context of personality differences. Similar studies could be conducted using other samples and different contexts, in order to get broader picture.

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WELL-BEING AND ACADEMIC ACHIEVEMENT OF STUDENTS: THE ROLE OF MINDFULNESS

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Abstract

Besides academic achievement, well-being of students is highly important for both their academic and general life. Although some current research showed the role of mindfulness in general flourishing, the research on the role of mindfulness in academic flow and academic flourishing is limited, while the role of mindfulness for students' achievement is inconclusive. Therefore, this study is focused on understanding the role of specific facets of dispositional mindfulness in students' academic achievement assessed as grade point average and the students' well-being indexed as academic flow, academic flourishing, and general flourishing. The sample consisted of 135 university students at the Faculty of Teacher Education in Zagreb studying preschool education (all female, 22 years on average). Participants completed several questionnaires: the Five-Facet Mindfulness Questionnaire, the Swedish Flow Proneness Questionnaire adapted for assessing academic flow, the Academic Flourishing Scale, and the Flourishing Scale. The correlation analysis showed that of the five facets of mindfulness, only acting with awareness was associated ($r = 0.23, p < 0.01$) with students' higher academic achievement. Regression analyses showed that facets of mindfulness explained 24% of academic flow with describing ($\beta = 0.22, p < 0.05$) and acting with awareness ($\beta = 0.35, p < 0.001$) being significant predictors, 34% of general flourishing with describing ($\beta = 0.21, p < 0.05$), acting with awareness ($\beta = 0.30, p < 0.001$) and non-reactivity to inner experience ($\beta = 0.24, p < 0.001$) being significant predictors and 14% of academic flourishing with acting with awareness ($\beta = 0.34, p < 0.001$) being a significant predictor. The study results contribute to the limited literature on the role of dispositional mindfulness for students' academic achievement as well as elucidate which specific facets of mindfulness are important for well-being of students. In addition to the theoretical contribution, the results also have practical implications suggesting the great value of practising mindfulness for sake of students' academic achievement, optimal functioning, and well-being.

Keywords: *Academic achievement, flourishing, flow, mindfulness, well-being.*

1. Introduction

Mindfulness is a psychological process of purposely self-regulating attention in order to bring a quality of non-judgemental awareness to present-moment experience (Bishop et al., 2004). As a psychological construct mindfulness has been studied both as a state cultivated through meditation practice and as a disposition that naturally varies between individuals (Baer et al., 2006). Previous research found that dispositional mindfulness encompasses specific facets operationalized by Five Facets Mindfulness Questionnaire (FFMQ; Baer et al., 2006): observing (noticing internal and external experiences), describing (labelling internal experiences with words), acting with awareness (focusing attention to present-moment activities), non-judging of inner experience (taking a non-evaluative stance toward thoughts and feelings), and non-reactivity to inner experience (allowing experiences to come and go without reacting in an effort to change them). Higher dispositional mindfulness as assessed by FFMQ is related to better performance in various settings including academic settings (Napora, 2013; Teodorczuk, 2013), but also with higher well-being (Ljubin Golub & Gajšek, 2022b; MacDonald & Baxter, 2017). However, it is unclear which specific facets are the most important in explaining academic-related outcomes such as academic achievement and students' well-being.

Previous studies found positive relationship of overall dispositional mindfulness and academic achievement (e.g., Elphinstone et al., 2019). However, only a few studies investigated the relationship between facets of dispositional mindfulness and academic achievement (McBride & Greeson, 2021; Napora, 2013; Teodorczuk, 2013), but the inconsistency of the results doesn't suffice for any concrete

conclusions. For example, although acting with awareness was most consistently related to students' achievement (Napora, 2013; Teodorczuk, 2013), the study of McBride and Greeson (2021) found that none of the facets were associated with achievement. Hence, the relationship between academic achievement and specific facets of dispositional mindfulness requires more research.

Dispositional mindfulness has also been positively related to various indicators of students' positive functioning and well-being, such as flow (Ljubin Golub & Gajšek, 2022a) and flourishing (e.g., MacDonald & Baxter, 2017). Flow is an optimal and highly enjoyable state of effortless, focused attention and absorption in present-moment activity (Csikszentmihalyi, 1975). Earlier studies found that higher dispositional mindfulness enhances propensity to experience flow in various activities (e.g., Cathcart et al., 2014) including academic activities such as learning, preparing seminars etc. (e.g., Ljubin Golub & Gajšek, 2022a). Recent studies have found that both overall dispositional mindfulness positively relates to academic flow in students majoring in various subjects (Ljubin Golub & Gajšek 2022a), and some of mindfulness specific facets (i.e., describing, acting with awareness and non-reactivity) significantly contribute to academic flow in students majoring in teacher education (Ljubin Golub & Gajšek 2022b). However, the studies on the relationship between academic flow and mindfulness are limited and more research is required.

Flourishing reflects both feeling good and functioning well (Diener et al., 2010). Studies showed that overall dispositional mindfulness (Akin & Akin, 2015) as well as all its facets are positively related to students' flourishing (MacDonald & Baxter, 2017). However, previous studies focused on general flourishing while the research of mindfulness and flourishing in the academic domain (i.e., academic flourishing) is lacking. Only one study indicated positive bivariate association of overall dispositional mindfulness and academic flourishing (Ljubin Golub & Gajšek, 2022a), and one study found bivariate relationship between mindfulness facets (i.e., describing, acting with awareness and non-reactivity) and academic flourishing (Ljubin Golub & Gajšek, 2022b). Taken all together, it seems that dispositional mindfulness has an important and positive role in students' well-being while it is not yet clear which of its facets are most relevant for explaining students' both general and academic flourishing.

2. Objectives

Based on the abovementioned, this study addressed two main research questions. First research question is to examine what specific facets of dispositional mindfulness are most relevant for students' academic achievement. Second research question is to examine what specific facets of dispositional mindfulness are most relevant for students' experiences of academic flow, general flourishing, and academic flourishing.

3. Method

3.1. Participants and procedure

In this exploratory, correlational-type study, the convenience sample consisted of 135 university students (all female, $M = 22.2$ years $SD = 1.47$) majoring in preschool education at the Faculty of Teacher Education in Zagreb. Questionnaires were administered during the regular academic semester. Participants filled in questionnaires anonymously and voluntarily.

3.2. Instruments

The Five-Facets Mindfulness Questionnaire (Baer et al., 2006) was used to assess individual dispositional mindfulness facets: observing (e.g., *I pay attention to how my emotions affect my thoughts and behaviour*), describing (e.g., *I'm good at finding words to describe my feelings*), acting with awareness (e.g., *When I do things, my mind wanders off and I'm easily distracted*), non-judging of inner experience (e.g., *I make judgments about whether my thoughts are good or bad*) and non-reactivity to inner experience (e.g., *I watch my feelings without getting lost in them*). All items were rated on 5-point Likert scale ranging from 1 (*never or very rarely true*) to 5 (*very often or always true*).

Academic Achievement was measured using self-reported grade point average (GPA). Academic grading in Croatia ranges from 1 (*Insufficient*) to 5 (*Excellent*).

Swedish Flow Proneness Questionnaire (Ullén et al., 2012), previously adapted for assessing flow in the academic domain (Ljubin-Golub et al., 2018), was used to assess individual proneness to experience flow in academic activities. All items (e.g., *When you are learning, doing assignments or projects for your studies, how often does it happen that.... e.g., you feel completely concentrated*) were rated on a 5-point Likert type scale ranging from 1 (*never*) to 5 (*every day*).

Academic Flourishing Scale (Rijavec & Ljubin Golub, 2017) was used to assess self-perceived flourishing in the academic domain (e.g., *Studying helps me fulfil my potential*) which are rated on a 7-point Likert type scale ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*).

Flourishing Scale (Diener et al., 2010) was used to assess self-perceived success in important areas such as competence, meaning and purpose in life, positive relationships, (e.g., *I am competent and capable in the activities that are important to me*). All items were rated on 7-point Likert type scale, ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*).

A higher average result on each scale indicates higher level of the variable. All measures used were previously shown to have good psychometric characteristics in Croatian samples (Gračanin et al., 2017; Ljubin-Golub et al., 2018; Rijavec & Ljubin Golub, 2017). In this study all instruments demonstrated adequate reliability of Cronbach alpha type as presented in Table 1.

4. Results

4.1. Descriptive statistics, correlations among the study variables and Cronbach's alpha

Students in this study reported moderate levels of dispositional mindfulness facets and experienced academic flow, very good academic achievement, and moderately high levels of experienced general and academic flourishing. Significant correlations were in the predicted positive directions (Table 1).

Table 1. Descriptive statistics and correlations among the study variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Observing	-	.22*	-.02	-.26**	.27**	-.06	.16	.15	.15
2. Describing		-	.51**	.25**	.19*	.03	.41**	.45**	.28**
3. Acting with awareness			-	.36**	.17	.23**	.44**	.49**	.36**
4. Non-judging				-	.10	.06	.04	.26**	-.00
5. Non-reactivity					-	.08	.22*	.36**	.14
6. GPA						-	.09	.09	.15
7. Academic flow							-	.48**	.45**
8. General flourishing								-	.51**
9. Academic flourishing									-
Theoretical range	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-7	1-7
Cronbach's alpha	.73	.89	.88	.85	.68	n.a.	.83	.88	.89
M	3.48	3.47	3.01	3.06	2.99	4.33	3.35	5.88	5.45
SD	0.58	0.69	0.69	0.70	0.49	0.53	0.61	0.76	1.07

Note. n.a. = not applicable; * $p < .05$; ** $p < .01$.

Four linear regression analyses (Table 2) were conducted with specific facets of dispositional mindfulness as predictors and academic achievement, academic flow, general flourishing and academic flourishing as criteria (Table 2). Proposed set of predictors explained 24% of academic flow ($F = 9.56$, $p < .001$), 34% of general flourishing ($F = 14.78$, $p < .001$), and 14% of academic flourishing ($F = 5.38$, $p < .001$). Significant positive predictors of academic flow were describing and acting with awareness. Acting with awareness was related to the academic flourishing. Describing, acting with awareness, and non-reactivity to inner experience were related to the general flourishing. Acting with awareness was significantly related to the academic achievement but the full regression model was insignificant ($F = 1.80$, $p > .05$).

Table 2. Results of the regression analyses of students' academic achievement and well-being.

Predictors	Criteria			
	GPA	Academic flow	General flourishing	Academic flourishing
	B	β	B	β
Observing	-.06	.04	.06	.09
Describing	-.10	.22*	.21*	.11
Acting with awareness	.27**	.35***	.30***	.34***
Non-judging	-.03	-.14	.09	-.13
Non-reactivity	.07	.12	.24***	.05
R ²	.07	.27***	.36***	.17***
Adj R ²	.03	.24***	.34***	.14***

Note. β = standardized beta coefficients; * $p < .05$; ** $p < .01$; *** $p < .001$.

5. Discussion

This study contributes to understanding of the relationship between the specific facets of dispositional mindfulness and students' academic achievement and well-being.

The results showing that acting with awareness facet was positively related to students' GPA are in line with previous studies (Napora, 2013; Teodorczuk, 2013). Teodorczuk (2013) suggested some mindfulness facets represent tendencies that are more inherently associated with academic achievement than others. For example, acting with awareness represent a tendency to be focused and attentive to present-moment activities and not distracted, worrying, or daydreaming (Baer et al., 2006), which facilitates also students' focus on academic activities and lead them to have better GPA. A previous study found that acting with awareness is associated with higher self-regulation in learning (Napora, 2013). Therefore, it may be suggested that acting with awareness have both direct and indirect link via self-regulation with higher achievement, which requires further investigation.

The results also showed that the facets of mindfulness - describing, acting with awareness and non-reactivity, were bivariately positively related to academic flow which is in line with previous studies linking overall mindfulness (Ljubin Golub & Gajšek, 2022a) and specific facets of mindfulness to academic flow (Ljubin Golub & Gajšek, 2022b) or flow in physical activity (Cathart et al., 2014). It was suggested that the higher tendency to act with awareness could enhance the propensity to experience flow because it provides sustained and focused attention to the activity at hand, while being able to describe and label the inner experiences enable a greater sense of control over the activity (Cathart et al., 2014).

Our results showing no relationship between observing and non-judging facets with academic flow are in line with the theoretical reasoning of Bishop et al. (2004) suggesting that these facets are unique aspects of mindfulness that are not related to flow experience. However, the relationship between non-reactivity and academic flow was not theoretically posed but was found in this study and the previous study (Ljubin Golub & Gajšek, 2022b).

This study showed a positive bivariate relationship between students general flourishing and all but observing facet of dispositional mindfulness. Our results are similar to that of MacDonald and Baxter (2017) study showing that female college students with higher tendencies to acting with awareness describing, non-judging and non-reactivity had higher flourishing. The results of our regression analysis indicated that acting with awareness, describing, and non-reactivity to inner experience facets were the most important mindfulness facets for student to flourish in life, e.g, having successful relationships, higher self-esteem, sense of purpose, and optimism in life.

Our study further found that describing and acting with awareness components were bivariately positively related to academic flourishing, in line with previous study (Ljubin Golub & Gajšek, 2022b). The facet of non-reactivity was found to be related to academic flourishing in the previous study (Ljubin Golub & Gajšek, 2022b), but not in the current study, showing that the relationship between this facet of mindfulness and academic flourishing is inconsistent. Acting with awareness was only significant facet of mindfulness predicting academic flourishing in regression analysis, indicating that the unique contribution of this facet to academic flourishing.

Finally, several limitations of this study should be mentioned. First, the sample comprised of all female university students majoring in preschool education. Therefore, further research should include male students as well as students majoring in other subjects. Second, the study design is cross-sectional thus any conclusions about causality cannot be drawn from the findings. Future longitudinal studies are needed to confirm the results of this study.

6. Conclusion

This study adds to the literature on the role of specific mindfulness facets in higher education. The results showed the key role of acting with awareness for students' academic achievement, academic flow experiences, as well as for general and academic flourishing. Describing and non-reactivity to inner experiences were shown to have the key role for academic flow and general flourishing. Therefore, universities should stress the importance of practising these specific mindfulness tendencies since they may foster students' achievement and well-being both in general and academic setting.

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STUDENTS' ANXIETY ABOUT THE CHANGING WORK ENVIRONMENT AND FUTURE TRENDS

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Abstract

Based on the recent reaction during the introduction of biosensor research equipment to the HR business course at a business school in Germany, the lecturer noticed anxiety among students. The question arose if this anxiety was based on the students' general apprehension towards technology or the perceived lack of knowledge concerning technology. This study seeks to determine the causes for anxiety occurring upon the realization of required skills for future digitized work environments.

With the mixed-method design, quantitative data has been evaluated using questionnaires, which has been supplemented by additional qualitative data using a between-subject design of focus interviews. Respondents were comprised of bachelor and master students at a Bavarian business school, aged 18-40 years. The validity of the data was measured against standard quality criteria for quantitative and qualitative data. Depending on the scenario presented to the "confident" and the "anxious" group of students in both the questionnaire and the focus interviews, confident participants are not perceiving anxiety about a lack of skills in their business education and are confident about their work perspectives. Contrary to that, the anxious group participants are displaying a high level of anxiety and perceive to lack the required skills in future work trends.

Curriculum adjustment needs to take place to reflect the transition into the future of work trends. Similarly, communicating the necessity for change to both groups and the development of required skillsets are imperative to master the transition into a highly digitized work environment.

Keywords: Digitalization, future of work, anxiety, business education, awareness.

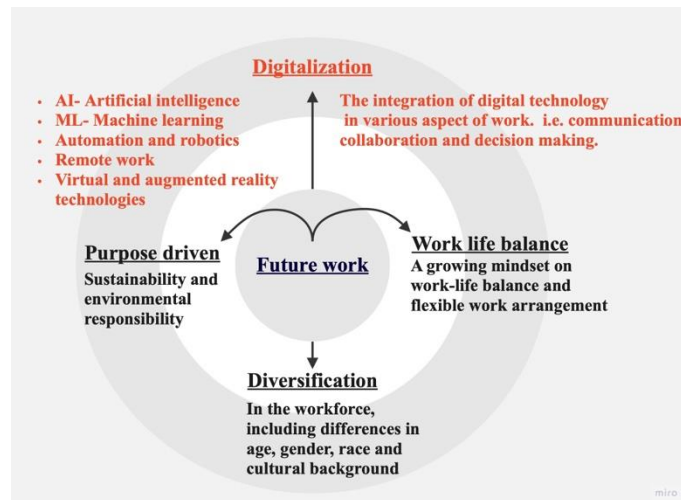
1. Introduction and objectives

The discovery of anxiety concerning how it is going to affect in the future of work happened during a lecture and that was the turning point where the authors got the idea to research the topic for deeper understanding. Anxiety is a common and regular emotion characterized by feelings of tension, worried thoughts, and sometimes physical changes such as increased blood pressure (American Psychological Association, 2023). Referring to that emotional behavior of anxiety, the authors got the same feeling from the students arguing that they have disadvantages when it comes to studying business contrary to the students who study IT programs, digital management, etc.

According to Buffer (2021), McKinsey & Company (2017), Deloitte (2022), Forbes (2021), Harvard Business Review (2018), and the World Economic Forum (2020), artificial intelligence and machine learning will be used more and more in the future to increase production and efficiency; the frequency of remote work and flexible working hours will change the way work is conducted and managed; many industries will continue to embrace virtual and augmented reality technologies, changing the way work is done and how training is conducted; workplace practices and decisions will place an increased emphasis on sustainability and environmental responsibility; collaborative technologies will dramatically shape the future of work, which will encourage cross-functional collaboration and teamwork.

The authors created a visual representation of future work environment (Figure 1: Visual representation of future work environment). Based on the model, this paper is focusing specifically on digitalization (as indicated in the red areas).

Figure 1. Visual representation of future work environment based on Buffer (2021); McKinsey & Company (2017); Deloitte (2022); Forbes, (2021); Harvard Business Review (2018); World Economic Forum (2020).



2. Theory

Anxiety could develop into a medical disorder if a person experiences more than temporary worry and tension on a regular basis (National Institute of Mental Health, 2023). Emotions of unease, worry, fear, or panic characterize a group of mental conditions such as feeling anxious when facing difficulties at work or before making important decisions are known as anxiety disorders (National Library of Medicine, 2023). According to cognitive behavioral therapy, anxiety disorders develop due to interactions between thoughts, emotions, and behaviors depending on the situation (Therapist Aid, 2023). As stated by Bauer, Riedel, Ganz, & Hamann (2019), who cited Bauer (2015) there are three drivers changing work.

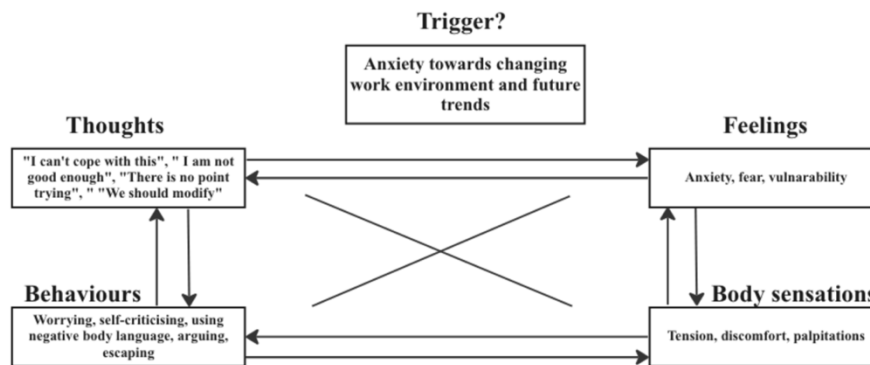
The first is the adoption of people and the environment in which work is done: demographic change, the development of a new awareness of physical and psychological health, as well as the growing social and cultural diversity among employees. The second force for change is made up of changing business models that create new networks for value generation using digital infrastructures. New technologies are the third driver, and they cause significant disruptions in a society that is becoming more digital and networked.

Ideas about what the workplace of the future might look like are already starting to take shape (Bauer, Riedel, Ganz, & Hamann, 2019). In the context of the workplace, technology, climate change, globalization, and demography are identified as important megatrends that will have a significant impact in the coming years, and understanding how these megatrends affect the workforce and society is critical to prepare for the changes to come (Balliester & Elsheikhi, 2018). The cross-sectional formulation is a shared method of exploring problem interactions between a situation, thoughts, emotions, body sensations, and behaviors (PSYCHOLOGYTOOLS, 2023), based on the cross-sectional formulation analysis (see figure 2: cross-sectional formulation during a lecture) the paper discussed how new technology and shifting cultural expectations are causing a change in the kinds of professions and skills that will be in demand, and how this is accelerating the future of work. Transferring this change of accelerated future work demands on the student population, students can become anxious as a result, as they may feel uncertain about their employment prospects and the qualifications they need to succeed in the workplace. Psychological disorientation that might arise from rapid societal and technical change can make students anxious as they are unsure of their place in the workforce of the future and may feel overwhelmed by the pace of change (Toffler, 1970).

Based on the above discussion, following hypotheses can be derived:

- H₁ Fear of digitization is prevalent in the student population*
- H₂ Human obsolescence by Artificial Intelligence (AI) is perceived as a threat*
- H₃ Students feel the need for a more digitized / technological curriculum*

Figure 2. Cross-sectional formulation based on (PSYCHOLOGYTOOLS, 2023).



3. Methodology

This study seeks to determine the causes for anxiety occurring upon the realization of required skills for future digitized work environments. This report also articulates the in-depth relationship between the current course curriculum in the degree program and the future job requirements. In addition to that, the authors also examined the existing curriculum (Ostbayerische Technische Hochschule Amberg-Weiden, 2023) and whether changing or modifying course curricula would prepare properly for future job trends or not. With the mixed-method design, quantitative primary data have been evaluated, which were supplemented by additional primary qualitative data using a between-subject design of focus interviews. The validity of the data has been measured against standard quality criteria for quantitative and qualitative data.

3.1. Data collection

The survey for primary data collection consisted of a questionnaire with 19 items of multiple-choice questions using a paper-pencil survey, which was distributed through various OTH Amberg-Weiden educational groups after conducting the pilot study and adjusting accordingly. Participation in the survey was anonymous. Respondents were comprised of bachelor's and master's students of the OTH, aged 18-40 years. In addition to that, there was a field for the respondents to leave their personal information if they wanted to volunteer in an interview session for a deeper understanding of the topic.

3.2. Quantitative analysis

Due to its explorative nature, descriptive quantitative analysis (McCombes, 2019) was conducted by using SPSS after cleaning the data set and checking for completeness. Here, the authors focused on the distribution of answers on the rating scales leading to a group of respondents into the categories of "confident" and "anxious" students. Here, the participants classified as "confident" did not perceive any anxiety about a lack of skills in their business education and appeared confident concerning their work perspectives. Contrary to the "confident" participants, the "anxious" group participants are displaying a high level of anxiety and seemed to be aware to lack require skills in future work trends leading to anxiety.

3.3. Qualitative analysis

Following the survey, the participants who had voluntarily indicated they would be interested to join in the focus interviews were invited – all according to the classification of belonging to either the "confident" or "anxious" group. The in-depth discussions were summarized and evaluated.

4. Analysis and discussion

The authors distributed the survey questions using the convenience sampling method among their network, specifically in the Technical University Amberg-Weiden. There was a total of 19 questions prepared for the survey where authors typically categorized questions into four parts; 1. Demographic, 2. Anxiety-related, 3. Future skills-based and 4. Perceived appropriateness of the curriculum for future work demands. The answering options for participants were on a four-point Likert scale.

4.1. Data analysis

Among 106 respondents, 64 subjects answered to be male, 39 females, with none of the independent sample t-test being significant between those two groups. Out of the surveyed subjects, the mean age is 23.75 years, with the semester group on average being 4.75 semesters. Considering anxiety and fear all participants were concerned but not highly worried about the technology and digitization being a reality of future workplace which was expressed in a mean of 2.2 out of 4 with 1 being the lowest and 4 being the highest. When comparing the degree program groups of International Business (IB) and Applied Business Psychology (AWP), the means differ significantly ($\mu_{IB}= 2.26$ vs $\mu_{AWP}=2.73$) using a two-sided independent sample t-test ($p=0.018$). Based on the findings, H_1 *Fear of digitization is prevalent in the student population* can be accepted.

All participants are more concerned with human obsolescence and jobs being replaced through digitization, which all have an effect on students' mental health, caused by the mental pressure to adapt to constant technological changes. Also, a significant difference can be seen between IB and AWP students ($p=.041$), with means between 2.56 and 2.96; therefore, H_2 *Human obsolescence by AI is perceived as a threat* can also be accepted.

With an overall mean of 2.8 as far as the students' feeling towards current and future curricula, they are highly aware of how necessary future skills and a curriculum entailing digitized work are. Again, a significant difference between IB and AWP can be seen when it comes to the awareness of needs for future skills ($p=.008$) and the necessity of a curriculum enriched with digitized content ($p=.035$). Students feel it is imperative to supplement current curricula with digital skills in all degree programs with means of 3.0.-3.2, leading to the acceptance of H_3 *Students feel the need for more digitized/ technological curriculum*.

In all instances of significances described, international students (IB) are more aware of the need for a change towards digitized curricula while at the same time being less afraid of what the future might bring.

4.2. Interview analysis

Thirty-six participants shared their information and were willing to be interviewed; however, due to examination periods, time constraints, and short deadlines, only 4 students were part of the focus interviews. The authors prepared a focus interview (Fowler, Jr. & Mangione, 1990) according to classic guidelines and intended to deepen their understanding of the topic. The interviews took place in two different groups. The "anxious" group showed anxiety towards the digitized work culture and the "confident" group showed no fear and more awareness and confidence concerning future work trends. Among those four participants, three were male and one female. The group "anxious" reflected anxiousness in their discussion by specifically mentioning ChatGPT and it being used to replace human workers in particular in fields like HR and Marketing. Additionally, students indicated they do not have very basic troubleshooting or basic software application computer skills, when it comes to the field of Logistics and future demands; therefore, one individual even took a course outside of the university to be up to part with the requirements of the job market. On the other hand, the "future" group is more aware of the future need and fascinated by technological advancement, but both groups felt additional requirements of combining AI, digitized or technological education in the ongoing curricula are needed.

5. Conclusion

The research aimed to identify the anxiety of the students concerning changing future work environments and how changes in the curricula may help to prepare them for the future digitized work environment. Despite the limitations of little participation from students in the interviews, the implications are clear. Students need to have the curriculum adjusted to address the gaps in current education and future requirements. The result clearly suggests that it is not anxiety they are having concerning dealing with technology but not being prepared for the future digitized work environment. If students can have a curriculum with mandatory elements including technological future skills required in business, then they might not need to take extracurricular technical courses such as learning SAP, basic troubleshooting, data analysis, etc. from external institutes. University authorities may think about introducing integrated curricula in business and management education. Furthermore, detailed research is needed also including requirements from the industry and labor market.

Both the quantitative and qualitative analysis indicated that students are anxious and the majority of participants feel of having a mixed curriculum of digitized-based education along with their business education curricula, which will help them prepare better for the future job market. Future research can be conducted in the area of interrelatedness between cultural dimensions and needed change towards digitization. Similarly, even though it can be assumed that the German students' higher fear towards new

technology is based on the cultural dimension of risk aversion, this also would require further analysis and research setup.

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FLIPPED CLASSROOM TRENDS: A SURVEY OF COLLEGE FACULTY IN EUROPE

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Abstract

The emergence of ICT tools in education enhances opportunities for using Flipped Classroom methods in education. Although the use of FC methods presents numerous benefits, its widespread use is hindered by factors like increased efforts necessary for preparing FC activities or lack of recognition and/or support in using this method. In order to prepare FC educational tools (videos and tests) for covering the discipline of Introduction to Psychology, survey-based research was conducted among higher education teachers from six EU countries for identifying FC methods developed by individual teachers and their experience in using these methods. Subjects were asked to provide a description of the flipped classroom methods used, including the source and nature of online activities used, difficulties they experienced, and recommendations for like-minded teachers. In order to document insightful case stories, subjects were asked also if they have success stories to share. Results indicate that although teachers who are aware of the benefits of FC methods and have tried to flip a course do agree with difficulties like lack of time and support in elaborating a flipped course, they have a general positive impression about using the method.

Keywords: *Flipped classroom, teaching social sciences, international survey.*

1. Introduction

One of the methods which received increased attention with the spread of internet is the flipped classroom method. The idea behind a flipped classroom design is that learners can receive the material for the next lesson, video or presentation, less often reading material before in-class educational activities. Learners process and interpret the material at home so that in-class activities can focus on clarification of the questions, or practicing exercises related to the new knowledge. This avoids the need for the teacher to engage in long explanations usually associated with passive student attention. There is more time for a more personal, interactive learning, using methods like panel discussions, case-based presentations, expert led discussions, team-based discussions, role -plays and student presentations, discussions and debates.

Research results indicate that when changing traditional methods to flipped classroom it is expected to improve student's performance (Borchardt & Bozer, 2017) and satisfaction (Albert & Beatty, 2014; Andreychik & Martinez, 2019; Baeppler, Walker, & Driessen, 2014; Missildine, Fountain, Summers, & Gosselin, 2013). Flipped classroom methods increase student's motivation and their self-confidence (Thai, De Wever, & Valcke, 2017), their commitment to learn (Giannakos, Krogstie, & Chrisochoides, 2014; Gilboy, Heinerichs, & Pazzaglia, 2015; Tune, Sturek, & Basile, 2013).

Reviewing 28 studies on flipped classroom O'Flaherty & Phillips (2015) conclude that teachers does not really understand the role of Flipped Classroom steps or the relation between classroom and home activities. Students will be more motivated in doing the homework tasks if they receive feedback and they see the connection with classroom activities. Bethavas, Bridgman, Kornhaber, & Cross (2016) conclude in their review that students will be more motivated if they are explained the advantages and method of Flipped Classroom.

2. Research

To address the challenges of covering a course with flipped classroom materials six European institutes (mentioned in the institutional affiliation of authors) has joined their effort to develop materials for covering a course with flipped classroom materials. The purpose of the “Developing Flipped Methods for Teaching (DFM)” project¹ is to develop educational materials for teaching an entire course of introduction to psychology with a flipped classroom design, with translation to seven European languages. The project aims at overcoming the difficulties of elaborating multiple materials for teaching with flipped classroom design. Teachers from higher and secondary education institutes will have all the necessary materials for teaching the subject of psychology with flipped classroom methodology. The primary target group of the project are academic staff from the domain of psychology, who have a goal to improve their teaching skills and are open to use new technologies. A secondary target group is teachers from secondary education institutes specialized in psychology. Other target groups are pre-service university students from the domain of elementary school teaching, people who interact with children and have the goal to teach them social sciences, people working in adult education, students and people willing to learn social sciences.

In order to obtain a better understanding of higher education teachers’ views on flipped learning (with a special attention on social sciences), a survey was conducted in the DFM project using an online questionnaire. The survey sought to find out who’s flipping, who’s not, and the barriers and benefits to those who flip.

The questionnaire used was developed as part of a previous study initiated by Faculty Focus (an online publication) in 2015 (used with permission) (Faculty Focus research report, 2015). The online questionnaire was translated by DFM project partners to local languages, in order to identify flipped classroom methods used by individual higher-education teachers across seven countries: Bulgaria (BG), Cyprus and Greece (CY+GR), Hungary (HU), Portugal (PT), Romania (RO) and Slovakia (SK). The questionnaire was promoted by calls of completion sent to the main higher education institutes of the seven countries, explaining the goal of the survey and where the data will be used. Subjects were recruited with accidental and snowball sampling - existing subjects were called to recruit more subjects into the sample, so the collected data are not representative for the included countries.

Subjects were asked to provide description of the flipped classroom methods used, including the source and nature of online activities used, difficulties they experienced, and recommendations for like-minded teachers. In order to document insightful case stories, subjects were also asked if they have success stories to share. Data collection was conducted between September, 2021- March, 2022.

3. Results

The first question referred to knowledge about the flipped classroom method; number of scholars completing the questionnaire, as well as the percentage of academic staff not aware about this method is indicated in table 1.

Table 1. Number of subjects and percentage of persons knowing about the flipped classroom method.

Country	N	Yes	No	% No
BG	97	83	14	14
CY+GR	41	28	13	32
HU	69	36	33	48
PT	59	48	11	19
RO	118	38	79	67
SK	95	73	22	23
Total	479	306	172	36

There are significant differences between countries; in Romania, 79% of the 118 respondents have not heard of this method, whereas in Portugal 11% of the subjects have not heard about the flipped classroom method. One-way ANOVA was performed to study the effect of country on percentages of knowing about the flipped classroom method. Results revealed that there was a statistically significant

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difference in scholars knowing about the flipped methods between some of the groups ($F(5, 473)=24,563$, $p=0,000$). Tukey’s HSD Test for multiple comparisons found that the mean value of exam score was significantly different between the countries listed in table 2.

Table 2. Differences between number of academics aware about the flipped class method (post-hoc test).

Countries		Mean Diff.	Sig.	95% C.I.	
HU	PT	,292*	0,002	0,08	0,51
HU	SK	,268*	0,001	0,07	0,46
HU	BG	,365*	0,000	0,17	0,56
HU	RO	-,191*	0,038	-0,38	-0,01
PT	RO	-,483*	0,000	-0,68	-0,29
SK	RO	-,459*	0,000	-0,63	-0,29
BG	RO	-,556*	0,000	-0,72	-0,39
RO	CY and GR	,401*	0,000	0,18	0,62

Before offering our own definition in the survey, respondents were asked to select from a list those descriptions that best align with their understanding and interpretation of the flipped learning model (multiple answers were allowed). Results are indicated in table 3.

Table 3. Which of these definitions aligns with your interpretation of the flipped class?

	BG	GR	PT	SK	HU	RO	Total
Students complete pre-class work individually before class and engage in team work and collaborative learning activities during class.	57%	24%	12%	70%	8%	18%	51%
Lectures are recorded as videos for students to view outside of class time freeing up time in class to engage in discussions and problem solving.	37%	17%	10%	33%	0%	20%	32%
The learning environment is designed to switch the focus away from the instructor and toward the students.	37%	18%	12%	34%	4%	7%	30%
The homework and lectures are reversed. Recorded lectures are viewed outside of class time, and homework is completing during class time.	37%	8%	39%	11%	17%	33%	39%

Prior to formulating the next question, we offered a definition to respondents: “A student-centered learning approach that involves reversing the design of the learning environment, allowing students to engage in activities, apply concepts, and focus on higher level learning outcomes during class time.” Then they were asked if they have ever flipped a class, or their intention to apply this method. Although some scholars were not familiar with the flipped classroom concept, after reading the definition provide in the survey, they indicated that in fact they were using the method before. Results are presented in table 4.

Table 4. Have you tried flipping an activity, class, period, or course? A – Yes; B - I tried it, but I do not plan to do it again; C - No, I don’t intend to flip my class, D - No, but I plan to flip in the next year; E – A+B; F - E%.

Country	N	A	B	C	D	E	F
BG	97	65	0	5	25	65	67,01%
CY+GR	41	28	4	9	41	32	78,05%
HU	69	9	10	10	7	19	27,54%
PT	59	32	3	8	16	35	59,32%
RO	118	23	3	3	10	26	22,03%
SK	95	38	2	24	23	40	42,11%

One-way ANOVA was performed to study the effect of country on percentages of persons who have tried the flipped classroom method. Results revealed that there was a statistically significant difference in academics knowing about the flipped methods between at two groups ($F(5, 351)=2.563$, $p=0,027$). Tukey’s HSD Test for multiple comparisons found that the mean value of exam score was significantly different between Bulgaria and Slovakia ($p = 0.024$, 95% C.I. = [-0,43, -0.01])

Scholars who indicated they are not motivated to flip their class were asked their motivation for not interested in flipping. There were too small country-level groups to present detailed data, the totals are indicated in table 5.

Table 5. We'd like to know more in-formation about why you are not interested in flipping your class or what prevents you from flipping.

	Total	%
Not enough knowledge about flipping	17	3,5
It's a fad that will soon be replaced by the next new thing	9	1,9
Too time consuming	7	1,5
Uncomfortable with the approach	6	1,3
Limited experience with and/or knowledge about technology	2	,4
Lack of recognition and/or support	5	1,0
This type of work is not part of my position/role	2	,4
Total	48	10,0

Respondents who had experience in flipping their classes – even if they indicated an intention to not do it again – were asked details about the flipping experience: how would they rate the experience for them and their students? Total results are presented in tables 6 and 7.

Table 6. How would you rate the experience for you?

	Frequency	%
Positive	170	35,5
Neutral	28	5,8
Negative	13	2,7

Table 7. How would you rate the experience for your students?

	Frequency	Percent
Positive	154	32,2
Neutral	42	8,8
Negative	12	2,5

Respondents also indicated their degree of agreement regarding a range of possible effects on students when applying the flipped classroom method. The most indicated answers were that students become more engaged, and they are more collaborative (see table 8).

Table 8. Indicate the extent to which you agree or disagree with each of the following statements related to students in your flipped course(s) – percentages (Total: 479).

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly
They are more engaged	23,8	17,5	2,9	,2
They are comfortable using the technology	21,7	16,1	5,0	,2
They are more collaborative	17,5	21,5	4,6	,6
They ask more questions	17,3	19,6	5,4	1,0
They see the value of this type of experience	14,8	20,7	7,5	0,4
They build relationships/community	12,5	21,3	7,5	1,9
They adapt to the approach	11,5	26,5	5,6	0,4
Their grades are improving	10,2	25,7	7,5	0,4
They come to class prepared	9	23,2	10,4	0,6
They are resistant	3,3	14,6	17,3	8,1

Respondents were also asked about the perceived benefits they experienced in general when implementint FC methods. The survey offered participants 10 different choices and the option to select multiple answers. Most of the respondents indicated that flipping positively influenced student engagement, and teaching has become more student-centered (see table 9).

Table 9. What were the biggest benefits experienced from flipping? (check all that apply) (Total: 212).

Increased student engagement	75,47%
More learner-centered teaching	63,68%
Improved student learning	50,47%
Improved learning environment	51,42%
I know my students better	40,09%
I am more excited about teaching	20,75%
I look forward to class more often	10,85%
Re-energized a course	19,81%
I have been asked by colleagues to share what I am doing	4,25%
I have produced scholarship related to my flipped teaching	1,42%
I didn't realize any benefits	0,00%

4. Discussion

Although data collection was not representative, the similar methods of recruiting subjects in the surveyed countries makes possible some conclusion regarding country-level differences. First, although the 36% of scholars not knowing about the flipped classroom method can be considered relatively high, there are significant differences between countries (as indicated in table 2). Researchers from countries with low percentage of awareness of flipped methods among scholars working in higher education should consider working on local publications for raising awareness about this method. Moreover, negative experiences regarding the use of flipped methods should be specifically addressed in each country.

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SCHOOL PSYCHOLOGY PRACTICE AS CONFLICTUAL COLLABORATION

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Abstract

Reflecting on the role of the school/educational psychologist has been a core focus in school psychology research, however often considered separately from school professionals' perspectives. In the paper, we aim to transcend the tendency within school psychology research to treat the perspectives of the various parties who collaborate around school problems (e.g. teachers and school psychologists) separately. In continuation of this, we discuss the development of a knowledge hierarchy where technical rationality dominates at the expense of knowledge about everyday school practice. In school psychology, this development is illustrated by the application of a wide array of manuals and models for assessment and consultation where prescribed operational procedures often define the tasks of both school psychologists and school professionals at different stages of the collaboration. We present the concept of conflictual collaboration, grounded in critical psychology and social practice theory (Axel, 2020; Højholt & Kousholt, 2020) in order to encourage exploration of the different collaborating parties' perspectives and their interconnections in a common contradictory matter (to ensure a good school life for all children). Through an analytical focus on the different parties' structural conditions, their situated interplay, and their negotiations of possibilities for action in everyday practice, we hope to contribute to the development of school psychology practices that promote social justice. The paper draw on analyses from a qualitative research project examining interprofessional collaboration to support inclusion in Danish schools, as explored from the perspectives of teachers, pedagogues, school psychologists and educational-psychological consultants.

Keywords: *School psychology, conflictual collaboration, educational psychological services, interprofessional collaboration, knowledge hierarchies.*

1. Introduction

In this paper, we examine the collaboration between professionals from educational-psychological service (EPS) (school psychologists and educational-psychological consultants) and school professionals. Boyle and Lauchlan (2009) state that reflecting on the historical, actual and preferred role of the school psychologist has been a “*perennial obsession*” in school psychology research, while knowledge from the perspective of school professionals is under-represented or even overlooked (Borring, 2021). Furthermore, in the field of school psychology there is a tendency to view the perspectives of the various collaborating parties in isolation from one another. Our analyses of the historical development of school psychology indicate the development of a knowledge hierarchy where technical rationality dominates at the expense of knowledge about everyday school practices experienced from the perspectives of school professionals, parents, and students. We suggest the concept of conflictual collaboration (Axel, 2020; Højholt & Kousholt, 2020) to deal with this challenge of analyzing collaboration from the perspectives of several parties that collaborate from different positions with different tasks in relation to the children's school life. We draw on analyses from a qualitative research project that examine interprofessional collaboration to support inclusion and class communities in Danish schools, as experienced from the perspectives of school and EPS professionals. The analyses includes the different perspectives, interest, and positions of the collaborating parties and address their conditions for collaboration. Through an analytical focus on the different parties' structural conditions, their situated interplay, and their negotiations of possibilities for action in everyday practice, we hope to contribute to the development of school psychology practices that promote social justice. Hage et al. (2018) highlight inclusion, collaboration and equal access as core values of social justice in pursuit of

more democratic and egalitarian societies. We follow this conceptualization of social justice by examining interprofessional collaboration considering how collaborative knowledge making can be organized in ways that promote social justice and democratic principles. The context for the analyses is contemporary tendencies in school psychology in a Danish setting, where there has been a growing interest in more practice-near ways of organizing interprofessional collaboration between school and EPS professionals.

2. Rationalities in EPS services in a historical perspective

Lunt and Major (2000) have analyzed the professionalization of school psychology, arguing that a technical rationality has developed within the field whereby professional activities primarily consist of instrumental problem-solving and where the standardization and instrumentalization of knowledge has been a hallmark of school psychologists' work with school-based assessments. Donald Schön (1983) developed the concept of technical rationality in order to describe how a positivist epistemology dominates professional knowledge and action, where problems in professional practices are solved through predetermined solutions and actions. Schön criticized the paradigm of technical rationality for its instrumentalization of knowledge, ignoring the complexity, uncertainty, instability and conflicts of interest that are embedded in professional practices (Schön & Schön, 1983, p. 40). In school psychology, technical rationality is illustrated by the development of a wide array of manuals and models for assessment and consultation. Many of these models prescribe operational procedures that define the tasks of both school psychologists and school professionals at different stages of the collaboration (Bellinger et al., 2016; Doll et al., 2017; Wong et al., 2018). Consultation approaches and models differ in various ways, but they often use similar terminology and frame interactions between EPS and school professionals as consultant-consultee relations, often with a goal of standardizing and operationalizing collaboration. Glancing back in time shows that the notion of EPS and school professionals as consultants and consultees, respectively, has contributed to a strong emphasis on school psychologists' and consultants' perspectives because of a historical importance afforded to the role and responsibilities of the consultant. In the consultative approach to collaboration, school professionals and parents are often perceived as change agents, responsible for helping and supporting children. In the literature, paradoxically, it is primarily the role of EPS professionals that is scrutinized and detailed. This focus on EPS professionals' perspectives and the development of and adherence to prescribed procedures and models means that subjective experiences and perspectives from the everyday lives of school professionals, parents and children are often excluded from the collaboration or marginalized, attributed only anecdotal significance (Røn Larsen & Højholt, 2019).

Mercieca (2009) and Rasmussen (2010) question the role of school psychologists as experts when collaborating with school professionals. Instead, they advocate for greater attention to professional uncertainty, to improvisation and to a common exploration of the complexities of school problems. Within this framework, differences, contradictions, and inconsistencies are conceived as central aspects of the school. Such an approach encourages interprofessional collaboration that is more open, explorative and emerging – where perspectives from everyday school life as experienced by school professionals, parents and children are included as essential knowledge.

3. A 'practice-near turn' in school psychology

The current functions of school psychologists and EPS consultants in the western world covers a vast array of tasks, such as assessment, therapy, consultation, and interventions that target individual children, teachers, and parents. At the same time, there has been an increased focus on creating inclusive educational environments through consultations and interventions targeting groups of children and teachers, and through whole-school approaches. In Denmark, EPS are under municipal jurisdiction and provide services across mainstream and specialized day care institutions and schools. In Denmark, EPS have two overall objectives: to contribute to the development of inclusive school environments, where as many children as possible can learn and develop within mainstream education; and to provide input and expert knowledge in assessing cases involving individual children and their need for additional resources and support (Undervisningsministeriet, 2000). In the research literature, many challenges are associated with different forms of collaboration between school and EPS professionals, such as criticism of the tendency to focus interventions on a single child in isolation and difficulties in the consultative approach when transferring knowledge from a meeting room and into the classrooms. A consensus seems to have emerged within contemporary research that perceives school psychologists' role in schools as having moved away from primarily conducting psychometric assessments of individual children, instead adopting a more consultation-based approach with a greater focus on school professionals' work with

children (Ahtola & Kiiski-Mäki, 2014; Mendes et al., 2017). While school psychologists have historically been perceived as experts on educational and psychological issues, at the same time, there has been ongoing debate as how best to translate this expertise into relevant support structures for students (Mercieca, 2009; Nolan & Moreland, 2014; Nugent et al., 2014; Waldron & McLeskey, 2010). In Denmark, this historical tendency has brought about a new demand that school psychologists embrace a more ‘practice-near’ position, in the sense of developing more relevant interventions in close collaboration with school professionals. This entails moving the collaboration between school and EPS professionals out of traditional assessment and consultation settings and into classrooms. Such collaboration involves increased focus on children’s communities instead of individual children, and on developing expertise in close collaboration with school professionals (Borring, 2021). A similar development can be seen outside Denmark, where various *multi-tiered systems of support* (MTSS) such as *response to intervention* (RTI) have moved collaboration between school and EPS professionals closer to the classrooms with a focus on prevention and early intervention (Eagle et al., 2015; Little et al., 2017; Newman et al., 2018). However, as the analysis will illustrate the practice-near approach to collaboration and the ambition to get closer to the everyday life of school is in Denmark affiliated with dilemmas.

4. Conflictual collaboration

We have found that the concept of *conflictual collaboration*, grounded in critical psychology and social practice theory (Axel, 2020; Højholt & Kousholt, 2020), can help transcend the tendency in school psychology to view the perspectives of the various collaborating parties in isolation from one another and the development of a knowledge hierarchy where technical rationality dominates at the expense of knowledge about everyday school life. This conceptualization of collaboration emphasizes that, when collaborating, people must deal with different perspectives on, interests in and different knowledge on what the collaboration is about, and there is therefore always a risk of conflict in collaboration (Axel, 2011; Højholt & Kousholt, 2020). People collaborate to address a range of societal problems and issues in social practices, which can be conceptualized as common matters. People are connected through the common matters in which they participate. The common matter at the core of interprofessional collaboration between school and EPS professionals can be characterized as the creation of an inclusive environment where all children can learn, develop and thrive. The work related to this common matter is multifaceted, and contradictory (Axel, 2020; Højholt & Kousholt, 2020). As a complex societal practice, school is comprised of many aspects—learning, development, assessment, collaboration, inclusion, preparing children for participation in society etc.—that school professionals must address and somehow integrate to make everyday school life work (Højholt & Kousholt, 2018). Exploring interprofessional collaboration from this perspective involves exploring the different perspectives of the collaborating parties and their concrete conditions and reasons for taking part in the collaboration in specific ways.

The following analyses is based on a qualitative research project conducted by the first author (CGB) that examines interprofessional collaboration between school and EPS professionals in Danish public schools. In this project, various collaborations are explored from the perspectives of both school and EPS professionals through participant observations and interviews. During one year of fieldwork, CGB observed EPS professionals in their work with assessment, consultation and practice-near collaboration across different schools and daycare institutions, as well as observing teachers’ work, encompassing teaching, preparation of lessons, various meetings, breaks, in-service training and professional development activities and different forms of collaboration with EPS professionals.

5. School problems from different perspectives

The concept of conflictual collaboration draws analytical attention to school problems conceived as a complex common matter where children, parents, school professionals and managers often have very different perspectives on how to understand the problems and in different ways have struggled for a long period to find solutions. Seen from the perspective of the EPS professionals, the practice-near form of collaboration is an ambition to work in more contextually grounded ways with interventions (working with children’s communities in the classroom instead of assessing and testing individual children). The new form of collaboration is also an ambition to be more relevant for the school professionals. Working in the classroom is for many EPS-professional a new form of collaboration and it is therefore affiliated with professional uncertainty. Several of the EPS-professionals talks about their insecurity and dilemmas of ‘showing up empty-handed’ (because they do not have a test or predefined tasks). The practice-near collaboration therefor often takes the form where the EPS-professionals act as external providers on different models and methods that are brought into the classroom (e.g. co-teaching or methods for conflict resolution). Another reason for this is that such programs or models are endorsed and promoted by the

municipal strategy about inclusion in schools. Despite the intention of the collaboration to be closer to and more relevant for the school professionals, in several cases conflicts arise between the school and EPS professionals. Often the school professionals highlight the teachers' resistance to the interventions as barriers in the collaboration. From the teacher's perspectives, based on interviews and observations, the reason for their apparent resistance can, however, be understood in the light of their working conditions and the history of the school problems, that EPS professional are brought in to contribute to solve. During observations and in interviews the teachers report e.g. how they in a class have made various efforts to solve children's conflicts by working with strengthen children's communities in and outside the classroom. This includes talking to the children about diversity, and about conflict resolutions in class and during breaks. The teachers organize group play during breaks to ensure every child has someone to play with, and they arrange different role-play exercises in the classroom that focus on conflicts in the children's communities. From the teachers' perspective, the conflicts between the children are not restricted to the classroom where the collaboration is located. Furthermore, the teachers describe that a part of the problem are frustrated parents who in different ways try to engage in and handle the school problems, e.g., arranging play groups or stay at the school (outside the classroom) because some children refused to go to school unless their parents joined them. The parent also had disputes on social media about which children was to blame for the school problems. The teachers described how the conflicts between children was linked to transitions to or the time in the after-school center.

Knowledge from the teachers' perspective illustrate how the conflicts in the classroom are connected to different aspects outside the class room and involves other contexts and situations that influence everyday school practices. However, in the cases CGB followed, this type of knowledge about school problems experienced from the school professionals was not brought into the collaboration.

The above elaboration of different perspectives on school problems provides a broader insight in what is at stake in conflicts and how they are connected to other situations, concerns and perspectives. Exploring the social history of conflicts (Schwartz, 2019) draws attention to how conflicts in school are connected to the contradictory conditions of everyday school life. However, the collaboration between EPS and school professionals often does not explore or address the social history of the conflicts. Instead, the collaboration become focused on implementing the program in the 'correct way'. Despite the intention of establishing a more equal and exploratory collaboration, this positioning of the EPS professionals as experts that provide an intervention based on ideas of technical rationality seem to be reproduced. During the various meetings the teachers did not voice their knowledge from everyday life regarding the pervasiveness of the conflicts and their previous experience in trying to find solutions. Such knowledge could have introduced new perspectives on the complexity of the conflicts and how to organize collaboration in response.

6. Conclusion

With this analysis, we hope to have indicated how working with a conceptualization of conflictual collaboration in relation to common contradictory matters can draw attention to the complex cross-contextual social history of conflicts. In continuation hereof, concepts such as 'professional uncertainty' (Mercieca, 2009) and 'improvisation' (Rasmussen, 2010) in common explorations of the complexities of school problems can enable perspectives on interprofessional that is more open and explorative where perspectives from everyday school life as experienced by school professionals as well as parents and children are included. Such explorative collaborative processes can, in turn, contribute to more comprehensive and contextualized understandings of what school problems are about where different perspectives and disagreements are explored and analyzed as contradictory aspects of the social practice in which school and EPS professionals collaborate. We hope to have illustrated how the concept of conflictual collaboration opens for such analysis of interprofessional collaboration and for exploration of social conflicts from different perspectives and in connection with the contradictory conditions of everyday school life. We see a potential for such analysis to contribute to a democratization of knowledge and, in that respect, to a movement towards interprofessional collaboration that promotes social justice.

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THE IMPACT OF A NATURE-BASED RETREAT ON THE SELF-CARE AND PEER SUPPORT INTENTIONS OF STUDENTS ENROLLED ON POST GRADUATE TRAINING IN EDUCATIONAL AND CHILD PSYCHOLOGY IN IRELAND: A PILOT STUDY

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Abstract

Time spent in nature is purported to impact positively on nature connection and psychological restoration. This paper reports on the impact of a nature-based retreat on the peer support and self-care intentions of a cohort of educational psychologists in training in Ireland. Opportunities for the group to meet in person were significantly curtailed by the Covid-19 pandemic. The nature-based retreat facilitated re-engagement as a group in a socially -distanced manner. The retreat took place at a location in the Mid-West of Ireland in early Autumn. The habitat included flora and fauna, a river, a pond, a woodland area comprised of re-forested and re-wilded woodland and natural buildings. The retreat was comprised of individual, pair and group tasks, including nature connection activities. Following the retreat, participants ($n=10$) were invited to complete a survey to access their views on the impact of the retreat on their intentions with regard to self-care and peer support. Findings from the survey indicated that participants were positive about the experience of the group, nature-based retreat in terms of self-care and peer support prioritization and intentions. A conceptual framework for understanding nature-based self-care is proposed. Directions for future research are considered, particularly in the domains of professional training in educational psychology, self-care and peer support practices, and the potential of nature-based settings in other areas of EP practice.

Keywords: *Educational psychology, nature connection, self-care, peer support.*

1. Introduction

In order to qualify as an Educational and Child Psychologist in Ireland, trainees are required to complete a three-year Professional Doctorate programme, accredited by the Psychological Society of Ireland (PSI). Programmes are typically comprised of research, academic and placement components. The Psychological Society of Ireland Code of Professional Ethics (2019) outlines four over-arching ethical principles that guide professional practice; Respect for the rights and dignity of the person, Competence, Responsibility and Integrity. The ethical principle of Integrity emphasises the importance of recognising professional limitations, and states that psychologists should:

4.1.1 Engage in self-care activities which help to avoid conditions (for example, burnout, addictions) which could result in impaired judgement and interfere with their ability to benefit and not harm others.

4.1.2 Seek emotional support and/or supervision from colleagues when feeling stressed or vulnerable due to professional dilemmas (PSI, 2019).

The two standards outlined above highlight an ethical imperative for psychologists to prioritise self-care and peer support. These standards are endorsed in other studies that explore wellbeing and self-care for psychologists (Collins & Cassill, 2021).

2. Self-care in professional psychology training

Butler et al (2019) define self-care in line with the *Oxford Living Dictionary* definition as ‘the practice of taking action to preserve or improve one’s own health, well-being and happiness, in particular during periods of stress’ (p. 107). They propose six key domains of self-care; Physical, Professional/Workplace, Relationship, Emotional, Psychological and Spiritual. There is an emerging

recognition of the importance of self-care for psychologists in training, with a burgeoning body of research exploring how to embed self-care at an early stage of professional psychology training to instill life-long self-care practices, to mitigate against burn-out and to promote psychologist retention in the field. In the context of clinical psychology training, Pakenham & Stafford-Brown (2012) identified a range of stressors associated with training including the multiple demands associated with academic, research and practice-based requirements of training and reported positively on the impact of Acceptance and Commitment Therapy (ACT) training as an intervention (Pakenham, 2017). Mindfulness-based strategies have also been found to improve the self-care of clinical psychology trainees. Pintado (2019) reported on the impact of an eight-week mindfulness programme with a small sample of clinical psychology trainees ($n=8$). Participants reported changes in awareness of physical sensations, well-being, sensory perception and integration. Increased bodily awareness of unpleasant sensations and self-compassion, synchronicity with others and increased self-compassion were also reported.

3. Self-care in educational and school psychology

In a US-based study exploring burnout for professional school psychologists, Schilling et al (2018) found that 90% of participants reported feelings of burnout at some point in their role as a school psychologist. In a review of the literature, Flood et al (2023) found that the main self-care strategies identified for school psychologists were mindfulness-based (e.g. yoga, deep breathing) and/or didactic instruction (e.g. goal-setting, positive self-talk). The authors concluded that more research on self-care for school psychologists was needed, with a particular focus on effective practices and interventions to promote self-care. This review focused on practicing school psychologists. The multiple demands outlined by Pakenham and colleagues for Clinical Psychology trainees are also a feature of Educational and Child Psychology training, while financial stress has been identified as an additional stressor for EPs in training in some contexts, given variation in the funding supports available (Myers, 2012). In the context of educational and counseling psychology training, O'Halloran & O'Halloran (2001) underlined the importance of self-care for students as well as instructors, particularly in relation to emotionally difficult course material. Within the spiritual domain, O'Halloran & O'Halloran highlighted connecting with nature as a potentially vital self-care strategy. More recently, Butler et al (2019) made a distinction between faith-based and secular spirituality, and posited a role for connecting with nature within the secular spiritual domain.

4. Nature connection

A number of studies have established the benefits of time in nature, and connection to nature for physical and psychological wellbeing. There are a number of theories put forward for the impact of nature connection on wellbeing. The biophilia hypothesis (Wilson, 1984) contends that humans have evolved with nature, and have an innate drive to connect with the natural world. Attention Restoration Theory (Kaplan, 1995) posits that nature restores cognitive resources such as attention and concentration via activation of involuntary attention, allowing effortful, directed attention to recover. The Stress Reduction hypothesis proposes that time spent in nature activates a stress lowering physiological response (APA, 2020). This hypothesis is supported by studies measuring the physiological responses of participants (heart rate, blood pressure, cortisol levels) in studies of stress and nature (Bakir-Demir et al, 2021; Ulrich et al. 1991). More recently, Grahn et al (2021) proposed the Calm and Connection Theory, hypothesizing that experiences in nature activate emotional and psychophysiological reactions, including the oxytocinergic system.

5. The current study

Additional challenges to self-care and peer support emerged during the Covid-19 pandemic, with intermittent periods of lockdown and a pivot to online lectures and research activity, remote placement experiences and imposed isolation from peers. In response to these challenges, participants were invited to attend an afternoon nature-based retreat to supplement the programme structures in place to promote a culture of self-care. This study outlines the development and preliminary evaluation of a nature-based retreat, carried out with a cohort of post-graduate students in educational and child psychology in the Mid-West region of Ireland with the goal of prioritising self-care and peer support. This pilot study aimed to explore the impact of a nature-based retreat on the self-care and peer support intentions of a group of educational and child psychologists in training. Self-care incorporates ideas of mental and physical wellness. To date, studies on self-care in professional psychology training have placed a greater focus on psychological strategies (ACT, mindfulness). The nature connection literature has established the benefits of time in nature for physical and psychological wellbeing (Barragan-Jason et al, 2023). Therefore, a group,

nature-based retreat was considered worthy of exploration as a potential approach to addressing self-care needs in a more holistic way.

This study is framed within the ‘people and nature’ paradigm, which espouses a symbiotic relationship between humans and nature (Mace, 2014). In addition, the nature connection literature makes a distinction between ‘green’ and blue’ spaces. Green spaces are environments characterised by the presence of green foliage, grass and trees. Blue spaces are environments characterised by the presence of water features (Loureiro et al, 2021). This study took place in an environment containing both green (trees, grass and foliage) and blue spaces (river and pond). The retreat took place in the Mid-West of Ireland. The habitat included a river, a pond, a woodland area comprised of re-forested and re-wilded woodland. Wildlife included birdlife, bees, donkeys, chickens and dogs. The buildings were natural buildings, constructed using cob building materials and techniques.

6. Procedure

The retreat was hosted by a member of the programme team and two colleagues. The group was met by a member of the programme team, provided with a brief orientation to the site and accompanied to a riverside seating area to meet with their peers. Participants were requested to put away their mobile phones upon arrival. At the riverside, the group was informed that the focus for the day was self-care and peer support. Participants were asked to note a sit-spot to which they could return after the silent walk and group work. Participants then proceeded on a silent walk to a woodland camp area under a parachute. The group based itself here for pair and group activities. Trainees were invited to discuss their experiences during the Covid-19 pandemic. They then engaged in pair-work to discuss self-care strategies and were encouraged to ‘walk-and-talk’ during this activity. Self-care strategies were then shared in the main group. Small group discussion was then facilitated with a focus on peer support, followed by a full-group discussion on how the group could support each other in the coming academic year. Trainees then went to their selected sit spot where they took ten minutes for independent reflection, and to consider a personal commitment to self-care and peer support for the coming year. The participants then re-convened in the onsite cob cottage for refreshments. Finally, the group returned to the riverside to close the retreat. Following the retreat, consent was sought from attendees to participate in an evaluation of the pilot via a short survey.

7. Study measure

Participants completed a 7-item survey to assess their views on the impact of the nature-based retreat on their self-care and peer support prioritisation and intentions. Four survey questions (Qs 1,2,4 &5) were posed on a 5-point likert scale. Three open-ended questions (Qs 3,6 &7) were also posed to allow participants to elaborate on their responses (See Appendix 1 for survey questions).

8. Results

The survey findings are discussed under the headings of self-care and peer support. Likert scale questions were analysed descriptively, while open-ended questions were organised using a deductive thematic approach, informed by the six self-care domains outlined by Butler et al (2019), with a seventh theme labelled ‘intentions’. The response rate was 100%, with all 10 participants responding to the survey. The seven themes were labelled: Physical, Professional/ Workplace, Relationship/ Peer support, Emotional, Psychological, Spiritual and Intentions. An example of a response under the theme of ‘Psychological’ was:

‘I really enjoyed the silent walk, not using phones, and the overall setting. I actually found it quite restorative. Would definitely do it again’.

9. Self-care

60% of participants rated the retreat as extremely effective for the prioritisation of self-care, with a further 30% of likert ratings at 4/5, and one respondent neutral (3/5) on this point. A question on the likelihood of participants to prioritise self-care in the coming academic year following the retreat suggested that 40% rated it extremely likely, 50% rated it as very likely (4/5) and one respondent neutral (3/5). Participants were then asked about the impact of the retreat on how they thought about self-care. Participants appreciated the nature-based setting and the physical activity involved. Responses indicated self-care benefits across all six domains of self-care identified by Butler et al (2019). Enhanced intentions to prioritise self-care were communicated. Participants also noted that the nature-based setting facilitated the opportunity to reflect, and commented positively on the silence, the sounds of nature and the absence of phones.

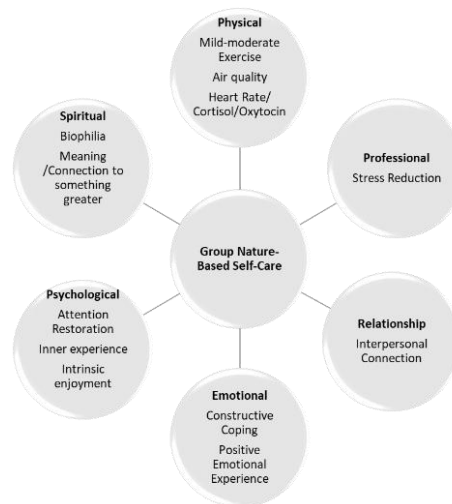
10. Peer support

When asked about the impact of the retreat on the prioritisation of peer support, 60% of participants rated the retreat as extremely effective. 10% rated it very effective (4/5) with 30% neutral on this question (3/5). Only 1 participant considered it ‘extremely likely’ that they would prioritise peer support in the coming academic year, while 60% rated it as very likely (4/5), with 30% neutral on this point. Responses to open ended questions on peer support indicated a degree of reflection on peer engagement as a group, with mixed views expressed. The realisation that concerns, stresses and worries related to EP training were shared was valued by more than one participant. Some participants identified an opportunity for a follow-up to strengthen peer engagement as a group who are going through the shared experience of EP training.

11. Discussion and conclusions

Overall, the findings suggest that participants were positive about the experience of the group, nature-based retreat in terms of self-care and peer support. The descriptive statistics indicated a tentative trend towards participants’ anticipation of challenges in maintaining self-care and peer support practices. Deductive thematic analysis indicated that the group, nature-based format has the potential to impact on a broader range of self-care domains than physical and psychological, and therefore might offer enhanced, or indeed additive benefits when implemented alongside classroom-based psychological interventions such as ACT and mindfulness. Figure 1 illustrates a conceptual framework to structure our understanding of the potential benefits of group format, nature-based self-care initiatives.

Figure 1. Conceptual Framework for Group, Nature-based Self-Care for Psychologists in Training.



The limitations of this small-scale pilot study are noted and future studies are needed to further explore the potential of nature-based self-care interventions for professional EPs and EPs in training. The pattern of responses also indicates that maintenance of self-care and peer support prioritisation and intentions requires further study. The proposed framework in Figure 1 may provide a structure within which to explore this area in future research. Future studies should also consider accessibility so that any nature-based self-care retreat is as accessible as possible to all participants. Ziede and Norcross (2020) contend that work is needed in terms of the ‘psychological healthiness’ of our professional psychology training programmes, and suggest a number of evidence-informed strategies to improve training and to support a paradigmatic shift towards ‘life-affirming, health-oriented’ training experiences. The current study indicates the potential for nature-based self-care in educational psychology training, and for professionals in the field, as part of a shift towards a culture of life-affirming, health-oriented approaches to training and practice in educational psychology.

Acknowledgments

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Appendix 1. Nature-Retreat Survey Questions

How effective did you find the nature-based retreat in terms of the prioritisation of self-care?
How would you rate the likelihood that you will prioritise self-care in the coming academic year following the nature-based retreat?
Please describe any impact of the nature-based environment on how you thought about self-care
How effective did you find the nature-based retreat in terms of prioritising peer support?
How would you rate the likelihood that you will prioritise peer support in the coming academic year following the nature-based retreat?
Please describe any impact of the nature-based environment on how you thought about peer support
Please add any other comments you may have on the nature-based retreat, including your thoughts on any particularly effective aspects of the day and anything that could be improved. In your response. You can include feedback on activities including the silent walk, sit-spot, full group/small-group discussion

PROMOTING THE DEVELOPMENT OF TEACHERS' AND STUDENTS' METACOGNITIVE AND THEORY OF MIND (ToM) SKILLS

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Abstract

A research network with academics from five European countries (Cyprus, Greece, Hungary, Portugal and Romania) developed an Erasmus+ successful educational program funded by IDEP (the Foundation for the Management of European Programs for Lifelong Learning), in order to conduct research and a well-designed educational Intervention on Metacognition. The research project aims to enhance teachers' and students' metacognitive, epistemic and Theory-of-Mind (ToM) skills. Such key thinking skills are part of students' higher cognitive & metacognitive skills, which aim to help them 'learn how to learn' for life, but also to correctly interpret human behaviour in order for people to co-exist functionally and harmoniously. This presentation focuses on the specific intervention program in which a Participatory Action Research takes place and a 12- sessions' training program is carried out in 5 participant countries and pre- and post- tests are delivered to all participating teachers and their students. Examples of the tools as well as the content of the 12 training sessions are presented in this paper and dissemination activities are discussed.

Keywords: Metacognition, theory-of-mind, epistemic beliefs, educational intervention.

1. The Erasmus project aims and objectives

The basic aim of this research program is to raise educators and students' awareness of the value of metacognitive skills and further develop and promote students' metacognitive abilities at both primary and secondary educational level, through a corresponding training of teachers.

Thus, the main intended achievement of the PRO-ME-ToM project is to provide a well-elaborated and tested developmental program for improving teachers' and students' metacognitive abilities, a crucial skill for a meaningful participation in the information society (Papaleontiou-Louca, 2008).

More specifically, the project aims to enhance teachers' self-awareness, self-monitoring and self-evaluation, as well as to promote students' metacognitive skills, epistemic beliefs as well as Theory-of-Mind (ToM) skills.

2. Design of the tools

Initially we have reviewed the international literature in order to find an appropriate instrument for assessing metacognitive awareness for teachers and students. In case that we find an appropriate instrument that satisfies the need of the project we will translate the instruments and adopt them. Alternatively, we will develop instruments for assessing metacognitive awareness, which will be validated. The instruments will be pilot-tested in the participating countries, using individual interviews, and revised if it's necessary. A coding scheme has also been developed for coding the instruments and all tests have been translated to the participant countries' languages.

3. The structure and duration of the intervention

Based on successful evidence-based practices reported in the literature, we have designed a training program aiming to support the development of teachers' metacognitive awareness and support them in promoting students' metacognitive skills during their everyday educational practice. We have also designed activities and collected material to be used in the training sessions, which are planned to take place over 12, 90 minutes-sessions. The training will involve presentation and discussion of effective

practices, from cutting-edge research in the field, discussion of case studies promoting metacognitive awareness in different domains and sharing of effective practices among teachers who will participate.

As happened with the evaluation tools, the content and material of the training programme has been also translated into the languages of the participating countries.

The training programme which is now running, takes place in 12 sessions on a weekly, mainly, basis. Four training programmes are running in total of five countries (Cyprus & Greece are combined) and the training sessions take place virtually, to encourage participation of teachers from different regions, especially from regions with limited opportunities for teachers to engage in programmes for professional development.

Before and after each programme participants' metacognitive awareness and skills have been assessed in order to determine the effectiveness of the programme on promoting teachers' and students' metacognitive awareness and skills.

4. The content of the intervention

4.1. The rationale of the intervention

Teachers first have been informed about the evidence from previous interventions in students' in order to better understand the logic of the present intervention program. Many interventions have been applied in school settings aimed at fostering metacognitive knowledge, strategies, and skills in various knowledge domains, but the literature does not seem to refer to an Intervention of this complexity, involving both teachers and students (of both elementary and secondary educational levels) and promoting simultaneously metacognitive, epistemic and ToM skills.

4.2. Specific objectives of the intervention

The main aims and objectives of the specific Intervention

- To develop teachers' knowledge and skills in order to improve students' metacognitive thinking in the elementary and secondary education

- To develop and implement an Action research seminar for teachers' participatory development so that be able to develop their students' metacognitive skills.

- To support teachers and students to transfer their self-regulating metacognitive knowledge and skills to new tasks.

- To support teachers and students to develop metacognitive skills and strategies for reading comprehension and writing in the mother tongue and mathematics.

- To explore the actual results of teachers and students' metacognitive development through pre-test, post –test and follow up research design.

- To broadly disseminate the participatory processes, activities and results in the national context of the partners and internationally so that to multiply the target group in other schools and countries, through a specifically developed web- page, conferences and publications.

- To communicate broadly the project's objectives, processes and results through an interactive online platform aiming at both providing continuous support of students and teachers' participating in the project and advising teachers who want to implement in their other schools or countries the project.

The concrete objectives and results from this project are to:

- a) Assess teachers' and students' metacognitive awareness prior- and after- a teachers' training program.

- b) Develop a 3- months' training program for educators of both levels

- c) Conduct a follow up evaluation on teachers' and students' Metacognitive & ToM skills

- d) Develop a Teachers' Educational Booklet (with helpful activities)

4.3. Action research: the concept and methodology

Action Research is defined as a participatory inductive procedure of teachers' professional development and its cycles of Development (Planning, Teaching, Evaluation-Reflection, Re-planning, Re-Action) are described. Helpful instruments, such as Reflecting Diaries, Observation, Evaluation-Reflection, Feedback, Re-action are discussed and an inductive analysis of the Diaries based on the Grounded Theory (Glaser & Strauss, 1967) is promoted. Moreover, an analysis of the teachers' diaries' is developed, including comparative analysis from lesson to lesson, coding, categories of change, etc. and finally, theory is enhanced by the teachers' role as a mentor/critical friend (Koutselini, 2020).

4.4. The concept and importance of metacognition

After a brief introduction to the concept of Metacognition, we analyze and discuss its importance in educational settings. We emphasize one's ability to reflect upon, understand, and control one's own learning. We explain the aspects of Metacognition and we refer to the term as 'cognition about cognition', and as a second-order, meta-representational process. We make distinction among the three facets of Metacognition, i.e., metacognitive knowledge, metacognitive experiences, and metacognitive control and we further analyze these terms by referring to the 3 types of Metacognitive Knowledge (i.e. a) Declarative knowledge, b. Procedural knowledge and c) Conditional knowledge), the types of Metacognitive experiences (including feelings and judgments about a cognitive task (Efklides, 2008; Efklides et al., 2018)] and we discuss about metacognitive control as a way of regulating cognition) including metacognitive strategies such as planning, monitoring, control and evaluation of the learning process.

4.5. The instruction of metacognition

In this section the emphasis is on practical ways in teaching metacognitive skills in classroom. We therefore aim in raising teachers' awareness about various metacognitive strategies and how these can be taught in ways that students' metacognitive skills can be enhanced. Such ways can be either (i) indirectly through experience, (ii) directly through instruction and / or (iii) elicited through practice (e.g., collaborative learning projects often require each student to contribute one part of the overall project).

Two basic modes of teaching metacognition referred in literature include:

(a) Explicitly teach students what is metacognition, how important is to "drive" their minds. So, teachers can use this metaphor from Flemming (2014), by asking their students to describe the benefits and supply examples of driving their brains well (sometimes we might need to put on the brakes e.g., by reviewing a reading passage to make sure that we understand it or to keep our brains moving in the correct lane and along best route toward achieving our goals).

(b) Being a model of "thinking" for the students in various tasks (e.g., thinking aloud the solution process of a problem, or of writing a summary, or making mistakes purposefully, or evaluating your work at the end and so on...). In such a way the process of working in intellectual tasks is "demystified".

Also, teachers discuss how they can encourage their students to:

(i) build a knowledge base with all three kinds of metacognitive knowledge:

Declarative knowledge (I know that I have a repertoire of strategies)

Procedural Knowledge (I know how to apply a strategy) and

Conditional knowledge of the available strategies (I know why and when I should apply each strategy).

and

(ii) give students tasks to practice and apply the new strategies and receive informative feedback (about the learning gains)

One of the basic topics of discussion within the aforementioned programme refers to ways in which metacognitive strategies are implemented in everyday practices. Therefore, in this Intervention Programme emphasis is given in raising teachers' awareness about the importance of metacognitive control processes, namely:

(i) Planning (making predictions before reading, selection of appropriate strategies, allocation of time and resources).

(ii) Monitoring (on-line awareness about the processing of the task and the distance from the learning goal, periodic self-testing while learning)

(iii) Evaluation (appraising the efficiency of one's learning, re-evaluating one's goals-closely related to planning and monitoring).

Since such metacognitive skills take time to be learned and effectively used in various school subjects, it seems necessary that a relevant training ideally should start at quite young ages and be continued in secondary education to fully flourish.

(Metallidou & Moraitou, 2021).

4.6. Epistemic beliefs

The second main content of this Intervention focuses on 'Epistemic beliefs', that is on beliefs about knowing and knowledge. We discuss how a student's epistemic beliefs are related with his/her academic performance and many cognitive tasks (e.g. multiple-text comprehension and engagement in critical thinking).

Emphasis is especially given on how do epistemic beliefs develop. It seems that the developmental task that underlies the achievement of mature epistemic understanding is the coordination of the subjective and objective dimensions of knowing (Hofer & Pintrich, 1997; Kuhn et al., 2000; Jordanou, 2016). Initially, the objective dimension dominates, to the exclusion of subjectivity. Discussion also refers on how does a person's epistemic beliefs influence their motivation to engage in critical thinking and therefore in their learning and decision-making process.

According to Kuhn et al., 2000 "Someone at the absolutist (as well as the preabsolutist realist) level sees knowledge as an objective entity, as located in the external world and knowable with certainty. In what we take to be a key event in the development of epistemological thought, the multiplist relocates the source of knowledge from the known object to the knowing subject, hence becoming aware of the uncertain, subjective nature of knowing. This awareness comes to assume such proportions, however, that it overpowers and obliterates any objective standard that could serve as a basis for comparison or evaluation of conflicting claims. Because claims are subjective opinions freely chosen by their holders and everyone has a right to their opinion, all opinions are equally right. The evaluativist reintegrates the objective dimension of knowing, by acknowledging uncertainty without forsaking evaluation. Thus, two people can both have legitimate positions and can both "be right" but one position can have more merit ("be more right") than the other to the extent that position is better supported by argument and evidence." (Kuhn et al., 2000; p. 2-3)

4.7. Theory-of-mind skills

The third basic component of the Intervention's content refers to the development and promotion of ToM skills including questions such as:

1. What is theory of mind? Why is theory of mind important?

Teachers will be introduced to: (a) the meaning / definition of ToM and (b) its importance for social interaction and communication. Its importance will also be illustrated with references to the impact of deficits in ToM across different areas of functioning.

2. How does theory of mind develop from early years to middle childhood?

Teachers will be familiarized with tasks and research findings indicating that: (a) ToM emerges early in life and (b) advanced ToM skills emerge in middle childhood.

3. Experiential bases of ToM - Can theory of mind be taught and/or improved?

The importance of social environment for children's ToM will be briefly discussed. Findings of intervention programs indicating that ToM skills can be promoted will be presented. The focus will be on interventions aiming to promote ToM in middle childhood.

4. Examples of activities and a story/scenario that can be used to teach 10- to 11-year-old children aim to advance their ToM skills.

(Misailidi et al, 2013).

5. Activities for teachers

In combination to the theoretical part, we also develop practical activities, asking teachers get their students involved in hypothetical scenarios (in language and science topics), and ask them to think and discuss what they can do to help the actor. More importantly, perhaps, we ask teachers to give authentic class examples as well as to propose at least one teaching strategy aiming in promoting metacognitive skills and share their ideas with their colleagues.

6. Planned dissemination activities

The analysis and discussion of the results together to the basic conclusions and relevant suggestions are expected to lead to (at least one theoretical and one empirical scholar papers submitted in) international peer-reviewed journals (such as "Metacognition & Learning") and the findings of the study will be presented at international conferences such as EARLI and AERA. Finally, a Toolkit / Guide booklet for teachers will be prepared as a helping guide for developing students' metacognitive skills (in all partners' languages).

In a rapid changing world, this project seems to consist a necessity, in order to create thinking and reflective people and promote students' thinking skills so that they become active learners through life.

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PROFESSIONAL REDUCTION AND EMOTIONAL EXHAUSTION PREDICT INTENTION TO LEAVE

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Abstract

Role of burnout in predicting intention to leave a job for addiction specialists is investigated in the current study. 120 physicians, psychologists and nurses working in detox clinics, opioid substitution therapy and psychosocial rehabilitation centers constituted the study sample, which is 60% of the population of addiction specialists in the country of Georgia (former Soviet Union). The sample is representative and provides the possibility to generalize the obtained results to the entire population of drug addiction specialists. Intention to leave was measured using a two-item questionnaire by Kim et al. Burnout was measured by the Human Services Survey (MBI-HSS) (Maslach & Jackson, 1996), containing 22 items that group into three burnout factors: emotional exhaustion, depersonalization and professional reduction. The confirmatory factor analysis (CFA) of the Georgian version provided satisfactory indices after removing two items with low factor loadings: $\chi^2(25, 366) = 104.31, p < .001, CFI = .93, TLI = .92, RMSEA = .07, SRMR = .06$. Cronbach Alpha for revised (MBI-HSS) is: $\alpha = 0.89$ (emotional burnout scale), $\alpha = 0.76$ (depersonalization scale), and $\alpha = 0.82$ (scale of professional reduction). Demographic variables, such as age, gender, marital status, job position, satisfaction with income, length of professional experience, were studied. A hierarchical regression analysis was conducted with demographic variables in the first and three burnout scales in the second model. Both models were statistically significant: $F(4, 115) = 2.40, p < 0.05, F(7, 112) = 3.97, p < 0.001$, from demographic variables, age $\beta = -.17, t = -1.99, p < 0.05$ and working as a nurse $\beta = -.19, t = -2.05, p < 0.05$ were negative predictors of intention to leave. These results converge with the existing findings. The psychological variables provided additional 12% of explanation in variance of intention to leave a job: R square change = 0.12, $p < 0.001$. Emotional exhaustion: $\beta = .23, t = 2.28, p < 0.05$ and professional reduction $\beta = 0.30, t = 3.51, p < 0.001$ were positive, significant predictors of intention to leave, while depersonalization: $\beta = 0.01, t = 0.13, p > 0.05$ – did not yield significant coefficient. This finding differs from the previous studies. Professional reduction was found to be a predictor of intention to leave in one study only, however, coupled with depersonalization (Moneta, 2011). In our case professional reduction is coupled with emotional exhaustion, which is found to predict intention to leave in number of other studies (Azharudeen, Andrew, 2018; Ahmed, 2015). Depersonalization was also found to be a predictor in some studies (Lin & Jiang & Lam, 2013; Elçi, Yildiz, Karabay, 2018). This unique combination once more points to importance of including all three burnout factors in further studies.

Keywords: *Professional reduction, emotional exhaustion, depersonalization, intention to leave, health care specialists.*

1. Introduction

Role of burnout in predicting intention to leave a job for addiction specialists is investigated in the current study.

Intention to leave a job is an important variable for organizational psychologists as it increases turnover and threatens productivity of organizations (Halawi, 2014; Bigliardi, Petroni & Ivo Dormio 2005). Thus, possible reasons for intention to leave are well investigated. One of the most considered among these is a job stress (Tuna, & Baykal, 2014; Fong, Chui, Cheong & Fong, 2018; Yunita, Prasetio, Dharmoputra, Sa'adah, 2019). Among other frequent reasons low job satisfaction is considered, which is the same as frustration at a job, caused by low salaries, work overload, poor working conditions (Hasselhorn, Tackenberg, Müller, 2003; Azharudeen, Andrew, 2018). At the same time, support by co-workers as well as organizational commitment and identification with an organization (Dick, Christ, 2004; Ahmed, 2015) are shown to prevent intention to leave and attenuate an effect of job stress (Fong, Chui, Cheong & Fong, 2018).

It is important to investigate this variable for representatives of medical profession, where studies found that personnel show intention not only to leave job, but profession (Storer, 2002; Rosenstein & Russell, 2002). Indeed, in the current paper, we have looked at the intention to leave for representatives of addiction specialists, who treat various addiction problems.

According to Christina Maslach, the prominent scholar of burnout, it consists of three interrelated factors - emotional exhaustion, depersonalization and professional reduction. Emotional exhaustion contains sense of emotional emptiness and tiredness, depersonalization means cynical attitude to work and work related people, and for medical personnel this manifests itself in indifferent or inhuman relation to patients. Professional reduction means feelings of incompetence, professional helplessness, perceived lack of success and negative results of treatment (Maslach, 1998). In Maslach's and other studies three factors of burnout are positively correlated with each other (Elçi, Yildiz, Karabay, 2018; Moneta, 2011).

Burnout is also considered a positive predictor of intention to leave a job (Cropanzano, Rupp & Byrne, 2003; Smith & Tziner, 1998; Urien Angulo, & Osca, 2012), however, most of the studies found only emotional exhaustion as its predictor (Azharudeen, Andrew, 2018; Ahmed, 2015; Knudsen, Ducharme, Roman, 2009; Moreno-Jiménez, Hernández, Carvajal, Gamarra, Ramón, 2009). To the best of our knowledge, fewer studies found depersonalization to be a positive predictor of intention to leave (Lin & Jiang & Lam, 2013; Elçi, Yildiz, Karabay, 2018; Moneta, 2011) and only one study found professional reduction as a predictor of intention to leave (Moneta, 2011). As noted above, all three factors of burnout are positively correlated and, thus, can be considered as positive predictors of intention to leave; however, emotional exhaustion is considered as the primary factor leading to thoughts about avoiding current workplace and look for another one. Professional reduction is slightly different from the two burnout factors in a sense that it is more about decreased self-esteem, when a person feels that he/she is not worthy professional. At the same time, this feeling should also definitely lead to intention to leave not only a job, but profession.

The above considered studies leave a gap in understanding role of three burnout factors in predicting intention to leave: while emotional exhaustion is a "popular" predictor, depersonalization and professional reduction, which, by their nature should also lead to the same intention, are found to be predictors only in single studies. The current paper aims to address this issue by investigating three burnout factors of intention to leave. Demographic variables, such as age, gender, marital status, job position, satisfaction with income, length of professional experience were studied.

2. Method

2.1. Sample

120 physicians, psychologists and nurses working in detox clinics, opioid substitution therapy and psychosocial rehabilitation centers constituted the study sample, which is 60% of the population of addiction specialists in the country of Georgia (Eastern Europe, former Soviet Union). The sample is representative and provides the possibility to generalize the obtained results to the entire population of drug addiction specialists.

2.2. Instruments

Intention to leave was measured using a two-item questionnaire by Kim et al (1996). The sample item is: "I plan on leaving this job as soon as possible". Burnout was measured by the Human Services Survey (MBI-HSS) (Maslach & Jackson, 1996), containing 22 items that group into three burnout factors: emotional exhaustion, depersonalization and professional reduction. The confirmatory factor analysis (CFA) of the Georgian version provided satisfactory indices after removing two items (1 item from professional reduction scale and 1 - from depersonalization scale) with low factor loadings: $\chi^2(25, 366) = 104.310$, $p < .0001$, CFI = .93, TLI = .92, RMSEA = .07, SRMR = .06. Cronbach Alpha for revised (MBI-HSS) is: $\alpha = 0.89$ (emotional burnout scale), $\alpha = 0.76$ (depersonalization scale), and $\alpha = 0.82$ (scale of professional reduction). The sample items are as follows: for emotional exhaustion - „I feel emotionally drained from my work“, for depersonalization - „I feel I treat some recipients as if they were impersonal objects“, for professional reduction - „I deal very effectively with the problems of my patients“.

3. Results

Before proceeding with multiple regression analysis, means, standard deviations and correlations among all four variables were calculated. Emotional exhaustion and depersonalization provided close to high positive correlation, while professional reduction provided negative correlation with emotional

exhaustion and positive correlation with depersonalization. However, values of both correlation coefficients were so small that they did not reach significant threshold. At the same time, professional reduction showed the strongest positive correlation with intention to leave, while correlation with depersonalization was not statistically significant (table 1).

Table 1. Correlations, means and standard deviations of main variables.

	Intention to leave a job	Emotional exhaustion	Depersonalization	M	SD
1. Intention to leave a job				1.88	0.96
2. Emotional exhaustion	.204*			2.27	1.32
3. Depersonalization	.158	.488**		1.17	1.22
4. Professional reduction	.254**	-.156	.039	1.69	1.29

Note: ** $p < 0.01$; * $p < 0.05$

A hierarchical regression analysis was conducted with demographic variables in the first and three burnout scales in the second model. Both models were statistically significant: $F(4, 115) = 2.40$, $p < 0.05$, $F(7, 112) = 3.97$, $p < 0.001$, the psychological variables provided additional 12% of explanation in variance of intention to leave a job: R^2 change = 0.12, $p < 0.001$. Emotional exhaustion: $\beta = .23$, $t = 2.28$, $p < 0.05$ and professional reduction $\beta = 0.30$, $t = 3.51$, $p < 0.001$ were positive, significant predictors of intention to leave, while depersonalization: $\beta = 0.01$, $t = 0.13$, $p > 0.05$ – did not yield significant coefficient.

From demographic variables age $\beta = -.17$, $t = -1.99$, $p < 0.05$ and working as a nurse $\beta = -.19$, $t = -2.05$, $p < 0.05$ were negative predictors of intention to leave.

4. Discussion

In the current study, out of the three burnout factors, two: emotional exhaustion and professional reduction were found to predict intention to leave. This finding differs from the previous studies. Professional reduction was found to be a predictor of intention to leave in one study only, however, coupled with depersonalization (Moneta, 2011). In our case professional reduction is coupled with emotional exhaustion, which is found to predict intention to leave in number of other studies (Azharudeen, Andrew, 2018; Ahmed, 2015). Depersonalization was also found to be a predictor in some studies (Lin & Jiang & Lam, 2013; Elçi, Yildiz, Karabay, 2018). This unique combination once more points to importance of including all three burnout factors in further studies.

The correlational analysis shows similar relations among our variables: professional reduction does not significantly correlate with any burnout factor, however, professional reduction, as well as emotional exhaustion are positively correlated with the intention to leave.

Some theories of professional burnout state that its three factors unfold one after the other. According to the theory of social exchange, emotional exhaustion leads to depersonalization, which, in turn, leads to professional reduction. According to the organizational theory, depersonalization leads to emotional exhaustion, which, in turn, is a predictor of professional reduction (Edú-Valsania, Laguía, Moriano, 2022). These theories provide two different paths; however, professional reduction is located in the end of this path in both of these theories. According to this reasoning, the final product of burnout is professional reduction, and therefore, logically, this factor represents the end state of burnout, which, in turn, pushes the specialist to the intention to leave the job. It turns out that addiction specialists want to leave their jobs when they experience professional incompetence and do not consider themselves as the professionally valuable specialists.

From demographic variables, age and working as a nurse negatively predicted intention to leave. These results converge with the existing findings. According to the international literature, low salaries motivate workers to find other job, while nurses are not usually inclined to leave, or change working place, as they feel affiliated with it (Shore, Martin 1989; Wanger 2007). The finding about age can be understood on the backdrop of high unemployment rate in Georgia: the higher age of a worker, the more difficult to find a job. Also, according to the relevant literature, the higher the age of a worker, the higher his/her productivity and working abilities, which, in turn, negatively determines intention to leave (Austen et al., 2016).

The study has a usual limitation of a cross-sectional nature, which does not enable us to consider causal relations. Also, adding other predictors of intention to leave, such as job satisfaction and commitment to workplace, might help explain our findings. Despite these limitations, the contribution of the current

study definitely enriches relevant literature and stresses the role of professional reduction, mostly neglected burnout factor in predicting intention to leave. This finding is an important signal to the top management and organizational psychologists of medical organizations to seriously consider professional reduction as a risk factor for organizational functioning.

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WILL BOYS BE BOYS? ATTITUDES TOWARDS MASCULINITY AND EFFEMINACY IN MEN

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Abstract

The idea that “boys will be boys” has been used as an excuse for many behaviours, both by men and towards them. With the recent burst in attempts to bring back “masculine men” and the rise of the hegemonic norms most may wish were left in the 1920s, this study attempted to explore the attitudes towards masculine and effeminate men held by a sample of Maltese participants. Specifically, any associations between one’s attitudes and their age, gender, and self-perception of their own gender were sought. Since research on hegemonic masculinity is often carried out from a feminist lens, a goal of the study was to take on a neutral approach to determine which stereotypes about men are the most believed. Questions from the BSRI-12, the MRNI-SF, and the AFNS were used to construct an anonymous questionnaire. Hypotheses were tested using data obtained from 410 participants aged 18-78. It was found that older age groups endorse traditional attitudes more strongly than younger ones, and use more dated adjectives to describe masculinity. Additionally, men were found to have more traditional views than women. Participants who perceived themselves as having low levels of femininity were found to endorse traditional attitudes more than those high in femininity. However, masculinity levels had no significant effect on endorsement levels of hegemonic norms. These findings highlight which groups need to be targeted to encourage changes in the way that men are perceived and consequently judged.

Keywords: *Hegemonic masculinity, effeminacy, attitudes, stereotypes.*

1. Introduction

Rigid gender categories can result in harmful behaviours and misperceptions. And they are becoming increasingly problematic in relation to masculinity and the traditional cultural standard of what a man should and shouldn’t be. Moreover, effeminate men tend to be shunned because they do not fit the hegemonic ideal. Though literature on the subject is exceedingly diverse, that pertaining to the Maltese context is somewhat limited.

Both masculinity and femininity can be defined as descriptive gender terms, including characteristic ways of relating, acting, and appearing (Spencer, 2017). These are malleable, depending on the cultural demands of a context or time. Masculinity encompasses commonly socialised behaviours such as limiting emotionality and striving to be powerful. On the other hand, femininity could include being gentle and nurturing. These two constructs are not bound within the limitations of biological sex. They are socially constructed and thus can vary in different societies. Malta has made great strides in civil liberties and laws related to them. However, changing legislation does not always result in changing attitudes.

Sex stereotypes are systemic beliefs about attributes of men and women (Banks, 2012). These are typically applied to a whole group, widely shared, and often support differences between men and women. Moreover, these beliefs are biased and unsubstantiated. Sex stereotypes may be descriptive, pertaining to what men and women *are like* – for example the belief the men are rational rather than emotional. Sex stereotypes may also be prescriptive, delineating how men and women *should behave*. When a behaviour is not in line with the stereotype, it will likely be evaluated negatively (Heilman, 2012).

A prevalent ideology in this area of study is hegemonic masculinity – the notion of what constitutes a ‘real man’ (Connell, 1987). This concept maintains that men who adhere to the masculine stereotype are to dominate over women and other men. It can often be seen as the ideal form of masculinity, and hence it is what men are often socialised to achieve. Men must avoid anything feminine, never show signs of weakness, gain success and status, and take risks (David & Brannon, 1976). These norms might seem outdated or false today, however hegemonic masculinity is still alive and well even in today’s society (Iacoviello et al., 2021).

In addition to this notion there is the anti-femininity mandate, an unwritten rule whereby all feminine tendencies, behaviours, and preferences must be renounced (Bosson & Michniewicz, 2013). Research has been consistent on the idea that following the anti-femininity mandate is a way that men affirm their own masculinity (Falomir-Pichastor et al., 2019). Hence, it may follow that men who perceive themselves as highly masculine will tend to reject other men who show overt displays of femininity. The precarious manhood hypothesis is a perfect example of the performative nature of gender. Manhood is seen as a precarious state which can easily be lost at the slightest sign of weakness. Bosson & Michniewicz (2013) argue that men affirm their masculinity by eschewing stereotypically feminine behaviours and roles and display it through public action. Effeminacy – often used in a derogatory manner – may be displayed in men who deviate from traditional male norms, take on roles labelled as feminine, or fail in domains labelled as masculine, such as sports. Traditionally masculine behaviour is often rewarded in modern society, whereas effeminate behaviour in men is often stigmatised.

Herreen et al. (2021) found that as one ages, conformity to masculine norms decreases and gender roles become less rigid. Anti-effeminacy bias could be stronger in men than women due to the tendency for men to adhere to traditional norms more rigidly. Gul & Uskul (2021) attempted to test the expression of this bias in men by focusing on the reluctance of men to be friends with effeminate men. Effeminate men were seen as less valued in the group, and men were concerned that their reputation would be damaged by association. Ulrich & Tissier-Desbordes (2018) found this attitude encompasses the avoidance of using feminine brands as they are perceived as threats to their manhood. Vandello et al. (2008) found that men feel more anxiety about their gender status than women, and may explain their reasons for endorsing masculine traits and rejecting feminine ones to preserve their manhood. It has also been found that men find it more important to differentiate masculine and feminine characteristics, and that men are more likely to sanction non-traditional men (Iacoviello et al., 2021).

Based on this literature search, the below hypotheses are being proposed:

H₁: Attitudes towards masculine and effeminate men vary with age.

H₂: Attitudes towards masculine and effeminate men vary with gender.

H₃: Attitudes towards masculine and effeminate men vary between people who identify as having high or low femininity/masculinity.

2. Design and methods

A quantitative approach was used, with data being collected through anonymous online questionnaires made up of four sections: (1) demographic data – age and gender; (2) Bem Sex Role Inventory-Short Form (BSRI-12) (Mateo & Fernandez, 1991); (3) Male Role Norms Inventory-Short Form (MRNI-SF) (Levant et al., 2013); (4) the Anti-Femininity Norm Subscale (AFNS) (Brannon & Juni, 1984), as well as some questions related to stereotypes towards women. These additional items about women served as distractor items, so that the intent of the test would be more difficult to infer. These items were not scored, as they were not related to the objectives of the study. Finally, an open-ended question asked participants for words and phrases which they associate with the word ‘masculine’.

BSRI-12. This scale was used to assess whether respondents viewed themselves as more masculine or feminine. In turn, the aim was to determine whether viewing oneself as more masculine or feminine affects the way they judge others. Reliability for the BSRI-12 is good, with Cronbach’s alpha being .77 for the feminine subscale and .73 for the masculine subscale (Fernández & Coelleo, 2010).

MRNI-SF. This scale was used to assess attitudes towards masculinity. It has high reliability, as Cronbach’s alpha was found to be .92 for men and .94 for women (Levant et al., 2013). All items except one were kept the same. One of the items was changed from ‘*the President of the United States should always be a man*’ to ‘*the Prime Minister of Malta should always be a man*’, to be more applicable to the Maltese context.

AFNS. This subscale was used to assess attitudes towards effeminacy. It is a 7-item subscale taken from a 110-item measure developed by Brannon & Juni (1984), called the Brannon Masculinity Scale (BMS). Although the scale is quite old, it was still determined to be a good fit for this study as the scenarios presented are still relevant today. A seven-point Likert scale was used for all items of all three scales.

The questionnaire was piloted and feedback addressed. The volunteers had two criteria for participation – being Maltese and above 18 years of age. The reason for such unspecific criteria was to be more inclusive. Previous studies similar to this one were often carried out with students or samples having a good level of education. The research study was approved the Faculty Research Ethics Committee (FREC) of the University of Malta.

3. Results

Table 1 describes the sample of participants and gives their age and gender. There is an overrepresentation of participants between the ages of 18-24 years of age. The sample is also overrepresented in females. Because it is not a representative sample, the findings cannot be generalised to the population.

Table 1. Demographic and descriptive data.

Gender	n	%	Age	n	%
Male	107	(26.3)	18-24	155	(37.8)
Female	303	(73.7)	25-29	29	(7.1)
			30-39	53	(12.9)
			40-49	76	(18.5)
			50-59	66	(16.1)
			60+	31	(7.6)

Independent samples t-tests were carried out to compare the scores on the MRNI-SF and AFNS between genders. T-tests were also carried out to compare groups scoring high and low in masculinity/femininity. Comparisons were made based on scores of the MRNI-SF and BMS.

Table 2. T-tests for gender and MRNI-SF/BMS.

Scale	Subscale	Mean and SD		Sig.	C. α .
		Males	Females		
MRNI-SF	Dominance (D)	6.04 (3.51)	4.02 (1.62)	<.001	.79
	Negativity Towards Sexual Minorities (NM)	6.34 (4.03)	5.24 (3.51)	.014	.83
	Self-Reliance Through Mechanical Skills (SR)	14.89 (3.99)	14.66 (4.08)	.615	.72
	Avoidance of Femininity (AF)	7.95 (4.34)	5.69 (3.02)	<.001	.81
	Importance of Sex (IS)	7.14 (4.78)	5.17 (3.02)	<.001	.89
	Restrictive Emotionality (RE)	8.06 (3.46)	5.47 (2.51)	<.001	.68
	Toughness (T)	11.36 (4.40)	7.75 (3.87)	<.001	.71
	Whole scale	61 (20.69)	48.01 (15.08)	<.001	.91
BMS	Anti-Femininity Norms Subscale	18.79 (7.98)	15.53 (6.76)	<.001	.81

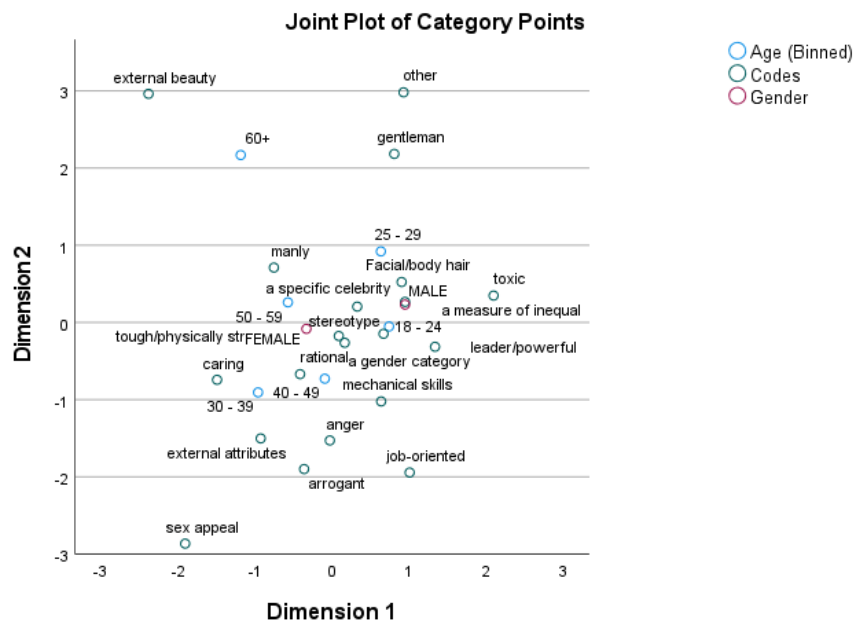
Tables 2 and 3 give the means, standard deviations, and significance of t-tests carried out. Table 2 also provides reliability measures for each subscale.

Table 3. T-tests for BEM-12 subscales and MRNI-SF/BMS.

Scale	BEM-12 Subscale	Mean and SD		Sig.
		Low	High	
MRNI-SF	Masculine	50.76 (15.29)	52.29 (19.53)	.375
	Feminine	54.04 (18.23)	49.04 (16.15)	.004
BMS	Masculine	16.42 (6.48)	16.35 (7.55)	.910
	Feminine	17.41 (7.00)	15.54 (7.32)	.009

Participants were asked to give adjectives that they associate with the word 'masculine'. Responses were coded according to commonly occurring traits in the literature. A multiple correspondence analysis was carried out to investigate the categorical variables age, gender, and adjectives produced. Two dimensions were extracted. The first dimension explained 47.19% of the variance and second explained 43.63%. Points closer together on the plot indicate a relationship.

Figure 1. Joint category plots for variables of age, gender, and adjectives (codes).



4. Discussion

Males in the sample endorsed traditional masculine norms more than females, and the difference is fairly large ($M_{males} = 61(20.69)$, $M_{females} = 48.01(15.08)$, $p < .001$). Additionally, almost all dimensions of hegemonic masculinity were endorsed by male participants more than females. The dimension showing the largest difference between genders was that of restrictive emotionality ($M_{males} = 8.06(3.46)$, $M_{females} = 5.47(2.51)$, $p < .001$). This may reflect the way society has been constructed. It seems more likely that a man would react negatively to overt displays of emotionality in other men than a woman would, especially since women find it more acceptable to do so. This is corroborated by the literature, as men face the most backlash from other men when they deviate from traditional norms (Iacoviello et al., 2021). Men were also found to endorse anti-effeminacy norms more ($M_{males} = 18.79(7.98)$, $M_{females} = 15.53(6.76)$, $p < .001$) in line with the literature (Gul & Uskul, 2021). This finding makes sense in light of the precarious manhood hypothesis, especially since women do not seem to experience this phenomenon. Hence, while men would feel the need to reject effeminate men because they find their displays threatening to their own manhood, women would have more tolerance for effeminacy in men because they do not feel at risk of losing anything.

According to this study, 18-24-year-olds associated masculinity with toxicity. The 60+ category associated masculinity with external beauty and being a gentleman, echoing the norms often upheld by that generation. Since such attitudes often form early on in life, results may also suggest that people who are older still hold attitudes which were formed decades ago, when gender roles were more stereotypical. Results from the MCA show that the 60+ groups associated being masculine with being a gentleman, whereas the 50-59 group associated it with being tough, manly, and rational.

Testing the hypothesis pertaining to the effect of self-perception of one's own gender yielded some unanticipated results. Participants rated themselves highly in both feminine and masculine domains. This could mean that the tendency to see those adjectives as gendered has decreased with time. It may imply a paradigm shift in the past few years, as it could indicate a movement away from considering adjectives as gendered. This change may have been brought about by recent movements, such as advancements made in the LGBTQ+ community where gender is being seen as more fluid and malleable. Another interesting finding was that there were significant attitudinal differences between participants scoring high and low in femininity (MRNI-SF: $M_{high} = 49.04(19.53)$, $M_{low} = 54.04(15.29)$, $p = .004$; BMS: $M_{high} = 15.54(7.32)$, $M_{low} = 17.41(7.00)$, $p = .009$). This could be explained by the possibility that rejection of femininity in others may also stem from rejection of femininity in oneself. If one rejects and suppresses their own feminine traits to remain in line with the hegemonic ideology, and for the same reason it is likely that these traits will also be rejected in others. Moreover, certain traits which were once thought to be highly masculine may have become more neutral because of more diverse representation. With more Maltese women being represented in political parties and leading business organisations, the common assumption that being a leader equates to masculinity might be given less weight. Another example would be the rise in feminine

Maltese activists, which counteracts the classification of defending one's own beliefs as a masculine trait. Hence, the reason why participants' masculinity levels had no effect might be because the BSRI traits used to classify people as masculine may no longer be presumed to fall into the 'masculine' category. On the other hand, 'feminine' traits may not yet have the same neutrality. Traits such as being sympathetic and gentle have been slower to change, and are exhibited less by prominently masculine people.

5. Conclusion

The aim of this study was to determine the attitudes towards masculine and effeminate men in the Maltese context. The findings obtained had mixed support from the literature presented. Although great care was taken to ensure a valid study, it was not without limitations. The use of a convenience sample decreased generalisability of the results. A non-representative sample could have resulted in skewed results, due to an imbalance in the sample.

Since research in this area in the Maltese context is lacking, this study sheds light on the attitudes held by Maltese participants regarding masculinity and effeminacy in men. This study, in combination with others, may inform policy makers of the target populations (older cohorts and males) for reducing harmful attitudes, such as those pertaining to domestic violence towards men and implementation of paternity leave. If gender categories are socially constructed, then it is possible to re-shape and de-emphasise them through social change.

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SECULARISM WON'T SAVE US FROM SEXISM: ATHEISTS IN ROMANTIC DYADS DEMONSTRATE NON-EGALITARIAN CHORE DIVISION

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Abstract

Introduction: Major religions often have scriptures or teachings emphasizing the role of women in performing labour within the home. In contrast, secularism is often argued as promoting egalitarianism in relationships, which should produce less pronounced gender roles. If secularism promotes egalitarianism at an individual level, we would expect atheists in heterosexual, romantic dyads to report greater equality in the performance of unpaid labour.

Purpose: Our intent was to explore how atheists divided household labour relative to Roman Catholics, Protestants, Anglicans, Baptists, Christians, Lutherans, Gospel/Pentecostals, Free Church/Presbyterians, United Church, Jews, Hindus, Muslims, Agnostics, and the generically nonreligious.

Method: The present study used data from the 2017 Canadian General Social Survey ($N_{\text{weighted}} > 14,000,000$) to investigate if there was a relationship between atheism and chore division. We retained only individuals who were in a romantic, heterosexual relationship in which they lived with their partner. Our housework variables were: meal preparation, laundry, generic housework, and washing dishes. Respondents could indicate that the chore was performed 'By themselves', 'By their partner', or 'Split evenly'. Notably, we controlled for age, marital status, education of respondent, education of partner, employment status of respondent, employment status of partner, and whether children were in the home.

Results: We found that the main effects of religious affiliation, religious attendance, prayer, and religiosity had little predictive power. Functionally, religious variables (unadjusted for sex) were not associated with more or less egalitarianism. When sex was added to the model, we found that women were more likely to prepare meals ($RRR = 0.21, p < .001$), wash laundry ($RRR = 0.13, p < .001$), perform generic housework ($RRR = 0.19, p < .001$), and wash the dishes ($RRR = 0.47, p < .001$). When examining our central research question—whether the relationship between sex and chore performance varied across religious affiliations—we found little evidence to support secularism promoting egalitarianism. Sexism was found to exist within romantic dyads irrespective of religious affiliation, and the burden of chores fell disproportionately on women.

Discussion: While sexism is often portrayed as a latent or manifest product of religion, there is little evidence that secular groups (e.g., atheists) demonstrate a greater degree of egalitarianism with respect to the division of unpaid labour in the home. This may suggest that the uneven division of household labour is due to a broader structural sexism as opposed to a narrower religious sexism.

Keywords: Atheism, religion, Canada, chores, General Social Survey.

1. Introduction

The regular completion of household chores is a time-consuming but vital component of maintaining a home. Chores can include a variety of domestic tasks, such as cooking, washing dishes, cleaning, laundry, yard work, home repairs, and taking out the garbage (Bartley et al., 2005; Frisco & Williams, 2003; Horne et al., 2018; Mencarini & Sironi, 2012). Among the most prevalent theories to explain household chore division are: *relative resource theory*, which argues that the individual with the highest earning potential will have the most power over resources and can avoid housework (Aassve et al., 2014; Horne et al., 2018; Singha, 2015); *economic dependency theory*, which suggests that the individual who brings in less income will compensate by completing a larger portion of the housework (Aassve et al., 2014; Sullivan, 2011); *time availability theory*, which suggests that the

individual who spends the least amount of time engaged in paid labour will complete more housework (Aassve et al., 2014; Horne et al., 2018; Singha, 2015); and *gender ideology perspective*, which argues that couples will divide housework based on their views of appropriate gender roles (Aassve et al., 2014; Davis & Wills, 2014; Horne et al., 2018). Although these theoretical perspectives vary in definition, they share a commonality: gender roles. Given the pivotal role of such roles in understanding the division of labour, it is important to understand the factors influencing gender roles and egalitarianism.

1.1. Egalitarianism and religion

Egalitarianism is the notion that people, regardless of race, gender, ethnicity, or other differences, should be treated as equals (Arneson, 2013). Egalitarianism in relationships relates to equality between partners, including things such as a fair division of household labour. Egalitarianism, or lack thereof, can have impacts on both individuals and relationships. Women who feel they complete more household labour than their partners perceive their marriages as more unfair, are less happy, and are twice as likely to become divorced (Bartley et al., 2005; Frisco & Williams, 2003).

Most of the major religions (Christianity, Islam, Hinduism, Judaism) have been associated with some degree of sexism and sexual prejudice (Etengoff & Lefevor, 2021). Greater religious values have been associated with greater levels of ambivalent sexism (Maltby et al., 2010) and, more specifically, benevolent sexism (Haggard, Kaelen et al., 2019); this relationship is, unsurprisingly, stronger in religious men than women (Maltby et al., 2010). Greater intrinsic religiosity, extrinsic religiosity, doctrinal orthodoxy, general interest in religion, and frequency of participation in religious ceremonies have been negatively related with egalitarianism (Glenwright & Fowler, 2013). In contrast, Atheists report greater egalitarianism than Christians and Muslims (Glenwright & Fowler, 2013). Scriptural literalism (Burn & Busso, 2005), religious involvement, and religious devoutness (Huntington et al., 2001) are all associated with adherence to traditional gender roles and greater employment gaps. Atheists, on the other hand, report greater egalitarianism, which is associated with a fairer share of housework (Glenwright & Fowler, 2013; Ruppanner et al., 2017). Currently, there is an unclear relationship between *nonreligious* identities and the division of household labour. Specifically, it is unclear if people who are atheist, agnostic, or nonreligious, display a similar pattern of responsibilities for household labour as religious individuals.

2. Objectives

Our primary goal was to determine if atheists differed from Roman Catholics, Protestants, Anglicans, Baptists, Christians, Lutherans, Gospel/Pentecostals, Free Church/Presbyterians, United Church, Jews, Hindus, Muslims, Agnostics, and the generically nonreligious with respect to how household labour was divided. Specifically, we were interested in determining if the more secular group (i.e., atheists) were *more* likely to report an egalitarian structure in the division of household labour. If secularism promotes egalitarianism, we would expect atheists to be significantly different from other groups in regard to their division of chores. From an analytical perspective, we would expect the sex-based interaction terms for atheist females to indicate a greater reporting of egalitarianism relative to non-atheist females.

3. Method

3.1. Data

Data were obtained from the results of the 2017 (cycle 31) Canadian General Social Survey (CGSS), a cross-sectional survey designed to monitor changes in the living conditions and well-being of Canadians (Statistics Canada, 2020). The focus of the 2017 CGSS was on understanding the changing trajectories of family dynamics in Canada. Cycle 31 was conducted via telephone from February 2, 2017, to November 30, 2017. The sampling frame was created by combining telephone numbers with property addresses made available by service providers and census data. Individuals were stratified geographically, and then a random sample was produced to select respondents (response rate of 52.4%). The target population included individuals aged 15 years or older in the 10 provinces. However, the current study applied inclusion criteria for our analyses: 2017 CGSS respondents must have been 18 years of age or older and must have indicated that they were either married or in a common-law partnership.

3.2. Measures

The current study controlled age, marital status (0 = common-law, 1 = married), education (1 = < high school, 2 = post-secondary, 3 = graduate school), household income, region (1 = Atlantic,

2 = Quebec, 3 = Ontario, 4 = Prairies, 5 = British Colombia), living with child(ren) under 15 years old (0 = none, 1 = 1 child, 2 = 2 children, 3 = 3 or more children), population centre indicator (0 = non-large city, 1 = large city), main activity of spouse/partner in past 12 months (0 = partner not employed, 1 = partner employed), personal employment status in the past week (0 = not employed, 1 = employed), and average number of hours worked in a week.

Given there were numerous religious elements of interest, we included several predictor variables: religious affiliation (with atheists as the base group), religious service attendance, prayer, and importance of religious/spiritual beliefs (all continuous). We used sex (0 = female, 1 = male) as a moderator for religious affiliation. For outcomes we looked at: who was responsible for cooking meals, doing the dishes, doing the housework, and doing the laundry (0 = equal between respondent and partner, 1 = respondent’s responsibility, 2 = partner’s responsibility).

3.3. Analytic approach

We used statistical moderation to examine sex differences, which acknowledges that a third variable can modify the association between a predictor and an outcome (Baron & Kenny, 1986). Multinomial hierarchical logistic regression analyses were carried out with weighted variables. The CGSS master file contained both person-level weights, allowing for corrected point estimates, and bootstrap weights, allowing for corrected variance estimates. All analyses were evaluated using an $\alpha = .05$.

For all analyses, we regressed the outcome onto covariates in Block 1, we added religious attendance, prayer, and religiosity in Block 2, we added religious affiliation in Block 3, we entered sex in Block 4, and we explored interactions in Block 5.

We have several hypotheses related to the addition of sex as a predictor in Block 4.

Hypothesis 1: Males will be less likely to indicate personal responsibility for a chore.

Hypothesis 2: Females will be more likely to indicate personal responsibility for a chore.

We have several hypotheses related to the addition of these interaction terms in Block 4.

Hypothesis 3: Non-atheist males will report less personal responsibility for a chore relative to atheist males.

Hypothesis 4: Non-atheist females will report a greater degree of personal responsibility for a chore relative to atheist females.

Table 1.

Predicting Responsibility for Chores in the Home.

	Block 1 <i>F</i> (34, 500)	Block 2 <i>F</i> (6, 500)	Block 3 <i>F</i> (28, 500)	Block 4 <i>F</i> (2, 500)	Block 5 <i>F</i> (28, 500)
Meal Preparation	23.31 ***	4.99 ***	1.85 **	619.64 ***	2.35 ***
Dishes	10.56 ***	2.74 *	1.86 **	86.14 ***	1.74 **
Housework	18.16 ***	8.20 ***	1.12	508.08 ***	1.67 *
Laundry	19.80 ***	10.88 ***	1.73 **	811.34 ***	1.65 **

Note. Block 1 was covariates; Block 2 was religious attendance, prayer, and religiosity; Block 3 was religious affiliation; Block 4 was sex; Block 5 was sex * religious affiliation interaction terms.

* $p < .05$, ** $p < .01$, *** $p < .001$

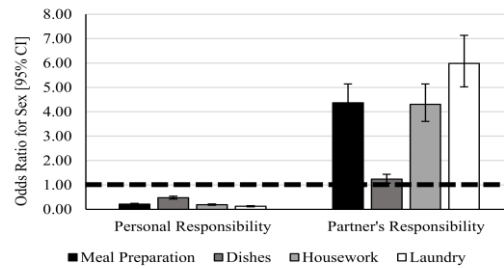
4. Analysis and discussion

In Table 1 we can see that the covariates contributed substantial amounts to the overall models. In Block 2, neither religious attendance nor religiosity were significant predictors of housework; however, higher levels of prayer were associated with a greater likelihood of indicating that the respondent was personally responsible for a given chore. Religious affiliation (Block 3) contributed little to the models. Atheists did not tend to be different from the religious groups, running antithetical to our expectation that atheists would be more likely to endorse an egalitarian perspective on the performance of household labour. In Block 4, sex was a substantial predictor of chore performance in all cases. Females were much more likely to report being responsible for meal preparation, washing dishes, general housework, and laundry, relative to males. Additionally, males were much more likely to indicate that their female counterparts were responsible for those chores. Both H1 and H2 were supported across models (see Figure 1). When we explored the interaction terms in Block 5, there were few significant effects. As can be seen in Table 2, the interaction terms were overwhelmingly nonsignificant, suggesting that the linear effect that sex has on the prediction of chore performance was similar across all religious affiliations. Rather than being more inclined to egalitarianism, atheists and other secular groups tended to demonstrate a *similar* pattern of sex-based labour performance.

5. Conclusions

While there is a tendency to view secularism as promoting egalitarianism and as being progressive, this may be an optimistic assessment. With respect to chore performance in the current study, the same-sex-based division of labour existed even within nonreligious individuals. While religion may contribute to sexism in some form, we would tentatively conclude that the sex-based discrepancies in labour performance are more likely to be the product of a broader structural sexism and not a narrower religious sexism.

Figure 1. Sex Predicting Personal Responsibility for Chores.



Note. All models controlled for age, marital status, education, income, region, minority status, children, employment status of partner, employment status of respondent, education of partner, immigration status, language, religious attendance, prayer, religiosity, and religious affiliation.
 Note. Odds ratios less than 1.00 indicate that females were more likely to be in that category. Odds ratios greater than 1.00 indicate that males were more likely to be in that category.

Table 2.

Sex * Religion Interaction Terms Predicting Responsibility for Chores.

	Relative Risk Ratios [95% Confidence Intervals]			
	Meal Preparation	Washing Dishes	General Housework	Laundry
Egalitarian (Base)				
Respondent				
Constant	0.85 [0.44, 1.65]	1.23 [0.65, 2.33]	0.58 [0.30, 1.12]	1.28 [0.64, 2.56]
Sex	0.57 [0.30, 1.10]	0.48 [0.26, 0.90] *	0.27 [0.14, 0.53] ***	0.11 [0.05, 0.24] ***
RomanCath * Sex	0.30 [0.15, 0.60] **	0.92 [0.48, 1.77]	0.65 [0.32, 1.30]	0.96 [0.42, 2.22]
Protestant * Sex	0.28 [0.12, 0.67] **	1.13 [0.52, 2.47]	0.54 [0.22, 1.29]	0.98 [0.36, 2.67]
Anglican * Sex	0.48 [0.20, 1.16]	1.15 [0.51, 2.61]	0.84 [0.33, 2.09]	1.19 [0.43, 3.29]
Baptist * Sex	0.21 [0.06, 0.76] *	1.72 [0.58, 5.09]	0.97 [0.32, 2.91]	2.06 [0.49, 8.63]
Christian * Sex	0.34 [0.15, 0.79] *	1.20 [0.57, 2.53]	0.80 [0.36, 1.79]	1.18 [0.45, 3.10]
Lutheran * Sex	0.31 [0.08, 1.24]	0.40 [0.12, 1.32]	0.58 [0.14, 2.38]	1.39 [0.30, 6.57]
GospPen * Sex	0.13 [0.03, 0.57] **	1.84 [0.45, 7.54]	0.14 [0.03, 0.77] *	2.06 [0.34, 12.49]
FreeChuPres * Sex	0.25 [0.06, 1.08]	0.71 [0.21, 2.39]	0.52 [0.12, 2.24]	0.84 [0.16, 4.35]
United * Sex	0.44 [0.19, 1.02]	0.56 [0.25, 1.26]	0.38 [0.16, 0.91] *	0.64 [0.21, 1.96]
Jewish * Sex	0.27 [0.06, 1.22]	0.73 [0.21, 2.54]	1.23 [0.31, 4.93]	1.67 [0.38, 7.30]
Hindu * Sex	0.07 [0.01, 0.41] **	1.07 [0.34, 3.41]	1.04 [0.32, 3.33]	1.73 [0.46, 6.60]
Muslim * Sex	0.06 [0.01, 0.27] ***	0.30 [0.10, 0.89] *	0.47 [0.16, 1.39]	1.79 [0.54, 5.96]
Agnostic * Sex	0.94 [0.30, 2.90]	2.37 [0.74, 7.58]	0.81 [0.22, 2.93]	1.35 [0.30, 6.02]
Nones * Sex	0.59 [0.29, 1.23]	1.19 [0.59, 2.37]	0.83 [0.40, 1.73]	1.63 [0.68, 3.90]
Respondent's Partner				
Constant	0.09 [0.04, 0.20] ***	0.52 [0.24, 1.13]	0.11 [0.04, 0.28] ***	0.15 [0.06, 0.38] ***
Sex	4.89 [2.29, 10.41] ***	0.96 [0.46, 2.00]	2.41 [1.02, 5.67] *	5.57 [2.34, 13.26] ***
RomanCath * Sex	0.89 [0.40, 1.97]	1.27 [0.59, 2.72]	2.20 [0.90, 5.39]	1.41 [0.57, 3.48]
Protestant * Sex	1.17 [0.44, 3.12]	2.64 [1.01, 6.89] *	3.41 [0.94, 12.45]	1.33 [0.43, 4.14]
Anglican * Sex	0.86 [0.33, 2.26]	1.14 [0.45, 2.90]	1.88 [0.62, 5.76]	1.38 [0.45, 4.22]
Baptist * Sex	0.81 [0.21, 3.11]	3.45 [1.08, 10.97] *	1.50 [0.39, 5.82]	1.01 [0.27, 3.78]
Christian * Sex	1.25 [0.50, 3.13]	1.29 [0.54, 3.07]	1.83 [0.66, 5.12]	0.89 [0.32, 2.48]
Lutheran * Sex	1.36 [0.29, 6.31]	2.48 [0.68, 9.09]	3.39 [0.63, 18.28]	2.19 [0.32, 14.97]
GospPen * Sex	0.22 [0.03, 1.74]	1.91 [0.39, 9.46]	3.49 [0.43, 28.11]	2.62 [0.34, 20.12]
FreeChuPres * Sex	0.71 [0.16, 3.16]	2.66 [0.63, 11.22]	5.94 [0.88, 40.04]	1.93 [0.35, 10.50]
United * Sex	0.48 [0.18, 1.22]	1.02 [0.41, 2.54]	1.83 [0.58, 5.81]	0.93 [0.31, 2.78]
Jewish * Sex	0.44 [0.10, 1.93]	0.77 [0.18, 3.38]	2.02 [0.34, 11.95]	0.48 [0.10, 2.28]
Hindu * Sex	1.64 [0.27, 9.97]	2.50 [0.68, 9.24]	0.39 [0.10, 1.57]	0.34 [0.09, 1.35]
Muslim * Sex	1.91 [0.41, 8.90]	1.34 [0.42, 4.22]	0.66 [0.18, 2.38]	0.53 [0.14, 1.95]
Agnostic * Sex	1.11 [0.21, 5.93]	0.60 [0.16, 2.21]	0.74 [0.15, 3.58]	2.71 [0.41, 18.02]
Nones * Sex	0.71 [0.31, 1.65]	0.99 [0.44, 2.22]	1.32 [0.51, 3.40]	0.69 [0.27, 1.77]

Note. All models controlled for age, marital status, education, income, region, minority status, children, employment status of partner, employment status of respondent, education of partner, immigration status, language, religious attendance, prayer, religiosity, and religious affiliation.

* p < .05, ** p < .01, *** p < .001

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TO EVALUATE TRAINING IMPACT IN HEALTHCARE: AN ACTION-RESEARCH PROJECT ORIENTED TO A SUSTAINABLE MODEL

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Abstract

Organizations in general, and particularly those in the healthcare sector, need to have evidence of the added value of training; the few existing tools and models may be too complex and time-consuming and are therefore usually dismissed or not used properly.

The aim of this presentation is to introduce a sustainable model to analyze the impact of training in the healthcare sector.

The TIE-H model (Training Impact Evaluation - Healthcare Model) has been created through a process of Action Research intervention involving the training referents of a large Italian healthcare organization in a four year-long process, and was tested on over 350 training courses. The main feature of the model is its focus on the training impact starting from the planning phase. The first step consists of classifying training based on three impact criteria; afterward deploying goals, indicators and timing of evaluation. The first criterion refers to the impact area: individual, team, organization; the second one refers to the added value (efficiency/effectiveness, quality, engagement and culture) and the third one refers to the degree of expected change (normative, improvement, strategic and disruptive).

At the end of each training, following the defined timing, indicators are monitored to define the impact of the training, its expected and un-expected results.

In addition to providing a new impact evaluation process, the TIE-H model has proved to be effective since the planning phase, making the training project process closer to the training aims, allowing for an easier identification of expectations of training results, thus acting as a guideline for training planning.

Keywords: *Training impact, training evaluation, healthcare employees, action research.*

1. Introduction

An interesting editorial of Industrial and Commercial Training (2004) reports that “*Some 70 per cent of organisations have no formal measurement practices to assess the impact of training employees on the performance of their business*”, and the situation does not seem to have changed much during this past decades.

Training and Personnel Development is nowadays a strategic area of any organization (i.e. Noe, 2010), and is of crucial value in the healthcare sector where the training of employees refers both to the continuous education of the single health professional, both to the development of the whole organization. Moreover, the training in healthcare sectors is one of the richest chapters compared to other organizations. Therefore, as pointed out by Kennedy et al (2014), it is crucial to know on which level a training intervention has achieved its objectives. This knowledge can only be collected through effective training evaluation (Jasson, 2017).

2. State of the art

The assessment or evaluation of Training Impact lies in the wider topic of Training Evaluation and Training Effectiveness. One of the most cited and criticized model remains the Kirkpatrick model (Kaufmann et al., 1996) with its theoretical four levels simplified in an implementation of the first two. This model consists in evaluating the training on the basis of-reaction, learning, behaviour and results; the author stated they are strictly correlated so that a positive result in the first level brings to a positive result in the second and so on. Although a large number of empirical studies refuted this hypothesis, it happens

that for very practical reasons -in saving time and money- the companies declaring to use this model applying only tools to monitor trainees' satisfaction and the acquisition of competences at the end of the training. It consists in a coarsy simplification that does not permit to assess the impact of a training.

In scientific literature, several models on training evaluation have been developed. In one of the most recent and complete review elaborated by Perez-Soltero et. al. (2019), in the 35 models under review, the training evaluation has been considered based on aim (e.g. formative, summative), actors (learners/stakeholders), timing (short/long time) and tools (questionnaire/ROI).

An area dedicated to training impact appears in most of the models, even named with a different label. For example, the CIRO model (Warr & Peter, 1970) and IPO Model (Bushnell, 1990) contain "outcomes"; CIPP Evaluation models (Madaus, Stufflebeam, Scriven 1983) considers Product; the Motivational Influences Training Effectiveness (Noe, 1986) includes Trainees' change of behaviour/in performance. The Impact area is present also in: the Three-Stage Model for Assessing and improving training (Attia et al. 2005) with two levels of Impact – Individual and Collective; the Griffin approach (2012); the eQvet-us training outcome evaluation model (Moldovan, 2016) and, naturally, in the models aimed at calculating ROI (Phillips, 1996, Wang et al., 2002).

Considering the healthcare sector, most of the evaluation models are dedicated to the pre-service training (university, technical schools), and they are mainly useful for a continuous improvement process and for a competence assessment, having the students as focus of the evaluation. For example, the Outcome-based evaluation model (OBE), where the training outcome was defined by Davis et al. as "a culminating demonstration of learning: it is what the student should be able to do at the end of the course" (2007, p.717). And this approach is not helpful for analyzing the impact of training inside organization.

One of the few models tailored for healthcare organizations, considering training impact as part of the evaluation, has been developed by Cervai and Polo (2015). The main feature of the Expero4care model is the comparison between stakeholders' expectations and perceptions, also in term of expected/perceived impact.

Although there are dozens of researches reporting case studies on the analysis and measures of the impact of training in healthcare (1805 papers in EBSCO database containing the words impact and training in the title), however none of them - at author's best knowledge – present a theoretical model to guide the healthcare organisation in the evaluation of the impact of training, that is the rational of the present paper.

3. Aim and objectives

Considering the need, on the one side, for healthcare organisations to monitor training impact as part of the standard training evaluation process and, on the other side, for scientific literature to present a general model that can be extended to and available for different organisations, we conducted a 4 years Action-Research with an Italian healthcare organisation, aimed at developing and testing a new model. The authors' intentions were to render this model suitable and sustainable (robust, as stated the Griffin theoretical model, 2012) for the single organization, and exportable to other healthcare organizations, too.

4. Research design

In the following part, we describe the Action Research process, starting from a description of the context, the rational for the choice of the AR approach, the description of the process, the results.

4.1. Context

A local health district in North-Eastern Italy approached the academic unit requesting support in the evaluation of the impact of training provided to the personnel. The public healthcare organisation consists of 2 hospitals, 11 territorial departments 4,128 employees in healthcare professions (around 3,000 involved in training activities) and administrative staff (around 1000). In 2019, the budget for training courses amounted to 500Keuro, with 7,420 hrs of training provided.

In the Training Center there are 10 employees (1 manager, 6 training designers, 3 administrative staff), moreover a wide network of referents, almost one in each department/service, act as the operational arm of the Training Center in most peripheral services. This network includes physicians, nurses and technical health professionals – around 40 people with a formal role of Training Referent. They focus on analysing training needs and providing the Training Center with the features of the training course requested by the facility itself in order to build the Yearly Training Plan (decided upon by the general management and approved at a regional level). Training referents support the Training Center in tailoring a training course once it has been approved. In short, they link the central administration with each branch, service and department in hospitals and health services.

After a first round of negotiation involving academic researchers and representatives of the Training Center, it becomes evident that it was crucial to involve the training referents in the process of training impact evaluation. Academic researchers proposed an Action Research model aimed at generating a sense-making process in building a model to evaluate the impact of trainings in the organisation.

4.2. Sample

The project team consisted of three academics, the head manager of the training center and 32 training referents employed in different services/departments of the healthcare organisation (18.75% male and 81.25% female; all graduates: 62.5% in nursing, 31.25% in technical and healthcare professions, 6.25% in medicine).

In the four years project, hundreds of trainings have been considered for classification and validation of the TIE-H model with limitation to the planning phase. In 2022, on the basis of managerial decision about sustainability and strategical value of the training, a selection of 18 training courses was chosen to monitor the impact completing the whole cycle (from the planning to the evaluation), reaching a great success for the organization.

4.3. The action research method

Among various approaches on A-R deriving from Lewin theory, the authors mainly applied the Action Science approach (Argyris & Schön, 1992) with the aim of creating common meanings and in order to generate learning processes in developing a shared model for training impact evaluation. The process is based on reflexivity where participants are asked to describe their past experiences concerning the training impact evaluation, ponder possible added values to be gained from a common model, and the related benefits for both the organisation and the participants. Researchers are seen as experts who devote their competences to find a common model that covers both the needs of training referents (simplification of processes, common classification/meanings, etc..) and the requirements of the organisation (to evaluate the training impact). The researchers also considered the Reason & Bradbury's approach (2008) to A-R in order to underline the importance of developing knowledge through participation, and to develop awareness of the training impact evaluation. The researchers mainly acted as enablers, supporting contributions from training referents, facilitating the mutual ex-change of experiences of previous attempts to evaluate impact, reporting and summarizing different options and, finally, proposing a common model to be implemented. Indeed, the aim was not only to create a model, but to propose a new process that the healthcare organisation could implement (Koch & Kralik, 2006). Given that the involvement of the training referents was crucial for the implementation of the model, the Action Research approach (Johnson, 2008) was chosen to strengthen the meaningfulness of this tool, without burdening the process.

4.4. The action research process

The project lasted 4 years (September 2018 – December 2022) and alternated workgroup (with project team and training referents) and individual activities (carried out by the researchers and by the referents).

During the first year the whole team agreed to begin from the state of the art, both exploring scientific literature and analysing the large database of training courses provided by the Training Center of the healthcare organisation over the past years. Academic researchers reviewed literature and presented results to organizational team, in order to find the features of a model that can fit the organizational needs. A first theoretical draft was presented at the end of the first year, proposing a classification of different areas and criteria to monitor training impact. Training referents were requested to test the model in the second year so to understand its feasibility and to individuate strengths and weakness points.

During the second year, academic researchers analysed how the training referents had applied the model, finding gaps and critical points; *this helped* to elaborate a new tailored version of the model and *to propose* a training course to support *the referents* in individuating indicators to monitor the training impact.

In the third year – because of the Covid19 – the Action Research process slowed down, working only with remote meetings: a case study was proposed to the team of training referents. This case study refers to an innovative training course developed to prepare healthcare employees to work in Covid sectors. The whole group of training referents shared ideas and developed a common method to monitor the training impact of this particular course. The experience was important to define a common method and to exercise on defining indicators and tools to monitor the impact. Whereupon each referent implemented the model on two single trainings and the researchers analyzed the results.

During the fourth and final year of the project, the model in its definitive version was included as standard in the organizational process of the Training Center. A selection of the training courses, those the impact was monitored, were presented to the healthcare managers during a formal meeting. Academic researchers introduced the model to the Regional Government that is intentioned to adopt it a regional level.

5. The TIE-H model

The main result of the Action Research project consists in the elaboration of a new model to evaluate the impact of a single training. The model, hereby called TIE – H (Training Impact Evaluation – Healthcare), consists of two steps. The first one acts in the planning phase of the training and the second one after a defined period from the end of the training.

5.1. First phase – planning

It consists in a reflection about the kind of impact expected from the training course, following the schema proposed in Figure 1, where there are three criteria: each one includes three or four categories. Being aware that a training can impact several categories at the same time, the choice in each criterion should consider the category in which the impact is prevalent.

After reflecting on the type of training impact expected, the training referents describe the expected results, defining the time in which it will be possible to monitor them (called T1), the indicators and the tools. Finally, it is required to define the expected results in terms of expected value of the indicators in T1 and, where possible the starting value (called T0).

Figure 1. TIE-H Model – Criteria to define the Training Impact.

Area	Value	Innovation
<input type="checkbox"/> Individual	<input type="checkbox"/> Effectiveness	<input type="checkbox"/> Normative
<input type="checkbox"/> Team	<input type="checkbox"/> Service Quality	<input type="checkbox"/> Improvement
<input type="checkbox"/> Organization	<input type="checkbox"/> Engagement	<input type="checkbox"/> Strategic
	<input type="checkbox"/> Organizational culture	<input type="checkbox"/> Disruptive
Expected results (describe using indicators, tools and expected value)		
Training impact will be monitored on (insert date)		

5.2. Second phase – monitoring

The timing of the impact evaluation has been defined in the first phase. It is usually carried out 3 to 9 months after the end of the training. The training referent monitors the indicators through the tools defined in the first phase and reports on the evidence. The situation could reveal three scenarios. The first scenario (Scenario #1) shows that the monitored indicators highlight that the expected results have been obtained. It means that the training impact shows that the training aims have been achieved in practice and it is possible to report the results in terms of accountability. In the second and third scenario the expected results have not been achieved, the indicators show that the situation is different from what expected. Consequently, the training referent needs to go into deep, usually through a qualitative analysis, to discover the causes. The model proposes two possible scenarios: the staff need more (or different) training (Scenario #2) or there are obstacles in organizational process to allow the application of the acquired competences (Scenario #3). In the Scenario #2, a new training process is going to be planned, considering the impact of the previous training as a need analysis for the next training event. It could be that competencies levels acquired with the first training are not enough to be applied in practice, it could be that other actors need to be trained, it could be that a different training has to be planned to match the organizational needs. In the Scenario #3, although the competencies seem to be gained, there are difficulties in their application, so that the expected results cannot be observed. It could be that there are protocols to be changed, structures to be re-organized, or more time is needed to observe the expected changes.

6. Limits and conclusion

Through the application of the TIE-H model, the organization is able to analyze the impact of the trainings. Our choice is to analyze a selection of trainings, not the whole amount of trainings provided by the organization. It means to select those trainings that are strategic for the organization to be monitored.

The number depends on the capacity and resources of the Training Center structure. Once selected the training to be monitored, the process starts from the planning phase. It is a strategic step because in clarifying from the beginning the features of the expected results, the training referent has the opportunity to reflect on what is going to change through that training. We observed that this process is helpful also for the training design itself, moreover it permits to define what has to be monitored after the training.

We prefer to use “monitor” and “observation” with the prior intention to avoid the risk to move on a meaning of judgement. Moreover, we observed that it can be hard to find measure to highlight changes, so we give the opportunity to use both qualitative and quantitative tools to monitor the impact.

Finally, this Action Research project gave the opportunity to reflect about the training impact in only one organization, where the TIE-H model and the related processes have been acquired as part of the internal process of training management. The implementation in other healthcare organizations could confirm its possible general application and also contribute to further improving the model. Further studies are needed to test its validity and, in particular, its suitability to different healthcare organizations, and possibly other kinds of organization as well.

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GEORGIAN STUDENTS' PERCEIVED VITALITY, COMPETENCE AND BEHAVIORAL INTENTION TO GERMAN-SPEAKING OUT-GROUP

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Abstract

Attitudes – stereotypes, their antecedents, emotions (i.e., positive – admiration, or negative - contempt) and behavioral intention of Georgian students toward the representatives of German-speaking countries are studied. According to the Stereotype Content Model (Fiske et al., 2002; Fiske, 2015), stereotypes of warmth measure to what extent German-speaking people are perceived as wishing to harm others and stereotypes of competence - how capable they are considered. According to theory, stereotypes are elicited by the corresponding socio-structural antecedents: perceived international image of German-speaking countries, measured by vitality and perceived threat posed by them, measured by fear of assimilation. Combination of stereotypes of warmth and competence, in turn, elicit corresponding emotions, which might lead to certain behavioral intentions, such as wish of cooperation or avoidance, etc. (Cuddy et al., 2008; Fiske, 2018).

The data were collected from 87 native Georgian students using a modified questionnaire from Cuddy, Fiske and Glick's study (2007). The German-speaking out-groups were perceived as competent, having high international status/being vital, eliciting the wish to become similar to the people of German-speaking countries.

The hierarchical multiple regression analysis (we entered demographic variables – age and gender - in model 1, vitality and fear of assimilation in model 2 and warmth and competence in model 3) showed that perceived competence of German-speaking group positively predicted the corresponding behavioral outcome: $\beta = .48$, $t = 3.28$, $p < 0.01$, $F(9, 56) = 3.55$, $p < 0.01$, $R^2 \text{ change} = 0.14$, $p < 0.01$. However, vitality also yielded significant regression coefficient in the previous model: $\beta = .29$, $t = 2.36$, $p < 0.05$, which turned insignificant in the final model. Thus, we conducted mediation analysis, which yielded full mediation: vitality antecedes perceived competence, which, in turn, elicits behavioral intention, $TE = 0.66$, $LLCI = 0.16$, $ULCI = 1.17$; $IE = 0.32$, $LLCI = 0.03$, $ULCI = 0.56$; $DE = 0.35$, $LLCI = -0.12$, $ULCI = 0.81$.

The stereotype content model is usually applied to investigate attitudes to the groups in a given society, while we applied this theory to measure attitudes of Georgian students to distant out-group of German-Speaking people, who, mostly, represent the European Union countries (Germany, Austria, Belgium, Luxemburg, Switzerland and Liechtenstein), and found out that their image on international arena (measured by vitality), predicted wish to become similar to them via eliciting perception of these group as competent.

Keywords: *Stereotype content model, attitudes of Georgian students, German-speaking countries, vitality, fear of assimilation.*

1. Introduction

Attitudes of Georgians to different ethnic out-groups have been studied since the end of the twentieth century (CRRC 2019, 2020; Javakhishvili, 2005, 2018, 2021; Kemoklidze, 2012; Mestvirishvili, 2012, TDI, 2017) and have consistently shown to be hierarchical, meaning that some ethnic groups are held closer than the others (Snellman & Ekehammar, 2005). Specifically, Georgians have been the most acceptive of Europeans, such as Italians, British, Greek, Germans and North Americans, while the least acceptive of their neighbours, such as Armenians, Azerbaijanians (Javakhishvili, 2011, 2012, 2016). The current study looks into more details of these attitudes and aims to explain them on the example of German-speaking groups, such as Germany, Austria, etc. German is the second foreign language after English in Georgia, many Georgian students have received education in

Germany, Austria, Switzerland, thus, we have collected data from those Georgian students who study German as a second language at different Georgian universities.

The attitudes of Georgians toward different ethnic groups have been mostly studied by investigating either stereotypes or behavioral intentions, components of attitudes (Grigoryan et al., 2019; Javakhishvili, 2011, 2012, 2016; MDF, 2018). In the current study, we look at these simultaneously. Stereotypes are studied via pulling out the widely spread social psychological theory called stereotype content model/SCM, which posits that cognitive component of attitude, the same as a stereotype, in other words, what people think of a group, is a combination of the perceptions of these groups as competent and warm. According to the SCM, stereotypes of warmth measure how eager any group representatives are to harm others and stereotypes of competence - how capable they are. The combinations of warmth and competence result into four categories: 1. high warmth/high competence cluster, which usually contains in-group representatives, 2. low warmth/low competence - the most disliked groups, such as homeless; and two ambivalent clusters of 3. high warmth/ low competence - such as housewives, and 4. low warmth/high competence - such as rich are considered (Fiske et al., 2002; Fiske, 2015).

Moreover, according to the theory, stereotypes are elicited by the corresponding socio-structural antecedents: perceived status and competitiveness of a group. If, for example, rich people are seen as having a high status in a society, they will be perceived as competent, and, if they are seen as capable of harm, they are perceived as cold; or, housewives hold low status, but are not competitive, thus, they are perceived as less competent, but warm. Later, authors demonstrated the mediational chain from stereotypes to behavioral intentions through emotions (Cuddy et al., 2007; Fiske, 2018, and from antecedents to emotions through stereotypes (Javakhishvili et al., 2021). In the current study we aim to demonstrate a different mediational chain starting from socio-structural antecedents to stereotypes, ended by behavioral intentions.

Behavioral intention, as one of the components of attitude, has been widely studied since the American sociologist, Emory Bogardus started measuring them using the concept of social distance (Bogardus (1925; Makashvili et al., 2018). This concept means that people hold others at different social distances, starting from the closest, which is marriage, followed by being neighbours, friends, co-workers, etc. Modified versions of this scale have been used many times, in the current study, we used one item that measures to what extent would Georgian students wish to become similar to the representatives of the German-speaking group, indicating a very short distance.

We aim to demonstrate this mediational chain on the example of Georgian students' attitudes to the representatives of German-speaking groups. Because German-speaking groups simultaneously represent citizens of some countries such as Germany, Austria, etc., for socio-structural antecedents we studied perceived international image of this group, measured by vitality and perceived threat posed by it, measured by fear of assimilation. Attitudes of students are of special interest, because, they usually represent the most tolerant part of a society, at the same time being less restricted by everyday problems and fears of losing jobs, etc. (Henry, 2008). The studied group is even more specific, as contains those participants, who study German as their second language, who, unlike general population, are better informed about German-speaking out-group.

The following hypotheses were investigated:

1. German-speaking countries' representatives are perceived as vital, but less threatening; thus, warmer than competent;
2. Behavioral intention of becoming similar is predicted by perceived vitality, fear of assimilation, stereotypes of warmth and competence;
3. Mediation chain from the socio-structural antecedent of vitality through stereotype of competence to the behavioral intention of becoming similar to the representatives of German-speaking group will be detected.

2. Method

The data were collected from 87 native Georgian students using a modified questionnaire from Cuddy, Fiske and Glick's study (2007).

According to the SCM, the stereotypes of warmth are elicited by socio-structural antecedents: the perceived international image of these countries, measured by vitality (two items) and threat posed by them, measured by fear of assimilation (three items). Next, competence and warmth were studied with 8 items in all, three of them for competence and 5 for warmth.

Since we studied attitudes toward the distant out-groups, citizens of European countries, we could not use Cuddy's and colleagues' questionnaire to measure behavioral tendencies. The items would be irrelevant. Instead, we asked participants if they would like to become similar to the people of German-speaking countries.

All items had a 5-point Likert scale as an answering option, where “1” meant “not at all”; “5” meant “absolutely”. Participants were delivered a printed questionnaire requiring approximately 20 minutes to fill out. All respondents were informed that they could stop participation and withdraw their questionnaire, as well as, that their participation in this study would be confidential. We also received approval to conduct this study from the research ethics committee at Ilia State University.

3. Results

Mean scores for vitality $M = 4.42$, $SD = 0.53$ were higher than those for fear of assimilation $M = 2.42$, $SD = 1.03$. Paired samples t-test was statistically significant: $t(86) = 15.98$, $p < 0.001$. Mean score for competence was $M = 4.26$, $SD = 0.61$, while for warmth was $M = 3.40$, $SD = 0.06$. The paired samples t-test was significant: $t(86) = 8.93$, $p < 0.001$. Thus, hypothesis 1 was confirmed.

As, according to the SCM, socio-structural antecedents and stereotypes are predictors of behavioral intentions, we studied vitality and fear of assimilation, stereotypes of warmth and competence as predictors of social distance of becoming similar to the representatives of German-speaking group. The hierarchical multiple regression analysis (we entered demographic variables – age and gender - in model 1, vitality and fear of assimilation in model 2 and warmth and competence in model 3) showed that perceived competence of German-speaking group positively predicted the corresponding behavioral outcome: $\beta = .48$, $t = 3.28$, $p < 0.01$, $F(9, 56) = 3.55$, $p < 0.01$, R^2 change = 0.14, $p < 0.01$. Thus, hypothesis 2 was partially supported.

However, vitality also yielded significant regression coefficient in the previous model: $\beta = .29$, $t = 2.36$, $p < 0.05$, which turned insignificant in the final model. Thus, we conducted mediation analysis, which yielded full mediation: vitality antecedes perceived competence, which, in turn, elicits behavioral intention, $TE = 0.66$, $LLCI = 0.16$, $ULCI = 1.17$; $IE = 0.32$, $LLCI = 0.03$, $ULCI = 0.56$; $DE = 0.35$, $LLCI = -0.12$, $ULCI = 0.81$. Thus, hypothesis 3 was also confirmed.

4. Discussion

As predicted, studied out-group representatives are considered as vital and threatening, warm and competent. However, vitality scores are higher than those of threat scores, meaning that the corresponding countries of these group are considered as having high international status/being vital, but less threatening to assimilate Georgians. The representatives of this group are perceived more as competent than warm. Hierarchical multiple regression analysis enabled us to demonstrate that Georgian students want to become similar to the out-group members.

The stereotype content model is usually applied to investigate attitudes to the groups in a given society (Fiske et al, 2002, Fiske & North, 2015), while we applied this theory to measure attitudes of Georgian students to distant out-group of German-speaking people, who, mostly, represent the European countries (Germany, Austria, Belgium, Luxemburg, Switzerland and Liechtenstein), and found out that their image on the international arena (measured by vitality), predicted wish to become similar to them via eliciting perception of this group as competent. Previous studies of the social distance of Georgians to representatives of Germany showed a very positive attitude, social distance to this group was short, meaning that Georgians held German-speaking people close (Javakhishvili, 2011, 2012, 2016). The current study enabled us to demonstrate the mechanism of this attitude. Based on the international image of powerful and respected Germanic countries Georgian students think that representatives of German-speaking group are competent and thus evoke behavioral intention of becoming similar to them.

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FROM COMMITMENT TO ORGANIZATIONAL PERFORMANCE: WHAT ABOUT THE ISSUE OF EMPLOYEE RETENTION?

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Abstract

The purpose of this paper is to present a critical analysis of the literature on high commitment, high involvement and high-performance management systems, in order to question the relevance of these models to meet contemporary challenges in human resource management. There is a need to revisit the attributes and influences of "new HRM" to assess whether the initial premises of these models are solutions for the human problems of today's organizations. The results of our analysis generate the proposition of a potential new high retention system that induces a perspective where commitment becomes a necessary goal, not just one of the means, to promote organizational performance, psychological health and well-being at work.

Keywords: *Human resource management, high commitment systems, high involvement systems, high performance systems, employee commitment, employee retention.*

1. Introduction

Over the last decades, the turbulent economic environment, characterized by globalization and market deregulation, has been the norm for most organizations that have focused their efforts on continuous change to support their performance (Saranya & Asok, 2019). At the heart of these transformations was the need to promote employee commitment through job enrichment and worker participation (Wood, 1999).

In this context, the 1980s witnessed the rise of new HR systems aimed at obtaining employee commitment (high commitment management; Walton, 1985) or encouraging their participation (high involvement management; Lawler, 1986), systems that reflected a particular employer orientation based on a view of the worker as a competitive advantage (Wood, 1999). Similarly, the 1990s brought forth a new paradigm of high-performance work systems (Delaney & Huselid, 1996) based on the pursuit of optimal flexibility and performance through HR management practices that encouraged skills development, motivation and performance. These new models testified to the desire to move away from the Taylorian heritage (Peutere, Saloniemä, Böckerman, Aho, Nätti & Nummi, 2022). Therefore, it seems appropriate to revisit the practices associated with the "new HRM" (Plaskoff, 2017), particularly through the prism of employee retention. This text focuses on the contribution of human resource management systems to better meet future post-pandemic era human challenges in organizations.

2. HRM systems based on commitment, involvement and performance

Arguing that a significant change was taking shape in control-based management approaches, Walton (1985) proposes the foundations of a new management model based on worker commitment: High-commitment management (HCM). This model is characterized by various human resource strategies. Among them, the reconfiguration of jobs, the use of teamwork, new remuneration policies, a certain job security, the possibility for workers to have their voice heard and the search for mutuality in labor relations. This HCM model is based on the premise that the participation and creativity of employees are consequential to the granting of greater responsibilities, the recognition of their contribution and the support to find satisfaction in their work. Unlike the control model rooted in Taylorism and whose effectiveness resulted from rules, procedures and direct supervision acting as regulatory mechanisms, the HCM aims to develop self-regulated behaviors based on trust (Rubel, Rimi, Yusliza & Kee, 2018). Later, Lawler (1986) lays the foundations of a new HR management model, high involvement management (HIM), which is echoed in research linking participation to the determinants of organizational effectiveness. Based on the sharing of information and power, the development of skills and rewards aligned with organizational performance, this management system emphasizes the importance of dissemination of these practices

downwards to achieve better results and two-way communication. The effectiveness of this model comes from the multiplier effect of its attributes and the highlight on skills and knowledge development among workers (Wood, 1999).

Although the terminology of these two systems testifies to their dominant dynamic on commitment and involvement (Boxall & Macky, 2009), the fact remains that HCM and HIM are mutually characterized by the combined use of certain practices (e.g. flexibility in employment, problem-solving groups, teamwork, minimal differences in status). The assumption is that the effect of these practices on worker commitment and involvement will have an impact on organizational performance (Wood, 1999). The introduction of the terms related to high performance work systems in the 1990s gave rise to the emergence of different paradigms. Appelbaum (2004) bestows distinctive characteristics on the high-performance work model. In addition to the organization of work providing employees the possibility to contribute discretionary effort through participation in decisions, which constitutes its major characteristic, the model also encompasses human resource management practices that improve worker skills and encourage employee participation.

Considering these elements and because no consensus exists on the nature of the practices in these HR systems, our discussion will be oriented towards high-commitment strategies, those that seek to create the conditions for employee identification with the organization. Thus, a look at the notion of organizational commitment seems essential.

3. What about organizational commitment?

The concept of organizational commitment (OC) has been the subject of numerous works in organizational behavior (Gagnon & Gosselin, 2019). Despite the general acceptance of the various forms that employee commitment can take and the different antecedents and consequences of each (Meyer & Allen, 1997), the work of Meyer and Allen (1991) supported the existence of a three-dimensional construct that goes beyond the mere congruence of values and goals initially identified by Mowday, Steers and Porter (1979) and encompasses the desire, need or obligation to remain with the organization. Their three-component model (affective, normative and continuance) identifies the psychological states that underlie the dimensions of the concept. While affective commitment denotes emotional attachment, identification and participation of the individual in the organization, normative commitment reflects the perceived obligation to remain within it. For its part, continuance commitment reflects the individual's perception of the costs associated with leaving the organization (Meyer, Stanley, Herscovitch & Topolnytsky, 2002).

Based on a definition where commitment is seen as a force binding the individual to behaviors and based on the possible existence of a core essence characteristic of the construct, Meyer and Herscovitch (2001) have developed a general model of commitment in the workplace. This general model considers not only its dimensions (affective, normative and continuance) and the state of mind that characterizes them (desire, obligation and cost), but also the mechanisms (identification, reciprocity, investment) and the different targets towards which the commitment is directed (Meyer, Becker & Vandenberghe, 2004). Furthermore, although studies on the impact of HRM practices have focused more on the measurement of affective commitment, Meyer and Allen (1997) have also reported their influence on normative and continuance commitments.

4. Human resource management practices and organizational performance

The importance of human resource management on organizational performance has given rise to numerous works that have focused on the links between HR practices (e.g., selection, training, performance evaluation) and various performance indicators (Das, 2022) based on the implicit assumption that the effects are additive, where more is better than less (Kaushik & Mukherjee, 2021). However, the low level of explained variance in organizational performance has led to the confirmation of a limited impact of isolated practices, a perspective that paves the way for the need of complementary practices to obtain a substantial effect (Arthur, 1994). Thus, based on configurational theories according to which the combination of practices has a better influence on organizational performance, researchers have attempted to identify typologies of practices (Barrette & Carrière, 2003). These configurations of practices aim to improve worker commitment and participation. The idea of an internal fit from the resource-based view of the firm, considering that a human resource system represents more than the simple sum of its constituent parts, has invigorated discussions relating to the synergy, practice clusters, holistic approaches, configurations, and contingency factors (Becker & Gerhart, 1996). On the other hand, other authors have been more inclined to propose the existence of an identifiable set of HRM best practices that would have positive, universal, and additive effects on performance (Becker & Gerhart, 1996).

According to Guthrie, Spell and Nyamori (2002), two perspectives have mainly been used to explain the relation between HRM and organizational efficiency. First, a universal approach supporting a direct relationship between best practices and organizational performance. Then, a contingent approach favoring a dependency relationship between the effects of human resource management on performance and the characteristics of the organization, in particular its competitive strategy. Moreover, some argued that these two approaches are more complementary than opposed.

Boxall and Macky (2009) pointed out that most research focuses on economic performance, with the success of new models being associated with an increase in profitability. However, the evaluation of profitability has taken various avenues: results at the company level (Huselid, 1995) or the costs/benefits associated with work results (Appelbaum, Bailey, Berg & Kalleberg, 2000). However, for Boxall and Macky (2009), the question of performance cannot be reduced solely to these aspects. Indeed, one of the premises of high-performance work systems is the dependency of these systems upon a positive response from workers. Thus, prior to the performance of the team, which would have an impact on the organization, there would initially be a notion of individual performance nascent of the interactions between the skills of the employee, his discretionary efforts and the opportunities offered to him. From this point of view, two fundamental questions emerge: what are the practices resulting from the various HRM fields of activity that promote individual performance and in what way they exercise their influence? The review of various research carried out in the years 1990-2000 makes it possible to identify certain answers to these questions (Kaushik & Mukherjee, 2021).

Huselid (1995) demonstrated that HR activities concerning skills improvement (e.g., training, selection), were associated negatively with turnover and positively with organizational financial performance, whereas those focusing on worker motivation (e.g., opportunities for promotion, performance evaluation), were positively associated with productivity. These observations made it possible to identify two trajectories of influence of HR practices on performance: one acting on the development of workforce expertise and the other structuring the attitudes and behaviors of workers. Contrary to the theoretical postulates, the effect of the complementarity of practices (internal fit) turned out to be modest and the effect of alignment on business strategy (external fit) was weak on organizational performance. The observations of Cappelli and Neumark (2001) point in the same direction. Also interested in the synergy between work practices and organizational performance, these authors identified a set of work practices among a theoretical range of combinations. Although their results highlighted some interactive effects of high-performance work practices on increased productivity, Cappelli and Neumark (2001) point out that the combined effects of bundles of practices, for which the synergy seemed obvious, were generally small and statistically non-significant. They conclude that the theoretical assumption of a contingent rather than a universalist model remains relevant.

In order to verify the effect of complementarity of HR practices on organizational performance, Barrette and Carrière (2003) demonstrated that an increase in the level of complementarity of HRM activities was associated with greater organizational performance. However, the complementarity of HR practices had more effects on productivity, efficiency and competitive positioning in the manufacturing sector, while its influence was greater on customer acquisition and growth in the services sector. Moreover, they emphasize *“the important role that the acquisition and development of human potential seemed to play in organizational performance, regardless of the type of organization studied”* (p. 443).

For other authors, however, the link between HR practices and performance is not necessarily direct, suggesting the presence of mediating effects. Beaupré and Cloutier (2007) position themselves in this camp. From the principle that a coherent system of mobilizing human resources practices is *“a source of competitive advantage by focusing on the will to act (commitment), the power to act (skills) and the opportunity to act (structure of work and resources)”* (p. 518), the authors' objective was to identify those practices and gain a better understanding of their link with socio-economic performance. Their observations highlighted two categories of mobilizing practices with distinct mechanisms of action: management practices that have a direct impact on commitment (information sharing and active participation) and practices having an indirect influence on commitment (results-based performance management, specific training and resource allocation) through perceptions of support and justice. They suggested that socio-economic performance could be the result of an internal consistency of practices that make it possible to reconcile the commitment of workers and their skills with the opportunities offered, and of a symbolic consistency that has a synergistic effect on commitment. Similar conclusions also appear in others studies.

5. Toward a high retention system

It is clear that the direct effect of HR systems on organizational performance remains limited, although in some respects promising. It appears that their ability to generate greater organizational performance is obviously variable and influenced by many organizational considerations

(Jiang, Lepak, Hu & Baer, 2012). However, their dissemination in a plurality of workplaces mean that it is still important to take an interest in them today. In fact, several studies over the past decade have highlighted the contribution of various versions of these models, particularly in terms of profitability (Jiang, Lepak, Hu & Baer, 2012), employee turnover (Selden, Schimmoeller & Thompson, 2013), job satisfaction (Latorre, Guest, Ramos & Gracia, 2016) or well-being at work (Wood & Ogbonnaya, 2018). The proposed analysis contributes to shed light on several elements allowing a better appreciation of the contemporary relevance of these models, and in doing so, it opens the way to the proposal of renewed studies on the subject.

First, we note that certain HRM practices associated with these systems seem, from a pragmatic point of view, ill-suited to the current dynamics of the labor market. With the dematerialization of workplaces and the increasing presence of algorithmic HRM, the traditional levers of mobilization mediated by an organizational culture marked by formal interactions between employees and managers could prove to be obsolete, especially given recent trends observed in the organization of work since the pandemic crisis. Next, the need and the opportunity for researchers to validate the influence of new management practices, whether universal or contingent, remain evident in light of our review. Similarly, the importance of following the path of strategic HRM by focusing on bundles of practices, as the core of high-performance management systems, is just as obvious (Aydogan & Arslan, 2021). Paradoxically, this need to consider new practices can also open the door to a reconsideration of more traditional HRM practices, some of which have been reconsidered by organizations, such as organizational career management (Gosselin, Dolan, Tremblay & B nard, 2022).

In a context of labor shortages, sanitary uncertainty, marked attention to psychological health at work and transformation of values toward a decentralization of work, the challenge of generating organizational commitment remains glaring and unavoidable. This situation, combined with contemporary organizational concerns, suggests a necessary change of perspective, and even the need for a new paradigm of HRM. We propose that the foundation of this new paradigm should be associated with a high retention HR system where attitudes would no longer be a simple means to achieve performance, but an essential purpose for the workforce, without which no performance is possible (Lee, Hom, Eberly & Li, 2018).

In order to stimulate reflection and research in this space, we can assume that the most successful organizations will be those that can acquire and retain employees with the profile needed to ensure their sustainability, therefore the organizations that will have operationalized a certain form of high retention system. It now remains to identify the outlines of this new HR system. As the first iterations of the high-performance systems, it is possibly the synergistic and complementary effects of practices that must be prioritized. More specifically, a high retention model implies that the achievement lies in upstream organizational performance, which would make it possible to create the winning conditions for attracting and retaining human resources who, once well committed to their employer, could in turn boost the organization's results. The challenge associated with the emergence of the conditions for implementing this system will be great for organizations and the operationalization of a high retention HR model represents more a world of possibilities than a formal prescription.

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STRATEGIC CAREER BEHAVIORS IN FLEXIBLE WORKING PATTERNS: A MEDIATION ANALYSIS

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Abstract

The main purpose of this study is to predict the use of strategic career behaviors from a set of antecedents and to determine their impact on a variety of consequences in a sample of European workers. A total of 739 employees (Male=442, 59.8%) participated in this study, with a mean age of 27.64 years (SD=8.48; Min-Max=18-70), working mostly full-time (n=398, 53.9%) and with 46.35% of their work being done remotely. These participants were assessed on personal, demographic, and career-related variables via an online questionnaire. Objective career success was removed from the model for being uncorrelated to most variables. Mediation analysis showed that strategic career behaviors only fully mediated the relationships between desire for career control and perceived career control and that between perceived organizational support and subjective career success. These results are important for informing recommendations and career management strategies for organizations and individuals.

Keywords: *Strategic career behaviors, flexible working patterns, career management, European workers.*

1. Introduction

The recent Covid-19 pandemic led many individuals and organizations to adopt flexible working arrangements (Milasi, González-Vázquez, & Fernández-Macías, 2021). These changes have posed challenges for personal career management, with many finding remote work to negatively affect long-term career prospects and opportunities for advancement (Tavares, Santos, Diogo, & Ratten, 2020). Bloom, Liang, Roberts, and Ying (2015) suggested that remote work impairs advancement as it clashes with the belief that productivity means time spent on the job (as per Green, Tappin, & Bentley, 2020; Posner, Hassink, & Plantenga, 2014). This also affects the perception office-bound colleagues have of remote workers, in turn affecting the consistency of their performance (Baruch, 2000). Furthermore, without direct communication and social interaction with colleagues, remote workers may worry they are missing opportunities for mentorship and to develop an identity within the company (Tavares et al., 2020; De Vries, Tummers, & Bekkers, 2019). Also, the autonomy expected means greater responsibility for defining roles and for managing long-term career (Raabe, Frese, & Beehr, 2007; Wrzesniewski, & Dutton, 2001). Hence, it is of particular importance to understand the specific challenges for those in remote work (Satici, Saricali, Satici, & Griffiths, 2020).

2. Aim, method and instruments

The present work extends a preliminary study that investigated strategic career behaviors (SCB) in a sample of Iberian remote workers using the Kaleidoscopic Career Model (KCM; Mainiero & Sullivan, 2006) as the central factor in a larger model (Figure 1, left). The KCM (15 items) is composed of three SCB: authenticity (moving one's career in alignment with personal values); balance (allocating time and energy between career and non-career duties); and challenge (seeking challenges and opportunities for growth and career advancement). The antecedents in the broader model were perceived self-efficacy (PSE; Kossek, Roberts, Fisher, & DeMarr, 1998; 11 items), desire for career control (DCC; King, 2000; 7 items), perceived organizational support (POS; Eisenberger et al., 1986; 11 items), and the consequences were perceived career control (PCC; Kuijpers & Scheerens, 2006; 5 items), objective career success (OCS; Whitely, Dougherty, & Dreher, 1991; measured using percentage of salary increase [%SI] and number of promotions [PRO] in the previous 6 years), subjective career success (SCS; Briscoe et al., 2021; 20 item [importance]) and career satisfaction (SAT; Briscoe et al., 2021; 20 items [achievement]). All factors except OCS were measured on 5-point Likert-type scales. These were

chosen as previous studies showed links between SCB and various career and personal aims (Desrosiers, 2001; King, 2000; Kossek et al., 1998; Lau & Pang, 2000; Lent & Brown, 2006; Raabe et al., 2007; Sturges, Guest, Conway, & Davey, 2002). However, previous research has been pairwise, and findings generally focus on traditional office settings, and has not investigate the interaction of these factors among remote workers. While the preliminary study did focus on remote workers, it was limited to those in Spain and Portugal.

Therefore, the present study aims to investigate these interactions among remote workers in a wider European population and used a questionnaire assessing factors in the model and personal, employment and sociodemographic variables. This study is part of a wider project funded through FCT – *Fundação para a Ciência e Tecnologia*, I.P. under the EXPL/PSI-GER/0321/2021 project – *EURECA: New career strategies for new European remote careers*. This was reviewed and approved by the CRC-W (Catholic Research Centre for Psychological, Family and Social Wellbeing) Review Board. Participants were informed of all procedures and data were collected online in June 2022.

3. Participants

The sample consisted of 739 employees, mostly male (N=442, 59.8%), single (N=499, 67.5%) with no children (639, 86.5%), with a mean age of 27.64 years (SD=8.48; Range=[18, 70]), working mostly full-time (N=398, 53.9%) and with 46.35% of their work done remotely. The majority worked in small (1-25 employees: N=250, 33.8%; <250 employees: N=204, 27.6%), private organizations (N=550, 74.4%) in the following industries: media, cultural, graphical (N=108, 14.6%); mechanical and electrical engineering (N=82, 11.1%); commerce (N=80, 10.8%); education (N=71, 9.6%); health care and social assistance services (N=71, 9.6%); and financial services (N=64, 8.7%). The majority were on salaries of less than 1500€/month (<1000€: 42.2% [N=312]; 1000–1499€: 28.6% [N=211]), had seen, on average, a 13.549% (SD=26.414%, [-100, 100], N=707) increase in their salaries), and had received, on average 0.94 (SD=1.263, [0, 10], N=738) promotions over the previous 6-year period. The participants' education levels showed 37.1% (N=274) had completed secondary education only, while 40.7% (N=301) and 20.8% (N=154) had completed up to a bachelor's or master's, respectively.

4. Analysis and results

Table 1. Relationships between Antecedents and Consequences of Strategic Career Behaviors.

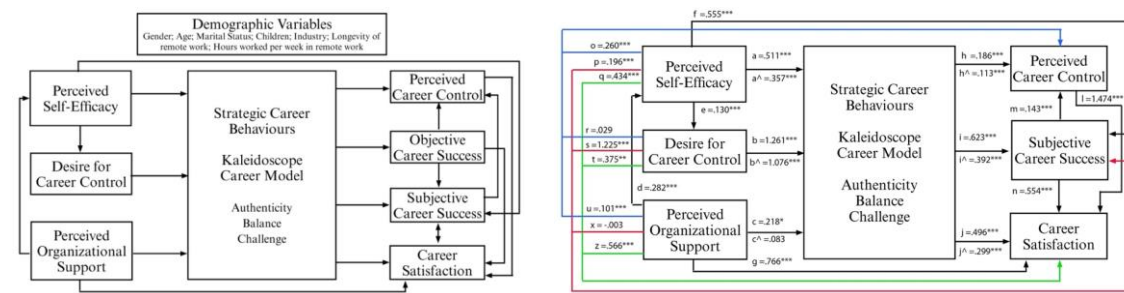
a. Correlations								*p<.05 **p<.01 *** p<.001	
Variable	1	2	3	4	5	6	7	8	
1. PSE	—								
2. DCC	.254***	—							
3. POS	.228***	.052	—						
4. SCB	.348***	.437***	.120**	—					
5. PCC	.541***	.251***	.258***	.435***	—				
6. SCS	.355***	.593***	.092*	.587***	.355***	—			
7. SAT	.366***	.256***	.307***	.361***	.458***	.428***	—		
8. OCS (%SI)	.092*	.085*	.097*	.033	.057	.073	.108**	—	
9. OCS (PRO)	.106**	.029	.085*	.053	.135***	.059	.158***	.224***	

b. Regressions (expected paths only)								
IV	DV	B	SE(B)	β	R ²	R ² adj.	t	p
PSE	SCB (path a)	.511	.051	.348	.121	.120	14.823	<.001
—	DCC (path e)	.130	.018	.254	.065	.063	7.139	<.001
—	SCS (path f)	.555	.054	.355	.126	.125	10.322	<.001
DCC	SCB (path b)	1.261	.096	.437	.191	.190	13.179	<.001
POS	SCB (path c)	.218	.066	.120	.014	.013	3.287	.001
—	PSE (path d)	.282	.044	.228	.052	.051	6.362	<.001
—	SAT (path g)	.766	.088	.307	.094	.093	8.745	<.001
SCB	PCC (path h)	.186	.014	.435	.189	.188	13.111	<.001
—	SCS (path i)	.623	.032	.587	.345	.344	19.692	<.001
—	SAT (path j)	.496	.047	.361	.130	.129	10.495	<.001
PCC	SAT (path l)	1.474	.105	.458	.210	.209	13.981	<.001
SCS	PCC (path m)	.143	.014	.355	.126	.125	10.299	<.001
—	SAT (path n)	.554	.043	.428	.183	.182	12.845	<.001

c. Outcome: Strategic Career Behaviors (SCB)							Note. n= 738; Confidence for all CIs in ou tput: 95.0000
R	R-sq	MSE	F	df1	df2	p	
.503	.253	8.00	82.791	3	735	<.001	
Main model		Coeff (B)	se	t	p	LLCI	ULCI
PSE (path a^)		.357	.050	7.173	<.001	.259	.454
DCC (path b^)		1.076	.095	11.302	<.001	.889	1.263

							percentile bootstrap confidence intervals: 5000							
POS (path c [^])							.083	.059	1.388	.166	-.034	.199		
d. Outcome: Perceived Career Control (PCC; Blue paths, Figure 1, right)														
R	R-sq	MSE	F	df1	df2	p								
.615	.379	3.12	111.789	4	734	<.001	Indirect effects on PCC							
Main model	Coeff (B)	se	t	p	LLCI	ULCI	Effect	SE	LLCI	ULCI				
PSE (path o)	.260	.020	12.953	<.001	.220	.299	.0613	.0097	.0432	.0813				
DCC (path r)	.029	.040	.722	.470	-.050	.108	.2164	.0278	.1647	.2745				
POS (path u)	.101	.023	4.347	<.001	.055	.146	.0382	.0126	.0146	.0642				
SCB (path h [^])	.113	.014	7.879	<.001	.142	.435								
e. Outcome: Subjective Career Success (SCS; Red paths, Figure 1, right)														
R	R-sq	MSE	F	df1	df2	p								
.760	.498	6.96	182.186	4	734	<.001	Indirect effects on SCS							
Main model	Coeff (B)	se	t	p	LLCI	ULCI	Effect	SE	LLCI	ULCI				
PSE (path p)	.196	.045	4.385	<.001	.108	.284	.2862	.0035	.2210	.3530				
DCC (path s)	1.225	.090	13.647	<.001	1.049	1.401	.5429	.0569	.4378	.6588				
POS (path x)	-.003	.052	-.064	.949	-.105	.098	.1354	.0443	.0496	.2241				
SCB (path i [^])	.392	.032	12.203	<.001	.329	.455								
f. Outcome: Career Satisfaction (SAT; Green paths, Figure 1, right)														
R	R-sq	MSE	F	df1	df2	p								
.501	.251	11.027	61.356	4	734	<.001	Indirect effects on SAT							
Main model	Coeff (B)	se	t	p	LLCI	ULCI	Effect	SE	LLCI	ULCI				
PSE (path q)	.434	.071	6.122	<.001	.295	.573	.1866	.0321	.1264	.2519				
DCC (path t)	.375	.142	2.638	.009	.096	.654	.5333	.0802	.3849	.7005				
POS (path z)	.566	.082	6.895	<.001	.405	.727	.0986	.0342	.0328	.1685				
SCB (path j [^])	.299	.051	5.884	<.001	.199	.399								

Figure 1. Conceptual Model using the Kaleidoscope Career Model and its Antecedents and Consequences on Remote Workers (left); Analyzed Unstandardized Coefficients of the Career Management Model (right).



*p<.05, **p<.01, ***p<.001

Pearson correlation analysis was conducted using SPSS (IBM, Version 28) between all factors in the model. Results (Table 1.a) indicated that OCS was not related to most variables or SCB and was hence removed from the model. However, correlations were found between all other variables except DCC and POS. Many of these were in contrast to the preliminary study, as was the direction of the correlation between PSE and DCC. This much broader set of correlations allowed for a deeper investigation into the predictive and mediating effects of SCB. Direct regression analyses (Table 1.b) were conducted between correlated factors. All were significant, including those not expected in the model: PSE to PCC (B[SE] =.340[.019], $\beta = .541$, $R^2_{adj} = .292$, $t = 17.479$, $p < .001$); PSE to SAT (B[SE] =.740[.069], $\beta = .366$, $R^2_{adj} = .133$, $t = 10.675$, $p < .001$); DCC to PCC (B[SE] =.310[.044], $\beta = .251$, $R^2_{adj} = .062$, $t = 7.048$, $p < .001$); DCC to SCS (B[SE] =1.817[.091], $\beta = .593$, $R^2_{adj} = .351$, $t = 19.983$, $p < .001$); DCC to SAT (B[SE] =1.016[.141], $\beta = .256$, $R^2_{adj} = .064$, $t = 7.183$, $p < .001$); POS to PCC (B[SE] =.200[.028], $\beta = .258$, $R^2_{adj} = .065$, $t = 7.235$, $p < .001$); and POS to SCS (B[SE] =.178[.071], $\beta = .092$, $R^2_{adj} = .007$, $t = 2.512$, $p = .012$). Many of these were not found in the preliminary study and, contrarily, PSE positively predicted SCB. The antecedents combined explained 25.3% of the variance in SCB (Table 1.c), with PSE and DCC, but not POS, being good predictors, suggesting the POS to SCB relationship may be mediated by PSE and DCC. As the direct regression paths were significant, analysis using PROCESS model 4 (Hayes, 2013) tested these paths as mediated by SCB (Table 1.d-f). All three models were significant. PSE and POS were significant predictors of PCC and had significant indirect effects. This shows that SCB only partially mediate the relationships from PSE to PCC and POS to PCC. DCC was not a significant predictor of PCC in the presence of SCB, but had a significant indirect effect, suggesting the weak relationship is mediated by SCB. For SCS, DCC and PSE were significant predictors and had significant indirect effects in the presence of SCB, showing that SCB only partially mediate the PSE to SCS (path f) and DCC to SCS paths. POS was not a significant predictor of SCS in the presence

of SCB but had a significant indirect effect, suggesting the very weak POS to SCS relationship is mediated by SCB. For SAT, all antecedents were significant predictors and had significant indirect effects in the presence of SCB, showing that SCB partially mediate the PSE to SAT, DCC to SAT, and POS to SAT (*path g*) relationships.

5. Discussion and conclusion

The present study aimed to analyze the antecedents and consequences of SCB among European remote workers. Results showed that POS predicted PSE and SAT (*paths d, g*), suggesting that feeling supported by one's organization leads individuals to adopt a positive view of their skills and abilities. This link is crucial for remote workers, as higher self-efficacy motivation towards challenging tasks in the remote environment (King, 2000; Kossek et al., 1998; Raabe et al., 2007; Van Vianen, De Pater, & Preenen, 2008). Feeling supported by one's organization is also an important factor in one's well-being (Desrosiers, 2001), which helps to explain the present results showing an effect of POS on SAT (*path g*). PSE also predicts DCC (*path e*). This finding aligns with King (2000, 2004), who argued that perceived self-efficacy increases when career control leads to good outcomes, which in turn increases the desire for more career control. Individually, PSE, DCC and POS all predicted SCB (*paths a-c*). However, the effect of POS on SCB becomes insignificant in the presence of PSE and DCC (Table 1.c). This may be a result of the locus of agency in the variables. PSE and DCC regard personal, internal agency, whereas POS regards the perception of what is being received from an external agent. Alternatively, regardless of the level of organizational support perceived, any effect of POS on SCB may be moderated by the importance one places on receiving organizational support for subsequently engaging in SCB. Also, there were significant direct effects of POS on PCC and SAT (Table 1.b), and a significant indirect effect on SCS (Table 1.e). These findings combined with the former suggest that PSE and DCC may mediate the effects of POS on SCB and on the consequent variables. PSE predicted SAT, but accounted for less variance than in the preliminary study. This is likely due to the different measure of career satisfaction (Greenhaus, Callanan, & Godshalk, 1990 vs. achievement score from Briscoe et al., 2021). PSE also predicted SCS (*path f*), in line with previous support for a link between self-efficacy and job performance and motivation (King, 2000; Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991), which can contribute to SCS (Heslin, 2005). In mediation with SCB, PSE remained a significant predictor of SAT, but also had significant indirect effects, suggesting SCB are only partial mediators. Only the relationship between DCC and PCC and that between POS and SCS were fully mediated by SCB. The former suggests that turning a desire for control into a sense of control requires taking specific action. The latter suggests that the role feeling supported by one's organization has in how successful one feels relies heavily on whether one takes action to develop a career. For the other relationships, results suggested SCB were only partial mediators. For PSE, feeling efficacious may suffice to feel successful, satisfied or in control of one's career, regardless of any action taken to develop it. Indeed, PSE related negatively to SCB in the preliminary study, suggesting feeling efficacious reduces the need for SCB. It is possible that SCB do not play a central, or that KCM in that central role needs further investigation. The sample may also be a factor, as most were unmarried, had no children, and were relatively young. Also, a third resided in Portugal, a quarter in Poland, and a quarter in Italy, Spain and Greece, and a large proportion received low salaries. Hence, the findings may result from lower salaries and/or southern European cultures. These various factors may need further investigation. As remote-working becomes more prominent, it remains important to understand the factors affecting these careers in order to find ways to support individuals in managing their own. This research will inform recommendations and career management strategies for organizations and individuals, taking account of differences in national cultures, individual goals and beliefs about success.

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THE PROMOTION OF EXTERNAL EXPLANATIONS: THE CASE OF SANCTIONS DISTRIBUTED IN THE FAMILY FIELD

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Abstract

Whether to explain the reinforcements that one receives or the behaviors that one adopts, many researches show the existence of internal attributions. However other researches, carried out in order to explain the distributive behavior of sanctions, *i.e.* exclusively focused on the distributor of a sanction, show that the attributions are more hetero-attributive than self-attributive, more external than internal. The latter researches having been carried out in the field of training or in a professional environment, the purpose of the present research is to extend them to the family sphere by studying the explanation of the sanctions administered by a parent to his children and between spouses. 55 participants were confronted with scenes in which a parent sanctioned (positively or negatively) his children and a husband his spouse (vs a spouse her husband). Each sanction, whether positive or negative, was followed by internal and external explanations. The participants had to indicate the degree of acceptability of these explanations. It is observed that the distributor of the sanction is never considered as the primary cause of the sanction: the receiver or the context, *i.e.* external targets, come first. These results are discussed in relation to the available knowledge on attribution.

Keywords: *Internality, sanctions, equity, family.*

1. Introduction

It has long been known that what happens to us in everyday life, whether positive (success) or negative (failure) events, can, from a causal point of view, be explained in two ways: by internal factors (successes or failures that we obtain because of our personality or our behavior) or by external factors (the chance, the arbitrary decision others, etc.). This dichotomization refers to what Lefcourt (1966) and Rotter (1966) called the *Locus of Control*. And a great deal of research have highlighted a prevalence of internal explanations, even in cases where the obvious should lead us to appeal to external causes (*e.g.* the reviews by Langer, 1975; by Lerner, 1965; by Lerner & Simmons, 1966).

This accentuation of the actor's weight has had several interpretations. It was initially considered by Lefcourt (1966) and Rotter (1966) as relating to personality (people would be mostly internal and would thus consider what happens to them as the consequence of their personological characteristics). Afterwards, it was interpreted as an error, a cognitive bias called "attribution error" (Nietzsche, 1968, p. 163) or "fundamental attribution error" (Ross, 1977, p. 184). But a few years later, another interpretation emerged, no longer in terms of bias but of social normalization: if we provide, even against all objective evidence, more internal answers than external ones, it would be because internal answers would be socially valued (*cf.* Jellison & Green, 1981).

Otherwise, if we move from the domain of the explanation of events to that of the explanation of behavior, we also have known for a long time (especially since Heider's reseraches, 1944, on attribution) that when we have to determine the reason for our behavior (or the reason for the behavior of others), we also can refer either to internal explanations or to external factors. The data from some researches then showed that internal explanations could again be given priority (*e.g.* the reviews by Jones, 1979; by Ross, 1977), which led some authors to consider that this accentuation would come from the fact that it would also be socially valued (*cf.* Beauvois & Le Poutier, 1986). But several other researches, which were carried out after theoretical support, have shown that it is, on the contrary, external explanations that are the most frequent and the most valued. This is the case of Gangloff's the pinceps research (2004), conducted as part of the training. The theoretical basis, the initial idea, was quite simple: if at school, a child is rewarded or punished by his teacher, this sanction will be the subject, according to the results of studies on the LOC, of

an internal explanation: the receiver of the sanction, that is to say the pupil, will say himself (and will be said) responsible for this sanction, this reinforcement. As a corollary, this means that the distributor of the sanction, that is to say the teacher, can only say that he is (and be said) not responsible for his distributive behavior of sanction. This is what Gangloff (2004) called the LOD or *Locus of Distribution*, in no longer getting into the role of the receiver having to explain, in terms of LOC, his reception, but getting into the role of the distributor of the sanction having to explain a particular behavior, in this case a distributive behavior of sanction, and by showing, in his research, that to explain the sanctions they administer to their students, teachers did appeal massively to external causes, and that these external causes were socially valued. This research was replicated in Argentina, with similar results (Mayoral, Gangloff, & Romero, 2009). And several other researches, carried out in the workplace to explain the sanctions distributed by hierarchical managers to their subordinates, have also highlighted the prevalence and valorization of external explanations (cf. Gangloff & Duchon, 2013; Gangloff, Soudan and Rezrazi, 2016; Mayoral, Gangloff, & Romero, 2011).

The present study aims to extend these researches to the family sphere by examining the desirability of the explanations provided in justification of the sanctions distributed by a parent to his children and by a husband to his partner. The hypothesis is that the explanation of these sanctions will again focus more on the receiver of the sanction (external cause) than on the distributor (internal cause).

2. Method

2.1. Participants

55 men and women, parents of children aged seven to fifteen, were contacted using the snowball technique and, on a voluntary basis, responded individually, at their workplace and in a face-to-face situation, to a questionnaire, being divided into two groups, each being confronted to a specific questionnaire.

2.2. Instrument and procedure

Each participant was confronted with a questionnaire in which a man (questionnaire 1) vs a woman (questionnaire 2) positively or negatively sanctioned his children or his spouse (vs her husband). Each questionnaire included 4 situations followed by six explanatory proposals that participants had to rank in order of acceptability, from 1 (explanation they considered most acceptable) to 6 (the less acceptable). Two explanations were internal (referring either to the personality or the mood of the distributor of the sanction), two others referred to characteristics of the recipient of the sanction, and the last two ones to characteristics external to both the distributor and the recipient: cf. table 1.

Table 1. questionnaire for a man (for a woman, it was similar but suitable for her gender).

<p>Potitive sanction with regard to the children: <i>When I am tolerant with my children, it is because...</i> 1) I'm having a good day, 2) I'm a caring person, 3) they behaved well, 4) they are good children, 5) I was advised to sometimes be less strict with them , 6) it is an educational technique</p>
<p>Negative sanction with regard to the children: <i>When I am severe with my children, it is because ...</i> 1) I had a tough day at work, 2) I am someone who doesn't let anything go, 3) they misbehaved, 4) they are difficult children, 5) I was advised to sometimes be severe with them, 6) it is an educational technique</p>
<p>Potitive sanction with regard to the spouse: <i>When I get mad at my spouse, it is because...</i> 1) I had a tough day at work, 2) I get angry easily, 3) she deserved it, 4) she has a difficult character, 5) sometimes it happens in a couple, 6) it's often like that, the couple's life</p>
<p>Negative sanction with regard to the spouse: <i>When I give a present to my wife, it is because...</i> 1) I'm having a good day, 2) I'm a generous person, 3) she deserved it, 4) she has a lovely character, 5) in a couple, it is sometimes necessary to give presents, 6) it is normal, in a couple</p>

For a man, the instruction was as follows (for a woman, the instruction was similar but adapted to her gender): “Here are some behaviors that Paul has in his family (towards his children and towards his wife). Paul can use 6 reasons to explain why he behaves like this. You are asked to rank each explanation from 1 to 6, marking 1 for the most acceptable explanation, which satisfies you the most; up to 6 for the one you consider the least acceptable, which satisfies you the least. There are no right or wrong answers: it is your opinion that interests us, and your answers will remain anonymous”.

3. Results

The average of the scores assigned to each of the six explanatory proposals (and reflecting their ranking) was calculated for each of the behaviors, then we calculated Anovas.

3.1. Parental situation

Inter-target comparisons indicate (tables 2 and 3), with the positive sanction distributed by a man, that the receiver (4.14) precedes the distributor (8.38) and the context (8.90), which are located at the same level. The hierarchy is the same when the actor is a woman, with first the receiver (5.23) then (equally) the distributor (6.96) and the context (7.15). The data are almost similar for the negative sanction: when the actor is a man, comes first the receiver (5.14) then the distributor (6.97) then the context (8.48), and with a female actor, the receiver (5.27) comes also first, then (equally) the distributor (7.92) and the context (8.08)

Table 2. Means (and standard deviations) of the answers to questions 1 (positive sanctions) and 2 (negative sanctions) in the parental situation.

	Target’s attribution	Sanction’s source	
		Man	Woman
Question 1 (positive sanction)	Distributor	8,38 (2,11)	6,96 (2,16)
	Recipient	4,14 (1,66)	5,23 (2,25)
	Context	8,90 (1,95)	7,15 (2,09)
Question 2 (negative sanction)	Distributor	6,97 (2,55)	7,92 (2,05)
	Recipient	5,14 (2,31)	5,27 (2,01)
	Context	8,48 (1,84)	8,08 (1,99)

Nota: responses range from 1 to 6, with 1 being the most acceptable explanation and 6 the least acceptable.

Table 3. comparisons of the answers to questions 1 (positive sanction) and 2 (negative sanction) in the parental situation.

	Actor	Comparisons	F	P	η^2
Question 1 (positive sanction)	Man	Distributor/Recipient	77.16	.00	.73
		Distributor/Context	.70	.40	
		Recipient /Context	121.34	.00	.81
	Woman	Distributeur/Recipient	7.07	.01	.22
		Distributor/Context	.09	.76	
		Recipient /Context	8.97	.00	.26
Question 2 (negative sanction)	Man	Distributor/Recipient	6.33	0.1	.18
		Distributor/Context	6.59	.01	.19
		Recipient/Context	32.38	.00	.53
	Woman	Distributor/Recipient	16.35	.00	.39
		Distributor/Context	.08	.77	
		Recipient /Context	16.96	.00	.40

3.2. Marital situation

Inter-target comparisons indicate (tables 4 and 5), with the positive sanction distributed by a man, that the receiver (6.21) precedes the distributor (7.86), and when the distribution is carried out by a woman, it is first the context (4.73) that takes precedence, then (equally) the receiver (6.19) and the distributor (6.38). Now, with the negative sanction and a male actor, comes first the context (5.93) then (equally) the distributor (7.55) and the receiver (8.48), and when the actor is a woman, the context (5.96) is ahead of the distributor (7.69).

Table 4. Means (and standard deviations) of the answers to questions 1 (positive sanctions) and 2 (negative sanctions) in the marital situation.

	Target's attribution	Sanction's source	
		Man	Woman
Question 1 (positive sanction)	Distributor	7,86 (2,73)	6,38 (2,77)
	Recipient	6,21 (2,67)	6,19 (3,04)
	Context	6,38 (2,82)	4,73 (2,67)
Question 2 (negative sanction)	Distributor	7,55 (2,74)	7,69 (2,42)
	Recipient	8,48 (2,48)	7,19 (2,62)
	Context	5,93 (2,57)	5,96 (2,23)

Nota: responses range from 1 to 6, with 1 being the most acceptable explanation and 6 the least acceptable.

Table 5. Comparisons of the answers to questions 1 (positive sanction) and 2 (negative sanction) in the marital Situation.

	Actor	Comparisons	F	P	η^2
Question 1 (positive sanction)	Man	Distributor/Recipient	4.95	.03	.15
		Distributor/Context	3.01	.09	
		Recipient /Context	0.3	.85	
	Woman	Distributeur/Recipient	.06	.79	
		Distributor/Context	6.44	.01	.20
		Recipient /Context	4.30	.04	.14
Question 2 (negative sanction)	Man	Distributor/Recipient	1.37	.25	
		Distributor/Context	4.95	.03	.15
		Recipient/Context	13.58	.00	.32
	Woman	Distributor/Recipient	.34	.56	
		Distributor/Context	7.18	.01	.22
		Récepteur/contexte	2.94	.09	

4. Discussion – conclusion

As we recalled in the introduction, researches on the locus of control report a quantitative prevalence of internal attributions, a prevalence interpreted as resulting from their social valuation: the receiver of a reinforcement is valued when he says he is responsible. This valuation was extended by Beauvois and Le Poulter (1986) to the attribution of behaviors: according to these authors, it would manifest itself both in terms of explaining reinforcements and explaining behaviors. However, researches on the Locus of Distribution, relating to the explanation of distributive behaviors of sanctions, invalidate this hypothesis: carried out in an educational or professional environment, they show an accentuation of the weight of the receiver of a reinforcement, which results in a disempowerment of the reinforcement distributor. Here, we have extended these latest studies to the family domain with the hypothesis that we could found similar results. The results effectively show that in the parental situation, whatever the gender of the actor or the direction of the sanction, the receiver is always evoked as the preferred cause: he is systematically ahead, in a significant way, both the distributor and the context. Similarly, in the marital situation, the results also show that the distributor is never indicated as the first cause.

However, this study has some limitations. Thus, only "fair" sanctions, or at least sanctions on which no information allows to question their fairness, have been staged. Additional researches are therefore necessary before being able to say that the results presented are generalizable to situations in which the sanctions would be unfair. It also would be interesting to examine the possible impact of cultural variations: would the results be identical in more patriarchal societies, in societies with more unequal couple relationships? This being so, apart from the fact that the results obtained already enrich the knowledge on the locus of distribution (and more generally on attributive theories), they are not without possible applications: participating in the deciphering of attributive ideologies can allow, by a more objective localization of responsibilities, to avoid some frustrations and disputes.

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NAVIGATING TRANSITIONS THROUGH TERTIARY EDUCATION: THE INFLUENCE OF THE FAMILY

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Abstract

This paper investigates the impact of the family on Maltese young people as they negotiate transitions through tertiary education at the University of Malta (UM). The findings presented in this paper are part of an ongoing PhD project and findings solely related to the family are discussed. The paper explores how the family shapes the expectations, choices and trajectories of young Maltese people. The findings are embedded in the narratives of sixteen Maltese participants in relation to the family. Taking a qualitative longitudinal approach, three sets of interviews were held with each participant, whose ages vary between eighteen and twenty-three. The first set of interviews was conducted while the participants were registered as freshers at UM. The narratives are explored through the Three-Dimensional Narrative Space Structure framework, developed by Clandinin & Connelly (2000) guided by Dewey's theory of experience. The findings highlight the interdependent relationships between parents and young people notwithstanding the change in the form and function of the family. The themes elicited are the strong family network, the matriarchal influence and the delaying of young people in moving out of their parents' home. The findings indicate that transitions are protracted and extended, while young people are reaching adulthood later and in a different way, therefore constructing a new concept of adulthood.

Keywords: *Transitions, tertiary education, family, young people, new adulthood.*

1. Introduction and Background

This paper investigates the role of the family in the tertiary education transitions of young Maltese people. It attempts to explore how tradition and family-oriented principles shape the trajectories and aspirations of young Maltese people.

Youth is a time of accentuated change, a decisive stage in the lives of young people. Youth transitions such as navigating tertiary education are a very important process in their life course. Across Europe there has been a significant increase in the number of young people who prolong their studies at tertiary level. In Malta, access to higher education is no longer reserved for the elite. Statistics for 2021 show that there was an increase of 6.1% of students who enrolled in tertiary level courses when compared to the previous academic year (National Statistics Malta, 2021).

Much of the literature on youth transitions deals with school-to-work transitions and the focus is on young people who are not in education, employment or training (NEET). There is insufficient research about young people's transitions through tertiary education, perhaps because one tends to think that since these young people have managed to enter a tertiary institution, their life is finally in order. The aim of this paper is to explore the influence of the family on the journey of young people as they negotiate transitions. These transitions are characterized by a number of choices, links and destinations and are all interwoven into different life domains in the journeys of young people. This paper investigates the role and the influence of the family on the choices of young people in tertiary education: whether to continue with their studies or join the labour market, or do both; whether to commit to a relationship and start a family; the attainment of independence and 'quasi-citizenship' (Jones and Wallace, 1992) and other key decisions at such an important stage in their life.

2. Societal changes and transformations

The negotiation of transitions and the influence of the family are explored through the lens of the socio-economic changes occurring in the past two decades. These changes present unprecedented opportunities to young people, but also heightened risks, differentially distributed across social groups.

Over recent years, the life course of young individuals has become fragmented and more complex. Today young people no longer follow a predetermined linear pattern after they finish compulsory education, but are faced with a number of choices. The 21st century, where “affluence is the key facilitator” (Ransome, 2005, p. 165), heralded major changes marked by incredible progress and innovation. Castells (2010) argues that these changes “transformed the way we think, we produce, we consume, we trade, we manage, we communicate, we live, we die, we make war and we make love” (p. 1). Society is continuously being transformed. Changes happen through various social patterns and social processes, in families, in relationships, in religion, in norms and values. In view of the family, the last twenty years have witnessed “important changes in patterns of fertility, increasing childlessness, significant increases in divorce, a growing proportion of single parent households, cohabiting partnerships and independent living ... increase in women’s employment” (Irwin, 2005, p. 1).

The structure of the family is going through a number of changes. Balancing work and family life can be complex and requires adjustments to work schedules or career ambitions. This is making parenthood more challenging. Such changes need also be explored within the context of the transformation of the role of woman in society, in the family and at the place of work. Men are slowly relinquishing their privileges and are learning to work together with women. Other changes are the delay of family formation and the increase of the age of first-time mothers, now reaching an average of 29.3 years of age (Eurostat, 2020).

These waves of change which evolved sometimes rapidly, at other times more slowly, could not be kept away from the shores of the Maltese Archipelago. One has to keep in mind the social and cultural structures of Malta: its colonial past, its strategic position in the Mediterranean Sea and its small size, its Catholic tradition and the once strong religious and family values. Against this backdrop, in recent years Malta witnessed the introduction of divorce and same-sex marriage and adoption rights for same-sex couples. Slowly but surely the nuclear family is being transformed into different structures such as single-parent families, extended families, families with more than two parents, same sex parents, etc. Another change is the transformation of the role of women in the labour market, where the female employment rate went up to 51.5% between April and June 2015 from 31.6% in December 2001 (NSO, 2003). This led to new welfare policies such as the increase of maternity leave and measures to include childcare services for children pre-school age and after-school hours service for children aged 3-16.

3. Methodology

This paper utilises Narrative Inquiry as the methodological approach. Narrative research seeks to analyze individual experiences and stories of research participants regarding a particular phenomenon; in this paper, the influence of the family on Maltese young people as they negotiate transitions through tertiary education at UM. This approach investigates the personal and social interactions of the individual narrating the story, through the passage of time. A qualitative longitudinal approach was used to collect data. Three sets of interviews were conducted with sixteen Maltese participants, over a span of four years. Research participants eligible for this study were required to be Maltese citizens and at the time of the first interview, freshers of an undergraduate degree course at UM. The qualitative longitudinal approach gave me the opportunity to embark on a journey with these participants and explore their experiences and trajectories as they moved on in their undergraduate and postgraduate studies and the labour market.

Participants were recruited through an email sent from the UM Registrar’s Office, to all freshers at the University of Malta. Research ethics approval was granted by the University of Malta Research Ethics Committee. The Single Question Aimed at Inducing Narrative (SQUIN) developed by Wengraf (2001) was utilized allowing the participants to narrate their own stories. The interviews were conducted in both English and Maltese depending on the preferences of the interviewee.

The data collected is analysed through Narrative Inquiry which is “a storytelling methodology through which we study narratives and stories of experiences” (Kim, 2016, p. 118). The Three-Dimensional Space Narrative Structure developed by Clandinin and Connelly (2000), embedded in Dewey’s theory of experience, enabled me to better understand this phenomenon of youth transitions and to carry out the storying and re-storying process. Ollerenshaw and Creswell (2002) defines re-storying as “the process of gathering stories, analyzing them for key elements of the story (e.g. time, place, plot and scene), and then rewriting the story to place it within a chronological sequence” (p. 332). Themes, patterns and categories emerged from these narratives which led to the findings in this study. In this paper, which is part of an ongoing PhD project, only the themes and patterns related to family are presented and discussed.

4. Results

The analysis shows that even though the Maltese family has, in these last years, changed in form and function, it still remains nuclear oriented, where strong kinship ties shape and impact the trajectories of young Maltese people. The recent changes in law, like the legalisation of divorce, same sex marriage and adoption rights to same sex couples, started bringing about a change in the structure of the family but not on the influence and the impact of the parents on the journey of their children as they negotiate their transitions to adulthood.

In this ongoing project, the themes elicited that relate to the family are: 1. The Strong Family Network; 2. The Matriarchal Influence; and 3. Delaying Leaving the Parental Home.

4.1. The strong family network

The model of the Maltese family is similar to the model of the Southern European family presented by Guerrero and Naldini (1997), which incorporates the characteristics and tendencies of the Southern European family: having generations living together in one household, the high institutionalisation of marriage, and relatively low cohabitation, divorce rates, births outside wedlock and lone parent households. The legalization of divorce in Malta happened in 2011 and according to Eurostat (2020) Malta has the lowest divorce rate in the European Union. Out of the sixteen participants taking part in this study, the parents of fourteen of them are together, while the parents of two of them are separated. This does not necessarily mean that most of the Maltese people are happily married. There can be other factors that are not reflected in official statistics, such as separation which is not picked up by Eurostat or spouses who are not happily married but not ready to start the proceedings for a divorce, one of the reasons being the influence of Catholic traditions and values in Malta. One of the participants, Cynthia, gets very anxious when she speaks about the relationship of her parents, *because my parents aren't happy together and it's obvious. They are together because of me and my sister.*

Some of the parents do their best to financially support their children while in tertiary education. Nancy's parents, even though her mother is a housewife and therefore has no financial income, paid half of the amount when she bought a car. Ramona, who hails from Gozo and pursues her studies at UM, did not need to rent a flat in Malta since her parents have property in Malta, *I don't have to pay rent. The flat is mine. So those E500 are mine.* The parents' support function as an effective 'social shock absorber' (Ferrera, 2010, p. 622) but it leads to a greater economic dependence of youth on parents while they are studying. Walther (2006) claims that young people are continuously faced with situations where they are expected to make their own decisions, leading them to individualized pathways. This process of individualization, as young people are negotiating their transition into adulthood, according to Furlong and Cartmel (2007), portrays "a subjective weakening of social bonds" (p. 143). Though pressure from society is placed on young people to take on a more individualistic attitude, they still rely on structural factors that influence and shape the processes faced by them as they move from one stage of life to the next. The family is one of the structures that still plays a pivotal role in the life course of young people. Shaun is very close to his family and also very much involved in various activities held in his village. He hails from the sister island Gozo and is studying in Malta. He finds it hard to accept the fact that to study he has to travel to Malta. *I am involved in a lot of activities in Gozo. Coming to Malta every day will not leave me time to take part in these activities. Moreover, I am very close with my family and I find it very difficult not to see my family for a whole week.* Furlong and Cartmel (2007) propose that in late modernity, life revolves around an epistemological fallacy. The paradox of late modernity is that although collective foundations of social life have become less relied on, they continue to provide powerful frameworks which support young people's experiences and life chances.

4.2. The matriarchal influence

The narratives of this study portray the matriarchal influence in the life course of young people especially as they are navigating life changing decisions. Saraceno (2000) discusses the cultural emphasis of southern European countries and speaks about "the crucial role of mother's presence and care" (p. 140) within the family. This is clearly portrayed in Daniela's interview. As she narrates her story, I could see her resilience and strength to overcome challenges in her life. However, as Daniela crafts her story, she attributes her success to her mother. Daniela completed her course at UM because *my mother brainwashed me that I need to achieve an award to make it in life.* Even though Daniela's mother never studied and never joined the labour market, she offered great support and guidance to Daniela and her siblings. While at University, Daniela bore two children. Her mother took it against Daniela and encouraged her *to put her life in order and marry.* Daniela did not give in to her mother's comments. Notwithstanding this, her mother stood by her and Daniela completed her undergraduate studies, followed a higher diploma course and joined the labour market. Another participant, Nancy, narrated the story of

when she had a car accident and slightly damaged her car. She speaks about the need, at that point in time, to speak to her mother, *A couple of days ago I had a small accident with my car, just some scratches nothing big, but I wanted to feel reassured, so I called my mother, I told her 'Mum I hit the car'.*

Open and positive communication between parents and emerging adults impact the well-being of the latter (Portugal et al., 2019). However, Parra et al. (2015) in their longitudinal study carried out with 90 Mediterranean emerging adults show that parent-child communication tends to decrease during the emerging adulthood stage. Parents are seen as agents of the past. The parent-child relationship is transformed in rules and limits (Arnett, 2004), at times influencing the decisions taken by young people. Both Roberto and Miriam describe their mothers as very dominant. Roberto is pursuing studies leading to Masters in Architecture. However, his heart is very much into performing arts. Every time he participates in a festival or a theatre production, his mother makes a scene telling him that this is a waste of time. Due to his participation in the various activities at UM, Roberto is very popular and he feels that his peers look up to him. Then at home he is treated completely different, *so I don't feel comfortable at home because I have to do what my parents say, not what they say but I see a huge difference from when I am with my friends. My friends respect me.* Miriam holds closely her mother's instruction that education comes first yet their relationship is paradoxical. Miriam wants to portray to her mother that she is the perfect daughter. She studies hard because if not her mother would shout at her, *I don't want to be like my brother, she used to shout at him.*

Research speaks more about the role of the parents than the role of the mother. However, a number of the participants of this study highlight the influence and the strong presence of the mother during such a decisive phase in their life, a time when they are navigating and negotiating their transition to adulthood.

4.3. Delaying Leaving the Parental Home

The negotiation of transitions has become complex, fragmented and individualized (Furlong & Cartmel, 2007). Extended transitions lead young people to continue with their studies after they finish compulsory education, joining the labour market later and staying longer at their parental home. Family dependence is prolonged and housing transitions and family formation are delayed. The study confirms that young people in Malta postpone leaving their parental home and seek independent living at a later stage in life. All sixteen participants, even though they consider moving out, do not take the plunge and remain living with their parents. According to data from Eurostat (2020), Croatian youth stay home the longest, on average till 32, followed by Slovakia at 30 and Italy and Malta share the third place at 30.2. On the other hand, in Sweden, Luxembourg and Denmark, children leave their family at the age of 17.5, 19.8 and 21.2 respectively. As discussed in theme 1, the close-knit family and the parent-child relationship have an impact on the when and the why of home leaving. Jacob lives with his mother because his parents are separated. He has been in a relationship for five years but at this stage in his life he does not consider moving out, *I am happy as I am, living with my mother. At the moment both my girlfriend and myself we work and so we earn some money but we are not committed to look for a place. It is sort of something for the future.*

Since Malta is a small island, young people do not need to leave the nest in order to be closer to the place of work or university, with the exception of those who hail from the sister island, Gozo. Leaving the parental home is considered a milestone in the transition from childhood to adulthood. This shows that young people are no longer fully dependent on their parents. However, this traditional transition is taking longer and has become more complex. One of the reasons that hinder young people from leaving their parental home is the increase in the prices of property. Mario completed his studies and graduated as a lawyer but due to financial constraints, he cannot move out from his parents' house: *I need to start saving, I already have something for the deposit, because then the loan will be taken from the salary and hopefully there will be property which is affordable.* The crisis of housing affordability is crippling young people on their journey towards adulthood; "housing, be it rental or purchase, is unlikely to be a realistic prospect for young people in Malta" (Briguglio & Spiteri, 2022, p. 11).

5. Conclusion

In the recent years, the transitional journey to adulthood has become more extended with increasing complexities. Transitions are not all smooth and linear; some are unpredictable, elongated and fragmented (Furlong, Cartmel and Biggart, 2006). They are not one-off events, may consist of a series of events and do not necessarily happen in a chronological order. For a number of young people, transitions are like a piece of mosaic: different colours, different shapes, different sizes; to others it looks like a jigsaw puzzle that the individual finds hard to put together.

As I was listening to the narratives of these young people, I pondered on the fact that perhaps the family never really lost its influence in the journey of young people. It may have changed, but the presence and the influence are still strong and needed. It is just different.

The narratives analysed in this paper show that transitions are no longer “seen as mere ‘life-cycle transitions’ that can be neatly incorporated into the traditional interpretations of the experience of youth” (Dwyer & Wyn, 2001, p. 2). The processes of change in the life course of the young individuals lead to the emergence of a new concept, a new adulthood. It is a stage characterised by uncertainty and unpredictability but which involves more dependence and stronger ties with the family. It would be beneficial if one had to continue studying the experiences of young people across time and present new ways how they can cope in their journey to “new adulthood”.

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PRE-MESSIANIC COGNITIVE DISSONANCE HAREUVENI IN LISBON

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Abstract

More than a few studies in social psychology dealt with what I call Post-Messianic Cognitive Dissonance, namely the dissonance arising in the wake of a failed messianic vision. In this paper I consider the other side of the equation, what I call Pre-Messianic Cognitive Dissonance, that is not the dissonance that arises from messianism but the dissonance that gives rise to messianism. I examine in detail one historical case of messianism, the case of the Sixteenth Century's David HaReuveni (or Reubeni). I focus on the critical state of cognitive dissonance experienced by the Jews of Europe in general and of Lisbon in particular at the start of that century. I analyze the major causes of this state and I explain from a social-psychological perspective how it gave rise to a wide ranging scope of belief in HaReuveni's vision. Finally I note that similar circumstances surround other Jewish false Messiahs, chief among them the Seventeenth Century's Shabtai Zvi.

Keywords: *Cognitive dissonance, pre-messianic, post-messianic, David HaReuveni.*

1. Introduction – when prophecy fails

Leon Festinger's Theory of Cognitive Dissonance was born practically hand in hand with the study of an apocalyptic-messianic group that predicted the destruction of the world and believed that its members will be saved by what they called Guardians from outer space. This study, by Festinger and two colleagues, was chronicled in a book entitled *When Prophecy Fails*, published in 1956, one year before the 1957's publication of the ground breaking *A Theory of Cognitive Dissonance*. The in-depth analysis in the failed prophecy book of the resulting cognitive dissonance drew appraisal and criticism in numerous books and articles in social psychology and related areas. Comparisons were drawn with other cases of messianism (See e.g., Bader (1999), Dein (2001) and several articles in Lewis' *Encyclopedic Sourcebook of UFO Religions* (2003).)

Members of the group studied by Festinger and his colleagues made preparations to be carried out of Planet Earth in flying saucers just before midnight of December 21, 1954, when a great flood will engulf all living creatures. Five collaborators of Festinger, pretending to be believers, closely observed the group's behavior before and after the prophecy's failure. Their findings led to the conclusion that disconfirmation of a prophecy may sometimes strengthen the initial belief and yield, among other things, increased proselytizing.

Critics of Festinger's approach, among them Melton (1985), argued that in the believers' eyes there is fact no failure of the prophecy. Their interpretation of reality is markedly different from that of outsiders. This view is depicted in a book entitled *When Prophecy Never Fails* by Tumminia (2005), analyzing what she calls "Myth and Reality in a Flying-Saucer Group".

Alongside appraisal and criticism of *When Prophecy Fails* and of Cognitive Dissonance Theory itself, the theory underwent extensions and modifications, yet remained alive and kicking as witness e.g. Harmon-Jones & Mills' (1999) collection of 13 new articles and the recent resort to cognitive dissonance tenets in relation to Covid19 (See, for instance, Aronson and Tavris (2020)).

Common to the study of *When Prophecy Fails* and the comparative studies mentioned above and others along the same line is that they deal with the dissonance arising after the collapse of the prophecy or the messianic mission. I call this Post-Messianic Cognitive Dissonance. In this paper I consider the other side of the equation, what I call Pre-Messianic Cognitive Dissonance, namely not the dissonance that arises from messianism but the dissonance that gives rise to messianism. I examine in detail one historical case of messianism and then I briefly discuss similar considerations relating to other cases. I chose to concentrate here on the case of David HaReuveni (or Reubeni) for two reasons. First, we're in

Lisbon, where the major part of HaReuveni's story took place. Second, next year, 2024, is the five hundredth year, half millennium, since the appearance of HaReuveni with his messianic message.

2. The story of David HaReuveni

HaReuveni's European saga starts in February 1524, when out of nowhere he emerged in Venice with a fantastic sounding tale. He claimed that he is a messenger from a faraway land called Habor, presumably somewhere in Arabia or Africa. His name, he said, is David and his late father, Solomon, was king of Habor. Recall that in the Bible (Samuel and Kings books) these are the names of the two powerful kings (albeit in a reversed order – David is Solomon's father) of a united Israelite kingdom. At the moment, he related, the reigning king of that land is his brother, Joseph. And recall that in the book of Genesis, Joseph was a Hebrew slave who turned into ruler of Egypt, second to Pharaoh.

The obviously purposeful resort to meaningful biblical names went on with the mysterious messenger's reference to the inhabitants of Habor. He proclaimed that they are descendants of two and a half of the ten lost tribes of Israel – the tribes of Reuben and Gad and half of the tribe of Manasseh. These tribes, according to 1 Chronicles 5:26, were deported by the Assyrians to Habor among other unidentified places. But long beforehand they are the tribes that, as we read in the book of Numbers, were allowed by Moses to settle on the eastern side of the River Jordan in return for promising to go up in arms ahead of all other tribes in the battle to conquer the land on the western side. Thus, their names convey an image of fierce, highly motivated, fighters.

Indeed, his brother, King Joseph, David maintained, has under his command an army of 300,000 Jewish fighters ready to go to war to redeem the Holy Land, that same land west of River Jordan, from Ottoman rule. And it's the fact, according to his story, that some of them are descendants of the tribe of Reuben, the patriarch Jacob's first-born, that endowed David with the title HaReuveni (Hebrew for 'Of Reuben'). He himself, while claiming that he represents the tribes of Reuben, Gad and Manasseh, claimed also that he is a descendant of King David. This meant that he is of the tribe of Judah, yet no one seemed to care much about this contradiction.

The message HaReuveni 'brought' from Habor was that his brother, King Joseph, was seeking to form a Jewish-Christian alliance against the Moslems ruling the Holy Land. He wants his Habor army to be joint by armies from European countries, or at least to be equipped by cannons and other weapons, for the battle that will liberate Christian holy sites and enable Jews to return to their ancient homeland and rebuild their lost temple.

In Venice HaReuveni met local Jewish leaders and found his way to Cardinal Egidio da Viterbo who sent him to Rome to meet Pope Clemens VII. The pope went on to dispatch him with a letter of recommendation to King João III of Portugal. The king met HaReuveni and agreed to supply him with the cannons he requested. It was thought to be in the best interest of Portugal and other European countries to assist an army preparing for war against the Ottoman Empire which at that time posed imminent threat to Christian Europe.

The fact that HaReuveni, an openly declared Jew, was received and honored like a prince by the pope in Rome and the king in Lisbon stirred up waves of excitement among Jews and Marranos (Jews who converted or were forced to convert to Christianity, also called Conversos or New Christians). To many of them the idea that somewhere in the world there is a Jewish army ready to take over their land of dreams was nothing less than messianic vision. Joy and hope rose high and a process of openly or secretly returning to Judaism started accelerating. This was too much for the king, and a mere few months after welcoming HaReuveni to his palace he ordered him to leave Portugal.

Most notable of Lisbon's Marranos who openly returned to Judaism under the influence of HaReuveni was a man called Diego Pires who held the post of secretary to the High Court of Appeals. He circumcised himself and changed his name to Shlomo Molcho – presumably Portuguese sounding version of the Hebrew name Shlomo HaMelech (King Solomon). Molcho left Portugal and moved to Italy, where he studied Talmud and Kabbala and pretty soon achieved reputation with sermons concerning Messianic kingdom in the very near future.

HaReuveni at first dissociated himself from Molcho, but around 1530 he joined him in Italy and in 1532 they went together to Ratisbon to meet Emperor Charles V. The meeting may have started well but ended catastrophically. The emperor took them back to Italy where Molcho was sentenced to death by fire in an *auto-da-fé*. HaReuveni was sent to prison in Spain where he died (perhaps executed) sometime between 1538 and 1541.

There is rich bibliography concerning HaReuveni in Hebrew and other languages. A good, concise, English source is Benmelech (2011).

3. Pre-Messianic dissonance

HaReuveni's story is shrouded in mysteries and questions. Who was he? Where did he come from? (Scholars' suggestions range from Russia, Poland and Spain, through Egypt, Arabia and Yemen to India and Afghanistan.) What made him cook the Habor story? What was he hoping to achieve? Did he truly believe he'd get the weaponry he requested? And if so, what would he have done with it?

Yet the most compelling query relates not to HaReuveni himself but to the impact of his vision. How is it that so many Jews and Marranos accepted his fantastic tale and saw it as Messianic tidings?

The answer has partly to do with the fact that more than a few Christians, among them leading figures such as the pope and the Portuguese king, also didn't right away rule out the possibility that maybe there is some truth in HaReuveni's story. They had vested interest in examining every idea, unlikely as it may be, concerning war against the Ottomans. And this was a period when new lands were discovered by European seamen all round the world, and a legendary Christian kingdom, Prester John's kingdom, was believed by many to be hidden somewhere among pagan lands (Silverberg, 1972). So, the notion of a hidden Jewish land didn't necessarily sound utterly farfetched.

But the main factor behind the wide spreading faith in HaReuveni among Jews and Marranos was cognitive dissonance. Just three decades before HaReuveni's appearance world Jewry suffered the most devastating blow since the destruction of the temple and Jerusalem a millennium and a half earlier. This was the expulsion from Spain in 1492. In the two or three centuries prior to the expulsion Spanish Jews, despite forced conversion of many of them to Christianity and other hardships inflicted on them by the church and the inquisition, experienced an age of prosperity and flourishing culture. They saw Spain as a place where they can live and thrive for generations. Expulsion was one thing they couldn't envisage, and when it hit them the dissonance between expectations and reality was unbearable.

The deportation from Spain wasn't the end of the saga. The deportees scattered all round Europe and North Africa, but most of them (about two thirds, between 80,000 and 120,000 according to various estimates, e.g. in Roth, 1932) sought refuge in neighboring Portugal. In December 1496 King Manuel I, at the request of King Ferdinand and Queen Isabel of Spain whose daughter he wanted to marry, ordered deportation of all Jews of Portugal. His intention was in fact to force them to choose between conversion and expulsion. While most of them chose to convert and stay in Portugal, more than a few preferred expulsion, or even death, to conversion.

In response to this kind of resistance the king decreed that the Jews are his slaves and are denied the right to move freely from one place to another in the country. Then, in 1499 he also denied the right of Marranos to leave the country. Still both Jews and Marranos felt relatively safe in Portugal. They did well in work and trade and formed tight communities sustained by mutual help and charity. Needless to say, this led old Christians to view the new ones as unwanted aliens.

The disaster didn't take long to come. It's known as the Lisbon Massacre. In April 1506 several Marranos were arrested for secretly celebrating the Jewish Passover. Two days later they were released from jail and rumors (perhaps partly true) held that bribery played part in the affair. At the same time a New Christian was heard in church loudly mocking Christian miracles. All of this together was enough to incite the multitudes to action against Marranos. Mobs burst into houses killing Marranos and carrying their bodies to burn them at the city center. All in all, between 2000 and 4000 (again according to different estimates) Marranos were massacred in four days. Once again the dissonance of feelings of wellness and security as opposed to harsh reality was overwhelming.

In addition to the communal dissonance there was the personal dissonance of many, if not most of, the Marranos who secretly kept Jewish practice and tradition alongside Christian overt behavior. You are Jewish at home and Christian outwards. This entails a painful clash between two sets of conduct and an even more painful clash between two identities.

Communal and personal dissonance lingered on for decades to come in spite of the fact that in 1507 King Manuel lifted the restrictions he had imposed on New Christians in 1499. Discrimination and suspicion of Marranos went on unabashedly. Still in 1524, King Manuel's heir, João III, while renewing the 1507's alleviations also allotted spies to trace Marranos who are not fully committed to Christianity.

And then, just one year later, the same king extended princely welcome to the openly Jewish HaReuveni. Insinuating to the Bible through names such as Habor, David, Solomon, Joseph, Reuben, Gad, Manasseh, HaReuveni maintained that he is bringing a message from some of the ten lost tribes who according to Jewish legends are to reappear with the coming of the Messiah. Adopting this messianic message was the best strategy Jews and Marranos could employ to restore balance between two communal cognitions that came into dissonance (harsh reality vs. hopeful expectations) as well as between two conflicting self identities (Jewish vs. Christian). The dissonance was resolved. They could forge a feeling that soon enough, with an army of 300,000 fierce Jewish warriors on their side they'd be able to live freely as Jews, protected against their enemies and perhaps even return to their promised land

4. Other messiahs

Shabtai Tzvi (Sabbatai Zevi), the most famous and most influential of all Jewish false Messiahs, was born in Smyrna (now Izmir in Turkey) in 1626 and declared himself Messiah in 1648. His fascinating story is recounted in Scholem (1937) and in numerous subsequent books. The staggering part of the story took place in the early 1660's with faith in Shabtai Tzvi spreading throughout Europe, from Holland and France in the west through Germany and Hungary to Poland and Russia in the east. Devout followers of the charismatic Messiah started selling their property and giving up their posts in preparation to return to their ancient homeland.

Finally, in 1666 Shabtai Tzvi made his way to Constantinople ostensibly with the intention to depose the Sultan as a pre-condition to fulfilling his holy mission. Upon arrival in Constantinople, he was arrested right away and after a few months moving from one jail to another was put to trial. During all that period most of his followers were still certain that he is the true Messiah. In the trial he was offered to choose between death sentence and conversion to Islam. He chose conversion.

Several pages are dedicated to Shabtai Tzvi and his legacy in the first chapter of *When Prophecy Fails*. Festinger and his colleagues are concerned with the believers' response to the Messianic vision's failure. Even after the total and most dramatic collapse of the redemption promise – the supposed savior's conversion to Islam, more than a few of his followers kept their faith in him and went on proselytizing. They invented explanations to his conversion, claiming that it was a necessary stage in the messianic process. Some of them went as far as joining him into Islam and forming a sect called Dönme. Still today some Dönme groups in Turkey are holding that Shabtai Tzvi is the true Messiah. As might be expected, these are small groups, since to most of his followers Shabtai Tzvi's conversion marked end-game.

Festinger and his colleagues conclude that "The Sabbataian movement strikingly illustrates the phenomenon we are concerned with: when people are committed to a belief and a course of action, clear disconfirming evidence may simply result in deepened conviction and increased proselytizing. But there does seem to be a point at which the disconfirming evidence has mounted sufficiently to cause the belief to be rejected".

From this account of post-messianic dissonance, we now turn to pre-messianic dissonance. We see it as a major factor in the arrival and rise of Shabtai Zvi.

As noted above, Shabtai Tzvi proclaimed himself Messiah in 1648. This was the year that, based on Kabbalistic and various other types of calculation, was expected by many Jews to be the year of their Messiah's revelation. Instead, this was precisely the start year of the most horrific catastrophe the befell world Jewry before the twentieth century's holocaust. Hundreds of Jewish communities were completely wiped out and tens of thousands men, women and children were killed in course of the Cossack rebellion against Polish rule of territories in parts of today's Ukraine, Belarus and Lithuania. The Cossack rebels, led by Bogdan Khmelnytsky, saw the Jews as collaborators, lessees and estate managers of the Polish landowners. Added to the age-old deep-seated hatred of Jews, this was good enough reason to show no mercy to them.

The best-known chronicle of what happened to the Jews in those dark days is *Yeven Metzulah*, a seventeenth-century Hebrew book by Nathan Hannover. It was translated into several languages, among them English under the title *Abyss of Despair*, first published by Transaction Publishers and by Bloch Publishing Company in 1950 and then by Routledge in 1983 and as a facsimile in 2018. Despite certain reservations concerning inaccuracies, this book is still considered fairly reliable as a historical source. Good recent sources are Glaser (2015) and Stampfer (2008).

No dissonance can be more painful than that between the messianic expectations towards 1648 and the events that actually took place that year. To Jews throughout Europe and beyond the dissonance was overwhelming. And Shabtai Tzvi's appearance was a rescue rope for them. Accepting him as their Messiah enabled them to restore balance between the two contradicting cognitions. They could see the disastrous Khmelnytsky's pogroms as what's called in Hebrew *Chevlei Mashiach* (Messiah's Hardships), namely apocalyptic hardships that must precede Messiah's days and pave the road for his coming.

Among stories of other failed messianic messages of special interest is that of Abner of Burgos (1270 or a little earlier – 1347 or a little later). In this case we encounter dissonance that is at the same time both post-messianic and pre-messianic – steering from Messiah to Messiah. I plan to elaborate on this story in a subsequent paper.

5. Concluding remarks

Like Festinger I took the liberty (and the challenge) to employ contemporary conceptual tools in the study of past times' events. Unlike Festinger the focus of my attention with respect to those events was their pre-messianic rather than post-messianic features.

I acknowledge with gratitude reports of the reviewers of this paper's abstract. Their comments were of valuable help to me while writing the full article.

In some parts of this paper I delved into history. I thought it is important to dwell, for instance, on the message and the acts of HaReuveni and on the events preceding his appearance in Europe, so as to fully appreciate the dissonance that was there and the key he handed in to resolve it. I relied on several sources, some of them mentioned above and listed here below. Still, if there are any inaccuracies in the historical accounts as presented in this paper it is solely me responsibility.

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ASSESSMENT OF CANDIDATE EFFICIENCY BASED ON PERSONALITY TRAITS ON RESKILLING PROGRAMS IN THE IT SECTOR

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Abstract

In the labor market, there is a rapid change in the need for employee competencies, conditioned by the increasing degree of digitization and technological innovations. Adaptation to these changes is expected from the educational system when preparing young people for new positions and jobs that arise, but it also requires additional training and reskilling of already employed workers, to keep their jobs. Bearing in mind the high costs and time resources invested in reskilling programs, it is important to consider all the factors that influence the efficiency and success of that process. The key role is often played by the candidates, their willingness, motivation, and personality traits. The main objective of this paper is to test a model for evaluating the efficiency of candidates, based on personality traits, in the reskilling program for junior Java programmers. Research was conducted during the reskilling program of unemployed and employed workers (from different fields of work) into junior Java programmers, in the Republic of Serbia. The Data Envelopment Analysis (DEA method) was used to calculate the efficiency. The candidate's personality traits (reasoning (R), tough-mindedness (TM), self-control (SC), independence (I), anxiety (A), extraversion (E)) were observed as inputs, and the results achieved during and after the reskilling course (test results, professional practice gain and employment in a new field) were observed as outputs. Data on personality traits were collected in the process of candidates' selection for the reskilling program, the assessment of the candidate's knowledge was carried out during and after the course through knowledge tests, and data on participation in professional practice and data on employment in new jobs were collected after the program. The results presented in the paper shows differences in the efficiency of the candidates based on demographic characteristics (gender, age, education, employment) but not significant impact of personality traits.

Keywords: *Reskilling programs, efficiency, personality traits, DEA method.*

1. Introduction

McKinsey & Company, in its study "Getting practical about the future of work" (Hancock, Lazaroff-Puck & Rutherford, 2020), announced that by 2030, 30 to 40% of the workforce will have to acquire new set of skills and change their occupations. Leading companies realize that they cannot hire enough new workers with necessary set of competencies, so they see reskilling programs as a solution for development competences among employees. On the other hand, after Covid19 pandemic, a lots of workers lost their jobs, and reskilling is one of the ways that they can return to the labour market and find employment. According to a study conducted by the World Economic Forum (Zahidi, 2020), it is predicted that 42% of the basic skills required for current work will be changed until 2022 and more than 133 million new jobs will be created. Reskilling programs for the unemployed workforce are an important instrument within policies designed to help unemployed people find work. Authors Philipp Grunau and Julia Lang (2020) state that in Germany, reskilling is an important measure in the active labor market policy. They showed that the unemployed are more often employed in the field for which they reskilled, and that reskilling leads to higher earnings (Grunau & Lang, 2020).

Reskilling programs are primarily suitable for unemployed workers, but also for all employees whose jobs are expected to change or disappear over time. Considering the high costs and time resources invested in reskilling programs, it is important to consider all the factors that influence the efficiency and success of that process. Often, it is the candidates who are key, their willingness, motivation, personality characteristics, because every reskilling program requires commitment, cognitive involvement and effort of the candidate. Personality characteristics and traits play an important role in understanding human behavior. Burger (2008) explains that personality represents "consistent patterns of behavior" that help us

understand and predict an individual's behavior. Many studies show that personality traits are related to behavior, attitudes and performance in the workplace (Bakker et al., 2002; Kumar & Bakhshi, 2010). The traits that are most often mentioned and analyzed in the work context are extraversion as important trait on managerial jobs, agreeableness for jobs with high level of interpersonal interactions, and openness to new experiences in situations that require continuous learning and developing new skills (Barrick et al., 2001; Mount et al., 1998). Openness to experience has a positive effect on the efficiency of workers since they show a higher degree of curiosity and engagement in certain activities than other employees (Louisburg et al., 2007), manage better in an unfamiliar environment (Bing & Louisburg, 2000), tend to learn new things, see the problem from multiple perspectives and manage in awkward situations (Stewart & Nandkeolyar, 2006). Conscientiousness, emotional stability and extroversion affect the motivation and level of satisfaction of employees at the workplace (Judge & Ilies, 2002; Judge et al., 2002), and research conducted by Alarcon et al. (2009) shows that employees with these traits are more resistant to stressful situations. Conscientiousness-dominant employees also encourage positive organizational behavior, put in extra effort and do more than expected (Chiaburu et al., 2011). On the other hand, there are also personality traits that are associated with negative behavior and performance in the work environment. For example, employees with pronounced neuroticism often show anger, stress, grumpiness, unsociability, nervousness, insecurity, doubt, fear (Barrack & Mount, 1991; Judge, Bono & Locke, 2000), they lack self-confidence (McCrae & Costa 1991), they perceive any feedback as a threat, which further increases their anxiety (Smither, London & Richmond, 2005) and reduces their performance and efficiency at work. When it comes to adaptation to new jobs and occupations, people with pronounced neuroticism are not successful (Smithikrai, 2007).

2. Objective and methods

The aim of this paper is to investigate the importance of personality traits for the efficiency of candidates on reskilling programs.

The research considered the personality traits defined by Cattell in his personality model (Cattell, 1949). Cattell's personality model includes 16 personality dimensions (warmth, reasoning, emotional stability, dominance, liveliness, awareness of rules, social boldness, sensitivity, caution, abstractness, privacy, timidity, openness to change, self-sufficiency, perfectionism, tension), of which it is possible to single out 5 general factors: tough-mindedness, self-control, independence, anxiety, and extraversion. In our model, we include 5 general factors and reasoning.

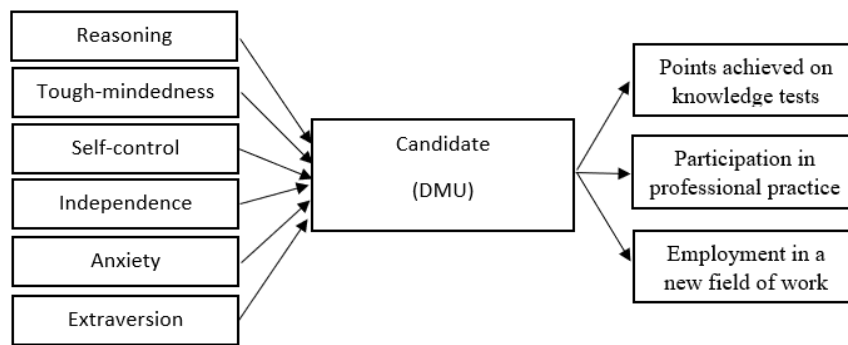
Data Envelopment Analysis (DEA - non-parametric approach for efficiency assessment) was used as a method for calculating the efficiency of candidates during the reskilling process (Savić & Martić, 2017). This method integrates measures of partial efficiency in one index and provides objective assessment and comparisons of efficiency among decision-making units for (Lotfi & Shirouiehzad, 2010). DEA is used in calculating the efficiency of various non-profit organizations, schools, universities, health, and social institutions (Dugelova & Strenitzerova, 2015), but also the efficiency of human resources within organizations (Zbranek, 2013; Yu et al., 2012; Manoharan et al., 2009).

The research was conducted during the program of reskilling of unemployed and employed workers from various fields of work into Junior Java programmers, in the Republic of Serbia. Reskilling program included 250 hours of teaching, 5 different chapters, 3 workshops, 5 internal knowledge tests, consultations, and special discussions, as well as a final exam. After the course, successful candidates were provided with an internship, and as a confirmation of their work, they were also employed as junior Java programmers in the most successful companies on the market.

2.1. Creating a model

Candidates who participated in the reskilling program (a total of 88 candidates) represent decision-making units (DMUs). The candidate's personality traits (reasoning, tough-mindedness, self-control, independence, anxiety, extraversion) were considered as inputs, and the results achieved during and after the retraining course (number of points the candidates achieved on knowledge tests, participation in professional practice, employment in a new areas of work) were considered as outputs, which is presented in Figure 1.

Figure 1. DEA model.



2.2. Sample and data collection

Candidates (N=88) from the territory of the Republic of Serbia participated in the reskilling program, without previous knowledge and work experience in the field of information and communication technologies. There was a total of 60 men and 28 women, ages 20 to 48. All candidates graduated from high school, and 56 of them also obtained a university degree in another field. Before and during the reskilling program, 38 candidates were employed, while 50 candidates were unemployed. During the selection process, almost all candidates expressed their desire to completely change their occupation and workplace through reskilling.

Assessment of the candidate's personality traits: Cattell's personality model (Cattell, 1949) is operationalized through the 16 Personality Factors Questionnaire (16PF), and an adapted version translated into Serbian and standardized for the Serbian population was used in the selection process. Standardization was carried out on 504 respondents aged 15 to 59, from all regions of Serbia (Mitrović, Smederevac, & Čolović, 2015).

Evaluation of the tests: During the retraining program, the progress of the candidates was continuously evaluated through internal tests that were conducted after each chapter. A total of five internal tests and a final exam were organized.

Participation in professional practice: During the internship, a questionnaire was conducted that examined the success and satisfaction of the trainees during the internship, as well as whether the internship was successfully completed.

Employment in a new field of work: Candidates were monitored for 6 months after the reskilling program. Questionnaires were periodically conducted asking whether candidates had found employment in a new field of work.

3. Results

The results obtained using the mixed-integer DEA model (Lozano & Villa, 2006) indicate that in the selection process 56 candidates (63.64%) were assessed as relatively inefficient, while 32 candidates (36.36%) were assessed as relatively efficient. The structure of efficient candidates according to demographic characteristics is shown in the Table 1.

Table 1. Efficiency by gender, education, employment.

Category		N	Number of efficient candidates	% of efficient candidates	Average results	Age average
Gender	Male	60	23	26,14%	69.76	29,74
	Female	28	9	10,23%	65.89	35,33
Education	High school	32	12	13,64%	67.35	29,17
	Faculty	56	20	22,73%	69.47	32,60
Employment	Employed	38	13	14,77%	65.48	32,92
	Unemployed	50	19	21,59%	70.85	30,21

Observed by gender, 23.14% of the sample are efficient male candidates, and 10.23% are inefficient female candidates. Most of the efficient candidates are those who have completed university in some other field (22,73%), and those who were unemployed at the time of reskilling program (21,59%). The assumption is that those candidates were more ready for the learning process and had more time to devote to the reskilling process.

The relationship between personality traits, reskilling results, practice and employment in new filed was observed, and it can be concluded that there is no significant relationship between personality traits, results, practice, new employment and efficiency (Table 2).

Table 2. Correlation between traits, reskilling results, practice, employment in new filed and efficacy.

	<i>R</i>	<i>TM</i>	<i>SC</i>	<i>I</i>	<i>A</i>	<i>E</i>	<i>Res.</i>	<i>P</i>	<i>NE</i>	<i>Eff</i>
Results	0,27	-0,02	-0,21	-0,07	-0,02	-0,09	1,00			
Practice	0,22	0,19	-0,17	0,07	0,05	-0,03	0,60	1,00		
New employment	0,24	-0,06	-0,04	-0,05	-0,16	0,01	0,48	0,25	1,00	
Efficiency	-0,22	-0,38	-0,20	-0,33	-0,29	-0,13	0,44	0,15	0,25	1,00

According to this research and model, personality traits are not key indicators when looking at candidate efficacy during the reskilling process. Reasoning is the only personal characteristic that is positively related to results during reskilling, participation in practice and employment in a new field of work, although not positively related to efficiency.

4. Discussion and conclusion

As the process of reskilling is increasingly important, the idea of this paper was to investigate the importance of personality traits (reasoning, tough-mindedness, self-control, independence, anxiety, and extraversion) for the success of the candidate, and to evaluate the efficacy of the candidates using a quantitative approach. As personality traits can be good predictors of success in learning (Barrick et al., 2001; Mount et al., 1998) and work behavior (Judge et al., 2002; Matzler et al., 2011), and their assessment is often done in the selection process, we wanted to test the model of efficiency assessment based on them, by applying the DEA method.

Results showed that personality traits, which were observed, do not have a significant statistical correlation with efficiency, so it is a suggestion for further research to take some other traits and characteristics of candidates into account. It would be useful to create a scale that would consist of factors that are proved to be good predictors for successful reskilling and candidate efficiency, including general competencies and some specific to a given profile.

The application of quantitative methods can support the decision-making in HR processes. Unlike traditional methods of decision-making and performance assessment, the DEA model presented in the paper enables the comparison of candidates based on defined criteria and determines the relative efficiency of one candidate in relation to other observed candidates. It also leaves the possibility of the evaluation of the results by the decision-maker (experts in the field), so that the weights determined by the DEA method agree with the preferences of the decision-maker.

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PREDICTING SELF-ESTEEM OF EMPLOYEES BY JOB PERFORMANCE, JOB SATISFACTION AND SUBJECTIVE WELL-BEING: THE MEDIATING ROLE OF SUBJECTIVE WELL-BEING

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Abstract

Self-esteem, which has a very important effect on cognition, emotion, motivation and behavior, is regarded one of the key elements of mental health. In studies examining the relationships between both job performance and job satisfaction with self-esteem, it is stated that self-esteem generally predicts job performance, and job satisfaction is a protective factor in terms of self-esteem, subjective well-being and happiness. The aim of this study is to examine whether subjective well-being has a mediating role in the relationship between self-esteem, job satisfaction and job performance and to find its function in explaining employees' self-esteem. For this purpose, data were collected online from a total of 508 working people between the ages of 18-65 (M=31.65; s=8.65), 217 men (42.7%) and 291 women (57.3%). Coopersmith Self-Esteem Inventory, Subjective Well-Being Index, and Osgood Semantic Differential Measures for Job Performance and Job Satisfaction were used as data collection tools. The data obtained were analyzed by path analysis, and it was found that subjective well-being predicted self-esteem by mediating job performance and job satisfaction.

Keywords: *Self-esteem, job performance, job satisfaction, subjective well-being.*

1. Introduction

Self-esteem, which is accepted as the evaluative component of the self, reflects the positive evaluations that arise about the individual's ability to meet or exceed life goals (Zeigler-Hill, 2013). The concept, which is also defined by feelings such as a general self-worth, competence, and/or self-acceptance, functions as a measure of how the person sees him/herself and how he/she feels about own achievements (Butt, 2009; Lyubomirsky et al., 2006; Wani & Dar, 2017). Self-esteem, which has a very important effect on cognition, emotion, motivation and behavior, is one of the key elements of mental health (Campbell & Lavelle, 1993). Due to the importance of the concept, studies on self-esteem are of great interest in the literature. Self-esteem, is a construct studied in many different disciplines, constitutes one of the focal points in the psychology literature. In this direction, it is stated that the causal links of self-esteem with many important life outcomes such as physical health, psychopathology, interpersonal relationships, well-being and happiness are examined (Satuf et al., 2018). Studies associate high self-esteem with phenomena such as high well-being, self-confidence, life satisfaction and happiness (Avci et al., 2012; Butt, 2009; Lyubomirsky et al., 2006; Yang et al., 2019);

It is claimed that self-esteem, stated as an indicator of global happiness or psychological well-being, can be achieved by directing one's environment effectively and successfully (Lyubomirsky et al., 2006). In addition, it is stated that competence, personal control and sense of dominance are critical factors for the formation of self-concept and self-esteem. (Harter, 1993; Taylor & Brown, 1988) In addition to these, self-esteem is also discussed in terms of employee attitudes and behaviors. In studies examining the relationship between job performance and self-esteem, although the relationship is highly variable, self-esteem is generally accepted as a potential predictor of job performance (Eom et al., 2022; Ferris et al., 2010; Gardner & Pierce, 1998; Judge & Bono, 2001; Piriaei & Goodarzi, 2019). A prominent concept at this point is conditional (or contingent) self-esteem. Conditional self-esteem refers to the areas (work, school, sports, popularity, religion, etc.) in which the individual's self-esteem is sensitive or conditional. Therefore, it is suggested that if a person's work life is one of these areas, there is a relationship between self-esteem and job performance (Ferris et al., 2010).

In terms of job satisfaction, the findings in this relationship are more complex. While some researchers discuss the effect of self-esteem on job satisfaction, others argue for the opposite effect. In one study, it was reported that job satisfaction is a protective factor for an individual's health, well-being, happiness and self-esteem (Satuf et al., 2018), while in another study, high self-esteem predicted better work results including job satisfaction and job success, but the opposite effect was not significant (Kuster et al., 2013). It is argued that the variability in these results is due to the diversity of demands and rewards of different professions (Baumeister et al., 2003).

Job performance assesses whether a person performs a job well and it is an important criterion for organizational outcomes and success. But job performance is important for employees too, because it represents career advancement, increase in pay, promotions, demotions even to be fired from organization (Landy, 2013). There are many studies predicting job performance with job satisfaction as well as personality characteristics, affective states, emotional intelligence and so on (Wright, 2015).

In this study, it was planned to predict the self-esteem of employees with job satisfaction, job performance and subjective well-being and to examine the relationships between these variables. In this framework, it is aimed to show how subjective well-being (whether there is a mediating effect) has a function in explaining the variance in the self-esteem of employees by examining the mediating role in the relationship between self-esteem, job satisfaction and job performance.

2. Methods

2.1. Participants

As inclusion criteria in the study, the participants were asked to be individuals who have been actively working for at least 1 year. A total of 508 working people, 217 men (42.7%) and 291 women (57.3%), aged 18-65 (mean = 31.65; n = 8.65) participated in the study.

2.2. Instruments

The Coopersmith Self-Esteem Inventory is a 25-item self-report inventory answered with a two answer option (Yes = 4, No = 0). In the short form inventory for adults used in this study, 17 items are scored in reverse. High scores from the inventory indicate high self-esteem (Turan & Tufan, 1987).

The Subjective Well-Being Index is an 8-item self-report type measurement tool. The items contain an 11-point Likert-type (0 = Not at all Satisfied, 10 = Totally Satisfied) answer option and there is no reverse item (International Wellbeing Group, 2006). In the translation study of the scale into Turkish, the internal consistency reliability coefficient for the Turkish form was reported as 0.86 (Meral, 2014).

Job satisfaction and job performance were measured separately with a 9-unit Osgood-type semantic differential scale.

2.3. Procedure

The study was carried out by distributing the form link on social media, which was prepared as an online. The purpose of the study, the working criteria and the knowledge about anonymity was given in the informed consent form. It was informed that the participation was on a voluntary basis. The one-person application took about five minutes.

2.4. Data analysis

Collected data were analyzed by first calculating the Cronbach Alpha internal consistency reliability coefficients of the scales and Pearson correlation coefficients between the total scores, and then using the Amos v22.0 program with different models between the variables and performing path analysis.

2.5. Results

The internal consistency reliability coefficients of the measurement tools used were determined as 0.78 for the Coopersmith Self-Esteem Inventory and 0.86 for the Subjective Well-Being Index. The correlation coefficients between the Coopersmith Self-Esteem Inventory total score and other variables were between 0.18 and 0.46, while the correlation coefficients between the other variables were between 0.22 and 0.37 (Table 1).

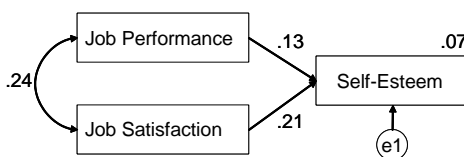
Table 1. Internal consistency scores of the scales and correlation coefficient results.

n = 508	Cronbach Alfa	Coopersmith Self-Esteem Inventory	Subjective Well-Being Index	Job Satisfaction
Coopersmith Self-Esteem Inventory	0.78			
Subjective Well-Being Index	0.86	0.46***		
Job Satisfaction		0.18***	0.22***	
Job Performance		0.24***	0.37***	0.24***

***p < 0.001

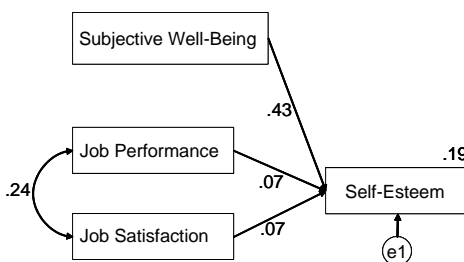
In the study, three different models were created that examine the relationships between variables for the prediction of self-esteem in employees, and the models were compared with each other in terms of their level of compatibility with path analysis.

Figure 1. Prediction of self-esteem with job performance and job satisfaction (Model 1).



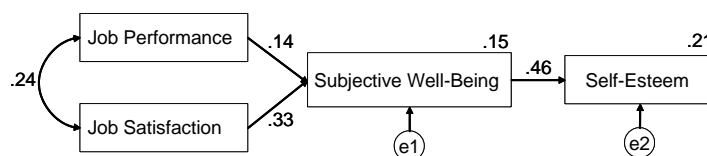
In the first model, self-esteem was predicted by job performance and job satisfaction (Figure 1). According to the results, it was seen that this model did not show model fit in general, and job satisfaction and job performance predicted self-esteem at a rate of 0.07 (Table 2).

Figure 2. Prediction of self-esteem by job satisfaction, job performance, and subjective well-being (Model 2).



In the next model, self-esteem was predicted by job satisfaction, job performance, and subjective well-being (Figure 2). While better goodness of fit coefficients was obtained in this model than the previous model, model fit was not observed again. However, in the prediction of subjective well-being and self-esteem, job satisfaction contributed 0.12 to the effect of job performance, increasing the variance explanation rate in self-esteem to 0.19 (Table 2).

Figure 3. The mediating effect of subjective well-being in the prediction of job satisfaction and job performance and self-esteem (Model 3).



In the last model, while self-esteem was predicted by job satisfaction and job performance, subjective well-being was included in the model with its mediating effect (Figure 3). In this model, while job satisfaction and job performance predicted subjective well-being by 0.15, it was observed that the mediation effect of subjective well-being, predicted self-esteem, surpassed the previous explanation rates and reached the level of 0.21. In this model, it is seen that the goodness of fit coefficients, except for one (RMR), indicate good levels of fit (Table 2).

Table 2. Path analysis results for different models in the prediction of self-esteem.

Model (n = 508)	ΔR^2	Chi-square / df	GFI	AGFI	CFI	RMR	RMSEA
1	0.07	22.95	0.91	0.82	0.00	0.00	0.21
2	0.19	41.41	0.93	0.65	0.66	0.46	0.28
3	0.21	3.36	0.99	0.97	0.98	0.47	0.07

3. Discussion

In this study, the relationships between self-esteem, subjective well-being, job satisfaction and job performance were examined. The role of subjective well-being in the relationship between job satisfaction and job performance with self-esteem was examined with different models and the role of subjective well-being in this relationship was reviewed.

According to the results, it has been shown that subjective well-being has a mediating effect on the relationship between job satisfaction, job performance and self-esteem, with a significant increase in the variance explanation rate in self-esteem. This means that, Job satisfaction and job performance has an effect on self-esteem by effecting subjective well-being.

As an opening debate, these results can show the importance of job performance and job satisfaction for psychological well-being and self-esteem. Employers and managers can support their employees by setting reachable and realistic achievement goals and criteria. Because all the criteria that define success are depend upon management strategies and organizational definitions.

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THE RELATIONSHIP BETWEEN RISKY AND DELINQUENT BEHAVIOR, SELF-ESTEEM AND DEPRESSION IN ADOLESCENTS¹

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Abstract

Adolescence is a sensitive developmental period in the life of every individual in which significant biological, physical and psychological changes occur. Also, it is a period of establishing various new forms of behavior in interactions with significant others. Some of them may have characteristics of risky and delinquent behavior. The aim of this paper was to examine whether the self-esteem and depression of adolescents can be important in predicting risky and delinquent behavior. Also, the goal was to examine the relationship between self-esteem, depression, and the tendency toward risky and delinquent behavior, as well as to examine the mutual relationships between the tendency toward risky and delinquent behavior and sociodemographic variables (gender, school performance, parents' education). The research sample is convenient and consists of 200 participants (102 female; 98 male), aged 18 to 19. The following instruments were used: Beck Depression Inventory, Rosenberg's Self-Esteem Scale, and Self-description of risky and delinquent behavior of young people. A significant negative correlation was obtained between depression and self-esteem ($r = -.45, p < .001$), as well as between self-esteem and the tendency towards risky and delinquent behavior ($r = -.49, p < .001$). Also, a statistically significant positive correlation was obtained between depression and a tendency towards risky and delinquent behavior ($r = .17, p < .005$). The results showed that the regression model with self-esteem and depression as predictors explained 23% of the variance in the tendency towards risky and delinquent behavior, but self-esteem is the only significant predictor ($\beta = -.515, p = .000$). When it comes to the relationship between the tendency towards risky and delinquent behavior and socio-demographic variables, the results show that the tendency towards risky and delinquent behavior will be manifested more often in boys ($t = 6.88, p = .000$), adolescents with lower school performance ($r = -.52, p < 0.01$) and an adolescent whose parents have a lower education ($r_{\text{father}} = -.25, p < 0.01, r_{\text{mother}} = -.38, p < 0.01$). The results of this research indicate the importance of self-esteem, and individual and family factors for the development of desirable forms of behavior and have implications for counseling work with adolescents.

Keywords: *Depression, self-esteem, risky behavior, delinquent behavior, adolescents.*

1. Introduction

Adolescence is a period of development from the age of ten to the early twenties (Smetana, 2006), which has its own psychological characteristics that distinguish it from other periods of life (Lacković-Grgin, 2006) and implies the realization of numerous developmental tasks, such as sexual maturation, development personal and social interests, reaching the level of hypothetical and deductive reasoning, building identity and self-concept (Christie & Viner, 2005).

Baron (Baron, 1974) believes that self-esteem plays a key role in the development process of adolescents. According to Rosenberg (Rosenberg, 1979), self-esteem is a set of thoughts and feelings about one's own value and importance, that is, a global attitude that a person has towards himself as a whole personality. He advocates the point of view that self-esteem is one-dimensional in nature and is formed based on feedback from reference persons such as parents, teachers, peers, and therapists, and is reflected as a positive or negative attitude towards oneself. Coopersmith (1967) defines self-esteem as the degree of an individual's belief in his own abilities, importance, success, or value and treats it as a multidimensional construct. This understanding of self-esteem best corresponds to self-esteem as seen by Maslow, who emphasizes personal competence, success, freedom, and independence from others as its basis and who

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saw self-esteem as one of the basic developmental motives of an individual (Fulgosi, 1990). In adolescence, self-concepts and the development of feelings of self-intensify, and this is not necessarily accompanied by satisfaction, and contradictory self-concepts cause confusion because they cannot be integrated immediately. Cognitive development enables comparison with others, which can be a source of "internal" injuries because that comparison can harm one's own self-esteem (Ruble, 1976; Maccoby, 1983; Damon and Hart, 1982 as cited in Todorović, 2005).

Adolescence is a period when many changes take place extremely dynamically and intensively, and in many studies, depressive symptomatology has been identified as a key obstacle to the normal functioning of adolescents (Greenberg, 2004). Depressive symptoms appear in the life of almost every individual and represent a mostly normal reaction to some unpleasant and stressful situations (especially in cases of the loss of a loved one, home, or pet). For these reasons, researchers define depression as a continuum from normal, intermittent, and transient sadness to a deep depression that persists or reoccurs (Vulić-Prtorić, 2004). Unlike the period of childhood when it is difficult to recognize a depressive clinical picture, in the period of adolescence there are fewer dilemmas and difficulties in recognition, but the main problem becomes distinguishing a truly depressed adolescent from a moody adolescent or one prone to behavioral changes. Cognitive development in adolescence contributes to the possibility of the appearance of depressive symptoms, as well as thinking about the world and the future, the meaning of life, about one's own value and identity (Turner and Cole, 1994, Nolen- Hoeksema et al., 1992 as cited in Vulić-Prtorić, 2004). In adolescents, depression is characterized by experiencing loneliness, helplessness, anger, and disappointment. However, it should be kept in mind that the image of adolescence as a period of intense stress is actually applicable to a smaller number of adolescents and that most children pass this period without significant emotional changes (Vulić-Prtorić, 2004).

Adolescence is also a period of life characterized by the testing of social constraints, often involving engaging in risky behaviors or committing minor crimes (Magoon and sar., 2005). In their desire to prove their independence and freedom of decision, young people tend to do exactly what their parents forbid them to do (Kapor-Stanulović, 2007). Risky behavior can be defined as any behavior that can threaten the physical and psychosocial health and development of adolescents, such as consumption of harmful substances, risky sexual behavior, antisocial behavior, etc. (Jessor, 1991). Stevens and Griffin (2001, as cited in Ferić et al., 2008) indicate that young people exhibit mostly multiple risky behaviors rather than one isolated risky behavior. In addition to risky behavior, adolescents can also exhibit delinquent behavior. Delinquents are an adolescent population whose specificity is that they drastically reject the values and norms of the ruling culture and who, through inappropriate behavior, express their rebellion against some form of abuse or fears they experienced in relationships with adults (Todorović, 2005). Delinquency includes various forms of behavior that violate the law - from minor offenses such as petty theft, through the destruction of private or social property to robbery, serious physical attacks, rape and murder. Delinquent behaviors can arise as a result of the interaction of various factors: personal (social skills, academic achievement), family (educational procedures, punishment, marital conflicts), and sociocultural factors (school experience, peer interactions) (Lacković- Grgin, 2006).

Researchers find that high self-esteem is associated with a lower frequency of risky behaviors (McKay et al., 2012). Jelić (Jelić, 2012) cites the results of research that showed that low self-esteem leads to some negative phenomena such as delinquent behavior, depression, bulimia, and a tendency to mental illnesses. Classic psychiatric classifications contributed to the prejudice that depression and delinquent behavior are incompatible. On the one hand, the key symptoms in the clinical picture of depression are low energy and withdrawal from the world (American Psychiatric Association, 1994). On the other hand, delinquent behavior does not represent a withdrawal from the world, but an action "against the world", which even implies increased energy. However, research shows that about 35 to 45% of adolescents who show symptoms of depression often show symptoms of anxiety, substance abuse, and risky behavior (Wesselhoeft et al., 2013).

2. Objectives

The subject of this research is to investigate the relationship between risky and delinquent behavior, self-esteem, and depression in adolescents. The specific goals were:

- Examine the expression of self-esteem and depression of adolescents and their experience of risky and delinquent behavior
- Examine the correlations between self-esteem, depression, and the experience of risky and delinquent behavior in adolescents
- Examine whether risky and delinquent behavior of adolescents can be predicted based on their self-esteem and depression

- Examine relationship between risky and delinquent behavior of adolescents and sociodemographic variables (gender, school success, parents' education).

3. Design and sample

The research was conducted in 2020 in two secondary schools in Serbia. Before filling out the questionnaire, participants were informed about the method of data collection and processing, the purpose of the research, as well as about the anonymity of the obtained data. For each questionnaire, participants received a short description of what the questionnaire refers to, as well as instructions on how to fill it out. The questionnaires were without a time limit. The sample consisted of 200 students, aged 18-19 ($M = 18.51$, $SD = 0.50$), 98 male (49%), and 102 female participants (51%).

4. Instruments

Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale consisted of 10 items. Participants were requested to indicate the extent of their agreement or disagreement with each of these 10 statements using a 5-point scale from 1-strongly disagrees to 5-strongly agree. Example items: "Generally speaking, I'm satisfied with myself". Cronbach's alpha coefficient was .74

Beck Depression Inventory (BDI, Beck et al., 1961). It is a self-report rating inventory that measures characteristic attitudes and symptoms of depression. The scale consisted of 21 items that are evaluated on a four-point scale (0–3), so higher values indicate greater symptom intensity. The assessment is made in relation to the last two weeks. Cronbach's alpha coefficient was 0.78

Self-description of risky and delinquent behavior of young people (SRDP; Ručević et al., 2009). It consists of 42 items that make up seven factors (misdemeanor and minor delinquent behaviors, undesirable normative behaviors, risky sexual behaviors, use or abuse of psychoactive substances, violent behavior in close relationships, aggravated theft, burglary and robbery, and suicidal and auto aggressive behaviors). Each statement also has a certain index of severity that shows the seriousness of the behavior. The participants are asked to answer each statement about how many times they behaved in a certain way. The answers offered are: never, 1-2 times, 3-5 times, and more than 5 times. In this research, the total score on risky delinquent behavior was used, where a higher score indicates more pronounced risky and delinquent behavior. Cronbach's alpha coefficient was 0.90.

5. Results

The following tables show obtained the results.

Table 1. Descriptive statistic.

	N	Min	Max	M	SD
Self-esteem	200	18	50	33.66	7.81
Depression	200	0.00	39	13.89	7.93
Risky and delinquent behavior	200	6.00	275	101.65	62.24

The obtained data show that the mean value for self-esteem is shifted to higher values ($M = 33.66$) on range from 10 to 50. The mean value for depression is grouped around lower values, ($M = 13.89$) on a range from 0 to 63. The mean values for risky and delinquent behavior are 101.65 on range from 0 to 663.

Table 2. Correlations between self-esteem, conformism, and risky and delinquent behavior.

	1	2	3
1 Self-esteem	1	-.45**	-.49**
2 Depression		1	.17*
3 Risky and delinquent behavior			1

Note: ** $p < .01$; * $p < .05$

All examined correlations show statistical significance. A negative correlation between self-esteem and depression and between self-esteem and risky and delinquent behavior was identified. These correlations are moderate. Positive correlation exists between depression and risky and delinquent behavior and this correlation is relatively low.

Table 3. Self-esteem and depression as predictors of risky and delinquent behavior.

Predictors	B	p	Model Summary
Self-esteem	-.515	.000	$R = .49, R^2 = .24, R^2_{adj} = .23,$
Depression	-.060	.393	$F(2,197) = 31.25, p = .000$

The results of linear regression analysis show that self-esteem is the only significant predictor of risky and delinquent behavior in adolescents. The direction of the Beta coefficient indicates that lower self-esteem increases the probability of risky and delinquent behavior in adolescents. Examined predictors could explain a 23% variance in risky and delinquent behavior in adolescents.

When it comes to the relationship between the tendency towards risky and delinquent behavior and socio-demographic variables, the results show that the tendency towards risky and delinquent behavior will be manifested more often by boys ($t = 6.88, p = .000$), adolescents with lower school performance ($r = -.52, p < 0.01$) and an adolescent whose parents have a lower education ($r_{(father)} = -.25, p < 0.01, r_{(mother)} = -.38, p < 0.01$).

6. Discussion and conclusion

The main goal of this paper was to investigate the relationship between self-esteem, depression, and experience of risky and delinquent behavior in adolescents. The main goal was broken down into several specific and narrower goals: first to determine the correlations of variables, and then to investigate whether risky and delinquent behavior in adolescents can be predicted based on their self-esteem and depression. Also, we wanted to investigate the relationship between risky and delinquent behavior in adolescents and sociodemographic variables.

After examining the correlations between self-esteem and depression, we noticed a significant negative correlation. In other words, adolescents with lower self-esteem experience more depressive symptoms, which is a result confirmed by numerous studies (Mruk, 2006; Baumeister et al., 2003). Also, a correlation between self-esteem and risky and delinquent behavior is statistically significant and negative. Similarly, other research also confirms that high self-esteem is associated with a lower frequency of risky behavior (McKay et al., 2012) and a lower frequency of delinquent behavior (Jelić, 2012). When it comes to the correlation between depression and risky and delinquent behavior, the results show that adolescents with depressive symptomatology are more prone to risky and delinquent behavior. And the results of other research confirm that in adolescents the symptoms of depression are often associated with the abuse of psychoactive substances and risky behavior (Wesselhoeft et al., 2013).

After reviewing the results of the linear regression analysis, it was determined that only self-esteem is a statistically significant predictor of risky and delinquent behavior. The obtained results showed that a positive self-image is a protective factor against the emergence of risky and delinquent behavior in the adolescent period. Kalajdžić and Perućica (2018) conclude that adolescents with a higher level of self-esteem use positive strategies for coping and solving problems and are therefore less likely to develop disorders such as anxiety, depression, and delinquency, than adolescents with lower self-esteem. In this research, it was not confirmed that depression is a significant predictor of risky and delinquent behavior, but a positive correlation of low intensity was found between these variables. Similarly, Hrnčić (2003) concludes that the high comorbidity of depression and antisocial behavior is the rule rather than the exception. A significant positive relationship between depression and antisocial behavior is found in young people with behavioral disorders, delinquent youth, and depressive youth. The results of this research show that boys will be more prone to risky and delinquent behavior than girls, which is also confirmed in other studies (Fagan et al., 2007; Junger-Tas et al., 1994). Also, adolescents who achieve lower school performance and whose parents have lower education will be more prone to risky and delinquent behavior.

Based on the results of this research, it could be concluded that in order to reduce risky and delinquent behavior in adolescents, the programs for prevention that are aimed at working with adolescents should contribute to strengthening their self-esteem and motivate them to achieve better school performance. Also, in the prevention of risky and delinquent behavior, it is important to pay attention to the prevention of mental health, due to the established connection between depression and risky and delinquent behavior.

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COMPARISON OF PARENTING STYLES, SOCIAL COMPETENCES AND CONFLICT MANAGEMENT STRATEGIES OF YOUTHS IN ITALY AND SERBIA

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Abstract

The aim of the paper is to explore how parental styles and social competencies predict the conflict management strategies of young adults in Italy and Serbia, as well as to explore the differences among those variables and their relations in different cultural contexts. Data were collected in Serbia (N=288) and in Italy (N=476) with young adults (18-30 age). They responded to a questionnaire composed of several scales. Social competencies were measured by MSCS and included empathy, emotional regulation, and verbal and non-verbal skills. Perception of the parenting styles was measured by the EMBU and showed two factors: authoritarian or democratic styles. The conflict management styles, based on the Dual Concern Model, showed three factors: Cooperative, Competitive, and Defensive. It was expected that differences in parenting styles and social competencies will have different impacts on preferences for conflict management strategies.

Multiple regressions showed that Cooperative style was predicted by similar variables in both cultures which include verbal communication as a personality trait, empathy, and emotional regulation, while non-verbal skills predict cooperative strategies only in the Serbian sample. The defensive style was predicted by the different variables in the two cultures. In the Italian sample, they were predicted by authoritarian parenting style, verbal communication as a personality trait, and verbal communication as an ability, while in the Serbian sample, they were predicted only by empathy. The competitive style was predicted by emotional regulation and verbal communication as an ability in both cultures, as well as by the democratic parenting style and empathy but only in the Italian sample.

Keywords: *Conflict management strategies, parental styles, social skills, cross-culture.*

1. Introduction

Conflicts are inevitable aspects of human behaviour having different causes, intensities, and consequences among individuals and cultures. The lack of skills for dealing with them in a constructive way contributes to a lot of individual and social problems, breaking interpersonal, even international relation and generally decreasing a life quality of people. Therefore, to avoid or minimize the risk of possible negative or even violent consequences, it is important to understand the factors that may contribute to a different approach to conflict situations (French et al., 2018; Julien et al., 2003; Komarraju et al., 2012;). Previous studies have shown that conflict management strategies are related to specific personality traits or attitudes (Jensen-Campbell & Graziano, 2001; Wood, & Bell, 2008, Laca et al., 2006, Dzamonja et al, 2022) and the preference for specific strategies varies across cultures (Croucher et al., 2012; Doucet et al., 2009; Kim-Jo et al., 2010; Purohit, & Simmers, 2006; Vokic & Sontor, 2009).

2. Objectives

The aim of the paper is to explore how parental styles and social competencies predict the conflict management styles of young adults in Italy and Serbia. Also, we were interested to explore the differences among expression and relations of those variables in different cultural contexts.

The study was based on one of the most prominent models of motivational orientation towards conflicts, the Dual Concern Model (Rahim, 2011; Pruitt, 1981; Pruitt & Rubin, 1986). The social

competences were defined as the heterogeneous complex of different *motivation/skills* level behaviors and abilities that underlie successful social interactions (Rose-Krasnor, 1997).

3. Method

This study involved 764 young people from Serbia (N=288; 69% females) and Italy (N=476; 61% females). The participants' age varied from 18 to 30 (M=21.54, SD=2.80). Data were collected online and participation in the study was voluntary and anonymous. The research was approved by the Ethical Research Committee from Belgrade and Sapienza Universities.

The conflict management strategies, based on the Dual Concern Model (Deucht, M., 2000), measured by *The Dutch Test of Conflict Handling* - DUTCH (Janssen & van de Vliert, 1996) showed three factors: Cooperative ($\alpha = .88$), Competitive ($\alpha = .72$), and Defensive ($\alpha = .72$). Social competencies were measured by shorter version of MSCS (Trevisan et al, 2018) which included empathy ($\alpha = .87$), emotional regulation ($\alpha = .81$), verbal conversation skills ($\alpha = .78$) and non-verbal skills ($\alpha = .87$). Perception of the parenting styles was measured by the EMBU (Arrindell et al., 1999) questionnaire and showed two factors: authoritarian ($\alpha = .87$) or democratic styles ($\alpha = .82$).

The multiple regression analyses were applied with 5 social competencies and 2 parental styles as predictors and 3 conflict management strategies as criterion variables.

4. Results

Young people from Serbia have significantly higher scores at empathy ($M_{diff} = 1.51$, $t(670,167) = 3.843$, $p < .001$), verbal conversation trait ($M_{diff} = 0.91$, $t(689,418) = 5.631$, $p < .001$) and non-verbal skills ($M_{diff} = 1.91$, $t(668,485) = 5.021$, $p < .001$). They also experience higher democratic parental style ($M_{diff} = 1.80$, $t(765) = 5.188$, $p < .001$) while there were no significant differences at authoritarian parental style ($M_{diff} = 0.67$, $t(765) = 1.307$, $p = .191$) and emotional regulation ($M_{diff} = -0.43$, $t(511,562) = -0.955$, $p = .340$).

Regression analyses showed that verbal communication as a trait, empathy and emotional regulation were significant predictors of Cooperativeness in both samples, and non-verbal skills only in Serbian youths (Table 1). The whole model explained 34% of the variance of the Cooperative strategy in the Serbian sample ($R^2_{adj} = .34$, $F(7,278) = 22.326$, $p < .001$) and even 41% of the variance in the Italian sample ($R^2_{adj} = .41$, $F(7,468) = 48.536$, $p < .001$).

Table 1. Regression analyses for Cooperative conflict management strategy.

		Beta coefficients	t	p
Authoritarian parental style	Serbians	.007	.120	.905
	Italians	.027	.634	.526
Democratic parental style	Serbians	.076	1.342	.181
	Italians	.083	1.919	.056
Verbal conversation skills	Serbians	.242	3.665	.000
	Italians	.289	5.625	.000
Non-verbal skills	Serbians	.201	2.999	.003
	Italians	.050	1.007	.314
Empathy	Serbians	.167	2.670	.008
	Italians	.319	6.507	.000
Emotional regulation	Serbians	.239	4.714	.000
	Italians	.141	3.781	.000

Regression analyses showed that only authoritarian parental style and verbal conversation 1 skills were significant predictors of Defensiveness, but only for Italian youths and empathy for Serbian (Table 2). The whole model explained only 4% of the variance of the Cooperative strategy in the Serbian ($R^2_{adj} = .04$, $F(7,278) = 2.750$, $p < .01$) and 6% of the variance in the Italian sample ($R^2_{adj} = .06$, $F(7,468) = 4.993$, $p < .001$).

Table 2. Regression analyses for Defensive conflict management strategy.

		Beta coefficients	<i>t</i>	<i>p</i>
Authoritarian parental style	Serbians	.081	1.180	.239
	Italians	.164	2.995	.003
Democratic parental style	Serbians	.016	.232	.817
	Italians	.102	1.849	.065
Verbal conversation skills	Serbians	-.038	-.533	.594
	Italians	-.250	-4.745	.000
Non-verbal skills	Serbians	-.031	-.376	.707
	Italians	-.004	-.056	.956
Empathy	Serbians	.161	2.121	.035
	Italians	-.083	-1.341	.180
Emotional regulation	Serbians	.021	.349	.727
	Italians	.053	1.127	.261

Finally, verbal conversation skills and emotional regulation (negatively) contribute to the prediction of Competitiveness in both samples. Democratic parental style as well as empathy (negatively) were significant predictors only for Serbian youths (Table 3.). The whole model explained 12% of the variance of the Competitive strategy in the Serbian ($R^2_{adj} = .121$, $F(7,278) = 6.606$, $p < .001$) and 10% of the variance in the Italian sample ($R^2_{adj} = .10$, $F(7,468) = 8.799$, $p < .001$).

Table 3. Regression analyses for Competitive conflict management strategy.

		Beta coefficients	<i>t</i>	<i>p</i>
Authoritarian parental style	Serbians	.045	.684	.494
	Italians	-.020	-.378	.706
Democratic parental style	Serbians	.148	2.241	.026
	Italians	.078	1.449	.148
Verbal converssation skills	Serbians	.216	3.159	.002
	Italians	.287	5.583	.000
Non-verbal skills	Serbians	.109	1.403	.162
	Italians	.108	1.749	.081
Empathy	Serbians	-.149	-2.057	.041
	Italians	-.098	-1.613	.107
Emotional regulation	Serbians	-.179	-3.047	.003
	Italians	-.149	-3.242	.001

5. Discussion

Interestingly, young people from Serbia perceived higher levels of different communication skills (empathy, verbal and non-verbal skills) and democratic parental style compared with Italians, while there were no significant differences in authoritarian parental style and emotional regulation. The obtained result is hard to explain bearing in mind the widespread (auto)perception that Serbia can be described as a conflict society. We can speculate that such an environmental (social) climate contributes to developing or to self-perception of good personal communication skills to be able to cope with challenging social situations.

Multiple regressions showed that Cooperative strategies were predicted by similar communication skills in both cultures. It is obvious that for successful collaboration is necessary to understand the feelings and needs of other people, regulate the expression of emotions and have good verbal skills to express them to others. Probably, in the Serbian sample, non-verbal skills play a more important role to clarify “underlying messages” in a potentially conflict relations which could prevent conflict and improve cooperation. Also, there was no contribution of parental style for a cooperative approach to conflict that would be expected for ademocratic style.

It is interesting that Defensive strategies were predicted by the different variables in the two cultures. In the Italian sample, they were predicted by an authoritarian parenting style, while verbal skills negatively contribute to defensiveness. It seems evident that if parents insisted that children should obey them and if young persons have less verbal skills, they would try to avoid conflict and accommodate

others' wishes and needs. Contrary to that, in the Serbian sample, defensiveness is predicted only by empathy which could be explained by recognition and importance of others' feelings and needs and willingness to give them some priority. Still, it is not clear how to explain those cultural differences. But since the small percentage of the variance of Defensive strategies could be explained by communication skills and parental style, we believe that other factors, like personality traits and situational variables could contribute more to the prediction of defensiveness. Other studies confirmed that Agreeableness, Neuroticism and Introversion in addition to the negative perception of conflicts and world "as a competitive jungle" explained defensive behavior in conflict situations (Dzamonja Ignjatovic et al. 2022)

Competitive strategies were predicted by lower levels of emotional regulation and higher verbal conversation skills in both cultures. It is obvious that lower frustration tolerance and anger expression accompanied by higher self-perception of verbal skills could lead to competition to win and beat the others. Besides that, a lower level of empathy makes it easier to express personal interest over others in more collectivistic societies such as Serbian. It is also interesting that the democratic parenting style contributes to the prediction of Competitive strategies among Serbian, probably experienced as "permission" to resist while that parenting style increases cooperativeness in the Italian youths.

6. Conclusion

Social communication competences predict mostly Cooperative strategies, while it seems that other approaches to conflict are more predicted by other variables. Besides a lot of similarities in factors that contribute to the prediction of specific conflict management strategies in the two cultures, there were also some differences that could be explained by the influence of broader social contexts. Those societal variables were not included in this study. Besides that, there are other personal and situational factors that could play an important role in the preference of a specific conflict strategy that should be more explored in the future.

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PARENTING STYLES AND SCRIPT INJUNCTION AS PREDICTORS OF ANXIETY IN STUDENTS¹

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Abstract

Parents, as the first agent of socialization with whom a child comes into contact, are of great importance for development and growth. Parenting styles, the way in which parents achieve their educational goals, accompanied by acceptance and love, or rejection of the child, as well as script injunctions, verbal and non-verbal messages that parents send to the child, affect the adaptation and autonomous functioning of the child. For this reason, with this research, we wanted to get an answer to the question of whether parenting styles and scripted injunctions are significant predictors of anxiety, which in earlier research was shown to be a dominant feeling among students. The sample was convenient, consisting of 122 respondents ($M = 18.9\%$, $F = 81.1\%$) with an average age of 19.95 ($SD = 1.02$). The following measuring instruments were used to operationalize the mentioned constructs: the Zung Anxiety Scale, the Script Injunctions Scale, and the Parenting Styles Measurement Questionnaire (PSDQ), adapted for the student population. The results show that the model consisting of script injunctions and parenting styles explains 43% of the total variance ($p < .01$). The estimated authoritative style of the mother ($\beta = .22$, $p < .05$), as well as the authoritative style of the father ($\beta = .32$, $p < .05$) stood out as individual predictors. When it comes to script injunctions, the following stood out as significant predictors of anxiety: *Don't exist* ($\beta = .58$, $p < .01$), *Don't be a child* ($\beta = .23$, $p < .05$), *Don't grow up* ($\beta = -.28$, $p < .05$), *Don't* ($\beta = .26$, $p < .05$) and *Don't think* ($\beta = .29$, $p < .05$). It can be concluded that the assessment of parents as authoritative figures leads to an increased feeling of anxiety among students. Also, script injunctions accompanied by feelings of guilt and a sense of bothering others (*Don't exist*), insecurity (*Don't*), lack of concentration, and doubt in your intelligence (*Don't think*), as well as those that led to the prevention of childhood play (*Don't be a child*), lead to more pronounced anxiety. On the other hand, lack of responsibility and frivolity (*Don't grow up*) are associated with less expressed anxiety.

Keywords: *Anxiety, parenting styles, script injunctions, students.*

1. Introduction

The educational style implies the emotional climate within which the interaction between parents and children takes place. It is formed in early childhood and extends throughout a person's youth (Todorović, 2005). In the literature, there are different models of educational or parenting styles. Diana Baumrind's model, (Baumrind, 1966) which distinguishes three parenting styles, authoritarian, authoritative, and permissive, proved to be very influential.

An authoritarian parenting style implies highly expressed parental control and a low degree of warmth. An authoritarian parent does not encourage a democratic exchange of opinions, believing that the child should unconditionally accept the parent's word as correct (Baumrind, 1966). Children are expected to obey, and in the process of education, parents often use punishment and violent measures (Ross & Hammer, 2002). The main educational goals are the development of self-control and obedience, with a clear set of boundaries and rules of behavior. Children who grow up in an authoritarian environment are irritable and withdrawn and have a changeable mood, which makes their socialization difficult (Todorović, 2005).

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The authoritative parenting style implies high demands adapted to the child's age, but also a high degree of emotional warmth and support (Baumrind, 1966). Although they set clear requirements and rules of behavior, authoritative parents explain to children the reasons for applying those rules (Ross & Hammer, 2002). The authority of the parents is respected, there is an emotionally warm atmosphere in the family, and the child retains a sense of belonging and appreciation from the parents. The most important educational goals are the development of independence, curiosity, and creativity in the child (Baumrind, 1966). When they grow up in a democratic environment, children are spontaneous, express their thoughts and feelings freely, are research-oriented, and have greater motivation for achievement (Matejević & Todorović, 2012).

A permissive parenting style implies a high degree of emotional warmth and a low degree of control. A permissive parent does not set clear boundaries and rules of behavior, but accepts the child's impulses, desires, and activities, allowing the child to independently regulate his activities (Baumrind, 1966). They indulge the child excessively and are unable to maintain control over his behavior. Unrestricted freedom in children creates a feeling of insecurity, which encourages aggressive and impulsive behavior of the child. Children of permissive parents have a low degree of social responsibility, often exhibit impulsive behavior, and have low achievements (Baumrind, 1966).

Script injunctions represent one of the basic concepts of transactional analysis and play a significant role in the formation of a life script, an unconscious life plan that a person follows throughout life, regardless of the pain and suffering that results from it. Script injunctions are messages that parents or significant others sent to the child at an early age, usually up to the age of 3, and can be sent non-verbally (facial expression, tone of voice, body position), or verbally, through sentences such as: "I hope you die", "Don't touch it", "Don't jump", "Mom's darling, I don't know what I would do without you". These pathological messages, derived from parental pain and suffering, are internalized by the child and they become the source of pathological manifestations during life (Gulding & Gulding, 2007).

Gulding and Gulding (2007) singled out the twelve most common injunctions, namely: *Don't exist*, *Don't*, *Don't be important*, *Don't be a child*, *Don't grow up*, *Don't be successful*, *Don't be you*, *Don't be healthy*, *Don't belong*, *Don't be close*, *Don't think* and *Don't feel*.

Don't exist is the strongest injunction because it implies a ban on life. It can be expressed in a mild form, "If it wasn't for you, I would divorce your father", but also in a more intense form, "I wish you had never been born", "I will kill you for that" (Gulding & Gulding, 2007). *Don't*, it implies that the child does nothing because everything he does is a danger, therefore, complete inactivity is the most adequate. If a person is constantly indecisive and has a feeling of lack of time, without trying to change the position he is in, it is assumed that he has these scripted injunctions expressed (Stjuart & Džoins, 2011). *Do not be close* is an injunction that can refer to both physical and psychological closeness with others. If there is not enough physical contact between parent and child, the child may interpret it as not being right to be close to people. The message *Don't be important* carries with it a feeling of insufficient worth, which manifests itself throughout life. It is often conveyed with the messages "Don't stand out", "The best is the golden middle", and "Children should be seen, but not heard". *Don't be a child* is most often aimed at the oldest children, from whom parents expect to take care of younger siblings, while the injunction *Don't grow up* is mostly reserved for the youngest children and serves as a confirmation of parental infantilism and preventing the child from doing things he is up to. Parents who send this ban are doing things for their children and on an unconscious level they are sending the message "Don't leave me". *Don't be successful* usually implies the hidden jealousy of parents towards their children's success, due to the unconscious desire that the child is not better than them. "*Don't be you*" is an injunction given by parents to children who are the opposite gender to their expectations, which can result in problems with the child's gender identity. *Don't be healthy* is the message that the child adopts because the parents give him the most attention when he is sick, because health would imply a lack of love. *Don't belong* is a message that parents transmit because they themselves don't feel that they belong to their environment, therefore, by learning from a model, the child adopts the presented way of behaving, while *Don't think* is adopted if the parents often belittle the child's way of thinking. *Do not feel* implies the prohibition of all or some feelings, more precisely, the showing feelings. Judging by the opinion of TA therapists, the mentioned message can also be the cause of psychosis (Stjuart & Džoins, 2011).

Scripted injunctions and parenting styles can increase feelings of insecurity and anxiety.

Anxiety is most often defined as the anticipation of a certain danger or as a reaction to stimuli that do not carry real danger (Zdravković, 1985, according to Hadži Pešić, 2009). Thiele (1973) states that anxiety is a characteristic unpleasant emotion caused by the anticipation of danger or frustrations that threaten the safety of the individual. Many speak of it as "free floating", because it is not tied to a specific object or situation (Hadži Pešić, 2009). Anxiety can be seen as general anxiety, the general feeling of an individual, or as situational, the feeling of a person at a given moment. General anxiety is a tendency acquired in childhood, through the relationship with parents.

The aforementioned tendency implies viewing objectively harmless situations as threatening, and the tendency to react to them more intensively than the specific situation dictates. Situational anxiety is a subjectively perceived state of concern that is accompanied by increased activity of the autonomic nervous system (Spielberg, 1972). Anxiety is usually assessed using three components - behavioral, subjective, and physiological (Wenar, 2003). The mental component is manifested through an unpleasant state of worry, apprehension, tension, nervousness, and irritability, while the physical aspect is accompanied by psychomotor restlessness, rapid heart rate, rapid breathing, muscle tension, but also stomach problems, and excessive sweating. Anxiety and dysphoria are common conditions in adolescence and youth. While one part occurs as part of normal developmental changes, the other part can turn into a pathology (Marić, 2010). Research shows that most children and youth have worries and fears that are part of the normal course of development (Bell-Dolan, Last & Strauss, 1990).

Parenting styles accompanied by acceptance and love, or rejection of the child, as well as scripted injunctions, and verbal and non-verbal messages that the child received while growing up, can affect the adaptation and functioning of the child. For this reason, the question arises whether parenting styles and script injunctions are significant predictors of anxiety, which is also the goal of this research.

2. Method

2.1. Objective

The main goal of the research is to examine whether parenting styles and script injunctions are significant predictors of anxiety in students.

2.2. Sample

The sample was convenient and consisted of 122 respondents (M=18.9%, F=81.1%), an average age of 19.95 (SD=1.02). The respondents were first and second-year students of the Faculty of Philosophy in Niš, Serbia. Before filling out the questionnaire, participants were informed about the method of data collection and processing, the purpose of the research, as well as about the anonymity of the obtained data. The questionnaires were without time limit.

2.3. Instruments

The following measuring instruments were used to operationalize the mentioned constructs:

The Zung Self-Rating Anxiety Scale (1971) is a one-dimensional scale composed of 20 items. When answering, respondents note the frequency of the mentioned feeling, on a four-point scale. The assessment of the degree of frequency of occurrence of symptoms ranges from 1 to 4 (1 - rarely, 2 - sometimes, 3 - often, 4 - mostly). The reliability of the scale is around $\alpha = 0.82$.

The Scale of script injunctions (Gavrilov-Jerković, Budiša, Lekić Babić & Čolović 2009) is used to register the quality and degree of manifestation of injunctions that people experienced while growing up, and which represent an integral part of their self-image. The scale consists of 71 items answered on a five-point Likert-type scale, which make up twelve subscales. The reliability coefficient of the entire questionnaire is $\alpha = 0.96$, while the reliability of the subscales is - Don't exist ($\alpha = 0.83$), Don't be you ($\alpha = 0.48$), Don't be a child ($\alpha = 0.61$), Don't grow up ($\alpha = 0.55$), Don't be close ($\alpha = 0.68$), Don't ($\alpha = 0.66$), Don't succeed ($\alpha = 0.77$), Don't be healthy ($\alpha = 0.58$), Don't be important ($\alpha = 0.72$), Don't belong ($\alpha = 0.75$), Don't feel ($\alpha = 0.77$), Don't think ($\alpha = 0.72$).

The Parenting Styles Measurement Questionnaire (PSDQ), (Robinson, Mandelco, Olsen & Hart, 2001) consists of 32 items that make up three subscales, authoritarian, authoritative, and permissive style. Due to previously noted poor metric characteristics, the permissive style subscale was not used in this research. Parenting styles were assessed for both parents. Answering is done on a five-point Likert-type scale. The reliability of the authoritarian style was $\alpha = .82$, while the authoritative one was $\alpha = .86$.

3. Results

In the following, the basic descriptive statistical results are presented first.

Table 1. Descriptive statistics.

Variables	Min	Max	AS	SD
Anxiety	27.00	56.00	37.05	5.70
Authoritative mother	1.20	4.93	3.13	.94
Authoritarian mother	1.00	6.50	1.98	1.02
Authoritative father	1.53	5.00	3.58	.94
Authoritarian father	1.00	4.33	2.06	.90
Don't exist	10.00	37.00	15.13	5.86
Don't be you	3.00	14.00	5.97	2.48
Don't be a child	2.00	12.00	3.19	1.76
Don't grow up	6.00	26.00	14.91	4.78
Don't be successful	6.00	27.00	11.88	4.22
Don't	7.00	29.00	18.02	4.56
Don't be important	6.00	23.00	10.17	4.47
Don't belong	8.00	33.00	16.47	5.46
Don't be close	5.00	22.00	10.10	3.93
Don't be healthy	3.00	13.00	6.12	2.97
Don't think	8.00	32.00	17.33	4.92
Don't feel it	8.00	31.00	17.64	5.35

Multiple regression analysis was used for data processing. The predictors were parenting styles, as well as scripted injunction, or rather the subscales of the mentioned construct, while the criterion variable was anxiety.

Table 2. Results of multiple regression.

Predictors	β	t	p	
Authoritative mother	.22	1.99	.05	$R = .65$ $R^2 = .43$ $F = 4.05$ $p = .00$
Authoritarian mother	.12	.87	.39	
Authoritative father	.32	2.41	.02	
Authoritarian father	-.16	-1.16	.25	
Don't exist	.58	3.67	.00	
Don't be you	-.03	-.24	.81	
Don't be a child	.23	2.33	.02	
Don't grow up	-.28	-2.37	.02	
Don't be successful	.15	1.17	.25	
Don't	.26	2.35	.02	
Don't be important	-.31	-1.39	.17	
Don't belong	.08	.61	.55	
Don't be close	.04	.26	.80	
Don't be healthy	.06	.45	.65	
Don't think	.29	2.00	.05	
Don't feel it	-.08	-.69	.49	

The results show that the model consisting of script injunctions and parenting styles explains 43% of the total variance. The estimated authoritative style of the mother, as well as the authoritative style of the father, were singled out as individual predictors. When it comes to script injunctions, the following stood out as significant predictors of anxiety: *Don't exist*, *Don't be a child*, *Don't grow up*, *Don't*, and *Don't think*.

4. Discussion

An adult who as a child received the messages "Children can't think", "What do you know", and "Don't talk nonsense", in situations when they need to show their opinion, express their views, say their ideas, answer exams, instead of thinking, they feel insufficiently competent, insecure, and the resulting feeling is anxiety, which on the other hand blocks the flow of thought even more (Stjuart & Džoins, 2011; Gulding & Gulding, 2007).

The "*Do not*" command is given by parents who are anxious themselves. Due to their anxiety, they do not allow the child to do many things for fear that something bad will happen. When he grows up, a

child who has internalized this prohibition feels anxious in most situations when he has to make a decision, expecting a catastrophic outcome.

Don't grow up and *Don't be a child*, although they seem to carry opposite messages, are fundamentally related to anxiety. An adult with these inhibitions feels insufficiently competent and self-confident to demonstrate his capacities. These are people who had to give up their childhood and do things that older children normally do, and because of that, they felt scared and anxious ("Can I do it?").

On the other hand, people who received the "*Do not grow up*" injunctions, which came from parents who unconsciously sent the message "Don't ever leave me", "Be a little child" and "Stay with me", when they grow up they feel anxiety in response to internal conflict between the desire to become independent and to stay with parents (Stjuart & Džoins, 2011; Gulding & Gulding, 2007).

Do not exist can also be seen as a ban on life. In adulthood, these individuals may have suicidal thoughts, but more often this injunction is manifested through, per person, risky behaviors, such as consuming too much alcohol, drugs, smoking, or eating too much food. As a defense against the possible catastrophic outcome of the Do not exist injunctions, the person becomes worried, and anxious, in order to cancel the power of the injunctions (Gulding & Gulding, 2008).

The authoritative parenting style of the father and mother significantly contributes to the prediction of anxiety in students. A possible explanation is that this parenting style is characterized by high expectations of children, as parents have confidence in their own children's abilities and autonomy, while clearly expressing warmth and support (Baumrind, 1966). We are talking about respondents who are first- and second-year students, who still have a lot of exams ahead of them, so it is possible that they are more often exposed to the situation of checking their own knowledge and abilities, with high expectations of themselves and the fear of letting their parents down.

5. Conclusion

The aim of the research was to examine whether it is possible to predict anxiety in students using parenting styles and scripted injunctions. The results show that significant predictors of anxiety are the authoritative style of the mother, and the authoritative style of the father, as well as the following script prohibitions: Don't exist, Don't be a child, Don't grow up, Don't, and Don't think. However, since certain subscales such as Don't grow up and Don't be a child do not have high reliability, it would be appropriate to be cautious when interpreting the results. Also, in some future research, it would be convenient to use a larger and more balanced sample, but also more diverse in terms of age and faculty department.

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POSTTRAUMATIC STRESS AND POSTTRAUMATIC GROWTH IN THE BLACK COMMUNITY

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Abstract

The aim of this study is to research psychological outcomes among Black adults after exposure to race related traumatic events online (TEO). Exposure to such events can lead to posttraumatic stress (PTS) and posttraumatic growth (PTG). Results showed a significant correlation between posttraumatic stress and posttraumatic growth indicating a link between the variables.

Keywords: *Posttraumatic growth, posttraumatic stress, social media, black identity, trauma.*

1. Introduction

Witnessing racial discrimination can be just as traumatic as directly experiencing it. This exposure often leads to many negative posttraumatic stress symptoms, but there's a new area of research focusing on the positive changes following traumatic events known as posttraumatic growth. An individual's personal connection with their racial identity may exacerbate or act as a buffer against experiences of racial discrimination. The purpose of this study is to research mental health outcomes among Black adults living in the US. Specifically, this study explores the relationships and associations between repeated exposure to race related traumatic events online and Black identity contribution to the amount of distress and growth experienced by individuals in the Black community. Past and current literature on this topic tends to focus on the negative consequences and outcomes following adverse events, ignoring the potential growth, resilience, and recovery that can occur within the Black community. Understanding the factors that may contribute to negative and positive consequences following adversity can lead to a better understanding of ways to best support individuals within the Black community and other racial/ethnic groups.

1.1. Variation in trauma responses: posttraumatic stress and posttraumatic growth

Posttraumatic Stress

Though racism is linked to many negative health outcomes, the connection between racial discrimination and post-traumatic stress disorder (PTSD) symptoms is even more prominent and unique (Williams et al., 2021). PTSD is a psychological disorder triggered by witnessing or experiencing a traumatic event (U.S. Department of Health and Human Services, 2022). Some symptoms include flashbacks, avoidance of reminders of the event, nightmares, hypervigilance, and negative thoughts about oneself (U.S. Department of Health and Human Services, 2022). A longitudinal study found that Black and Latinx American adults' frequency with experiences of discrimination significantly predicted PTSD, but not other anxiety and mood disorders (Sibrava et al., 2019). The presence of multiple stigmatized identities may also have a compounding effect on traumatization with a study finding that gendered racial microaggressions towards Black women with HIV predicted PTSD symptoms and posttraumatic cognitions greater than discrimination based on race or HIV-status alone (Dale & Safren, 2019).

Posttraumatic Growth

Posttraumatic growth (PTG) is the positive psychological changes experienced as a result with highly challenging life circumstances which can result in greater appreciation for life and personal strengths, recognizing new possibilities for one's life, improved interpersonal relationships, and spiritual development (Chan et al., 2016). Within the PTG model, there are three categories of positive change: (1) changed perception of self, (2) change interpersonal relationships, and (3) changed philosophy on life (Tedeschi and Calhoun, 1996). Previous research has shown that experiencing adversity may promote positive change and growth in refugees (Chan et al., 2016), but not considering one's exposure to

race-related traumatic events online. However, for PTG to develop and manifest, some degree of posttraumatic stress is necessary that challenges one's core beliefs to later prompt cognitive processing (As cited in Lowe et al., 2013). When individuals core beliefs, assumptions about the world, sense of safety, and identity are shaken up and challenged, they attempt to understand what is happening to them overall (Tedeschi and Calhoun, 2004).

1.2. Race related traumatic events online

Social media platforms have become widely used by people and ingrained within multiple cultures worldwide. With approximately 4.76 billion active social media users (Petrosyan, 2023) the exposure of these platforms is undeniable. Media coverage of traumatic events can be a common trigger to remember suppressed traumatic memories and cause immediate physiological arousal in adults who have experienced various kinds of traumatic events (Elliot 1997 & Kinzie et al., 1998). Little research has been done to understand the many negative effects of being exposed to racism and discrimination online on the mental health of people of color.

This gap is crucial, given the recent murders of George Floyd and others, and the concurrent tension between the Black community and the police continuing to rise. Police brutality against Black people has been widely circulated within the mainstream media. Videos of racism, discrimination, and the mistreatment of Black bodies – with a recent example being the murder of George Floyd– are played across multiple social media platforms reminding Black people that their lives aren't valued the same as their white counterparts. On YouTube alone, videos talking about and showing the murder of George Floyd have millions of views. On Twitter, analysts found evidence of strong condemnation of George Floyd's murder through the frequent use of popular hashtags #nojusticenopeace and #georgefloyd, and the daily use of the #BlackLivesMatter hashtag surpassed 1 million (Nguyen et al., 2021). Through social media these race-related traumatic events can be circulated even more across multiple social media platforms – a problem that some scholars have with the spread of police brutality against Black men. Though these problems have come to forefront in mainstream society, little research has explored the effects of repeated exposure to race related traumatic events online (TEO) among minority populations (Tynes et al., 2019). Such research is necessary due to the many negative psychological symptoms that can occur because of media exposure to traumatic events (Tynes et al., 2019). The broad objective of this study is to shed light on the impacts of being exposed to race-related traumatic events online on the mental health of Black adults.

1.3. Black identity

Black people are not a monolith, and the individual experiences of Black people can greatly vary. How meaningful and significant one's racial/ethnic identity is also varies between individuals. Racial identity can greatly vary between individuals which directly influences the role of race in behaviors and across situations (Scottham et al., 2009). Scottham et al., (2009) created the Multidimensional Model of Racial Identity (MMRI) that separates racial identity into four dimensions: Saliency, Centrality, Regard, and Ideology. (1) Saliency is the extent to which race is relevant to oneself in different contexts. (2) Centrality refers to how much one emphasizes racial group membership as a part of their identity. (3) Regard refers to how positively or negatively one feels about their race and is separated into two dimensions, public and private. Public regard refers to how one feels about how other people view the Black community, while private regard refers to how one feels about the Black community and their membership within that. (4) Ideology refers to one's beliefs about the way Black people should behave and act (Scottham et al., 2009). Where an individual lies on these dimensions may determine how they react to discrimination. For this study, I will focus on the dimensions of centrality public regard, and private regard.

2. Objectives

The purpose of this study is to research psychological outcomes among Black adults living in the U.S. after exposure to race related traumatic events online. **Hypothesis 1** is PTG and PTS will be significantly correlated with each other. **Hypothesis 2** is centrality, public regard, and private regard will influence the relationship between witnessing race related traumatic events online and PTS. **Hypothesis 3** is centrality, public regard, and private regard will influence the relationship between witnessing race related traumatic events online and PTG.

3. Design

Data for this study was drawn from an online survey of Black people living in the US assessing the thoughts, emotions, behaviors, and physical health following exposure to race-related traumatic events

online. A consent form and questionnaire were presented to participants requiring a maximum time of 25 minutes to complete. Individuals who were ineligible to participate were directed to the end of the study. A correlation was run to measure the relationships between all the variables and to see if PTS and PTG are associated with each other. To measure if centrality, public regard, and private regard influenced the relationship between race related TEO and PTS/PTG, a mediation analysis was run.

4. Methods

4.1. Participants

The sample for the present study consisted of 96 participants ($N = 96$) with 77 of them being female and 19 of them being male. 56 of the participants identified as straight, 39 identifying as a sexual minority, and 1 chose not to disclose. Participants mean age was 32 ($SD = 10$).

4.2. Measures

PTS reactions were assessed using the Impacts of Events Scale-6 (Thoresen et al., 2010). Participants were asked to respond to six items on a 5-point Likert scale ranging from not at all to extremely about experiences following exposure to race related traumatic events online. A sample question is "I had trouble concentrating." Reliability analyses revealed a high internal consistency, as shown by a Cronbach's alpha of .86 (Horowitz et al., 1979).

PTG was assessed using a short form of the Posttraumatic Growth Inventory (PTG-SF) containing 10 items (Tedeschi & Calhoun, 1996). Participants were asked to respond on a 6-point Likert scale ranging from not at all to a very great degree about perceived positive change following exposure to race related traumatic events online. Scores can range from 10 to 60, with higher scores indicating more perceived positive change. A sample question is "I am able to do better things with my life." Reliability analyses revealed a high internal consistency, as shown by a Cronbach's alpha of .94 (Tedeschi & Calhoun, 1996).

Three self-report items were used to assess the frequency of participants' experiences of witnessing race-related traumatic events online over the last month. The items correspond with (1) people from my racial group being beaten, (2) people from my racial group being arrested or detained, and (3) a person from my racial group being shot. The frequency of each event was rated from 0 = never and to 5 = every day. Scores were averaged to create a composite score, with higher scores corresponding to more frequent experiences of witnessing race related traumatic events online (Tynes et al., 2019). Reliability analyses revealed a high internal consistency, as shown by a Cronbach's alpha of .85 (Tynes et al., 2019).

To assess one's racial identity the Multidimensional Inventory of Black Identity-Teen (MIBI-t) scale was used. The subscales of centrality, public regard, and private regard were used with each subscale having three questions. Participants were asked the how much they agree or disagree with items on a 5-point Likert scale ranging from strongly disagree to strongly agree. Participants' scores are averaged into a composite score for each subscale. The centrality scale ($\alpha = .55$) assesses how important race is to an individual's identity with higher scores indicating race is a more central identity (Scottham et al., 2008). The public regard scale ($\alpha = .66$) assesses how individuals feel other groups feel positively or negatively towards Black people (Scottham et al., 2008). The private regard subscale ($\alpha = .77$) assesses how positive an individual feels towards other Black people and being Black (Scottham et al., 2008). Higher scores on the regard scales indicate more positive feelings towards Black people (Scottham et al., 2008).

5. Results

Correlation Analysis

The coefficients for the variables within the study were PTS, PTG, centrality, public regard, private regard, race related TEO, and age. Hypothesis 1 was supported by the analysis. The results revealed that PTS has a significant, positive relationship with PTG ($r = .24, p < .05$). As PTS increases, PTG also increases. The results also show that PTS has a significant, negative relationship with age ($r = -.46, p < .001$). As someone's age increases, their PTS score decreases.

Race related TEO has a significant, positive relationship with PTS ($r = .40, p < .001$) and PTG ($r = .33, p < .001$), and a negative relationship with public regard ($r = -.32, p < .001$). For the dimensions of black identity, PTS has a significant, negative relationship with public regard ($r = -.42, p < .001$). Centrality and private regard are positively correlated ($r = .70, p < .001$). PTG has a significant, positive relationship with both centrality ($r = .31, p < .001$). and private regard ($r = .29, p < .01$).

Mediation Analysis for Race Related TEO, Public Regard, and Posttraumatic Stress

Hypothesis 2 was partly supported by the analysis. Participants age and sex were controlled for during the mediation analysis. The results suggested that the indirect effect of the race related TEO on PTS through public regard was statistically significant ($B_0 = .0756$, $B_{se} = .0340$, $CI = .0212, .1513$).

Post Hoc Analysis

The results revealed that the centrality ($B_0 = .3109$, $B_{se} = .3825$, $CI = -0.4298, 1.1113$) and private regard ($B_0 = -.4894$, $B_{se} = .3297$, $CI = -0.1508, 1.1750$) did not mediate the relationship between witnessing race related TEO and experiencing posttraumatic growth. A post hoc analysis was run to measure the influence of race related TEO, centrality, and private regard on PTG. To test this a multiple regression model was ran and revealed that PTG had a positive relationship with race related TEO, centrality, and private regard. Such that, as PTG increases, race related TEO, centrality, and private regard also increased. ($R^2 = .23$, $F(1, 5.33) = 1986.798$, $p < .001$).

6. Discussion

Few studies have looked at how witnessing racial discrimination online impacts the mental health of Black, Indigenous, and people of color (BIPOC) communities. This study looked at the link between PTS and PTG among Black adults living in the US. The main purpose of this study was to examine how a person's racial identity mediates the relationship between witnessing race related TEO and psychological outcomes of distress and growth. The results indicate that there is a significant positive correlation between PTS and PTG which is consistent with previous research (Lowe et al., 2013). The results also indicate that public regard influences the relationship between witnessing race related TEO and PTS. The post-hoc analysis showed that centrality and private regard as well as race related TEO predict experiencing PTG which is consistent with previous research (Seaton & Iida, 2019).

Link between Posttraumatic Stress and Posttraumatic Growth

No known PTG studies including Black participants have assessed exposure to frequent traumas in their communities making this research even more necessary. Observing this relationship will advance the research on understanding the phenomenon of PTG and its link to PTS. Past research has looked at the link between posttraumatic stress and posttraumatic growth in survivors of Hurricane Katrina (Lowe et al., 2013). Lowe et al., (2013) found that after one-and-three years post Hurricane Katrina, posttraumatic stress and posttraumatic growth were significantly, positively associated. Survivors with probable PTSD that had high levels of posttraumatic stress, also had high levels of posttraumatic growth (Lowe et al., 2013). This indicates the process of experiencing both PTG and PTS may be very similar. Knowing these effects and impacts can inform future interventions, preventions, and clinical work that will be the most effective related to racial trauma.

Mediating Effects of Black Identity

This study specifically examined if centrality, public regard, and private regard mediated the relationship between witnessing race related TEO and experiencing PTS and PTG among Black adults. Though there are mixed findings regarding the mediating effects of black identity dimensions, some of the results of this study are aligned with previous research on this topic (Seaton & Iida, 2019). Hypothesis 2 was partly supported with public regard being negatively associated with PTS as well as influencing the relationship between PTS and witnessing race related TEO. This is inconsistent with previous research showing that low public regard buffer against the effects of discrimination (Sellers et al., 2003; Sellers et al., 2006). The reason why public regard and PTS have an inverse relationship could be because someone with a low public regard will be more likely to believe that others already have a negative perception of them probably leading to higher levels of perceived stress and perceived discrimination. Racially ambiguous events will likely be coded as involving racial discrimination.

Hypothesis 3 was not supported, but the post-hoc analysis revealed that race related TEO, centrality, and private regard predict experiencing PTG. This is consistent with previous research finding that black identity can predict better psychological functioning, as well as high levels of centrality predicting resilience (Sellers et al., 2003). This could be because if someone scores high on centrality and private regard, they would be more likely to see positive aspects of themselves and their identity allowing them to grow from such experiences and see positive aspects of their groups (Sellers et al., 2003).

7. Conclusion

The results from this study are important for reframing the conversation around trauma and racial discrimination. This study reveals the negative impacts of witnessing online racial discrimination while also illuminating the positive changes that may be possible after exposure. This study shows that though these experiences may be debilitating, they can also be a catalyst for change and better psychological functioning. This can allow for BIPOC to come together to discuss such experiences and

how to grow and cope after exposure. Future research on this topic should include a wider sample to examine if the process of experiencing both PTS and PTG is similar in different racial/ethnic groups.

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DIFFERENCES IN PERCEIVED SOCIAL SUPPORT, LIFE SATISFACTION AND PSYCHOLOGICAL WELL-BEING IN PARENTS AND “CHILDFREE” INDIVIDUALS

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Abstract

More and more women and men are postponing the age of childbearing due to lack of stability and changing life preferences. Other people, however, consciously decide not to have children because it is not their desire to have children. The literature recognises this group of people as “*Childfree*” individuals. Several studies have analyzed the influence that some socio-demographic variables such as income, employment status, educational level, etc, have on the decision to become parents. However, few studies have focused on analyzing which psychological variables are involved in this decision. Therefore, the main objective of this study is to analyze the differences in perceived social support, life satisfaction and psychological well-being between those who are parents and those who have made the decision not to become parents (“*Childfree*”). The sample of the study consisted of 145 participants between 25 and 45 years of age ($M = 37,46$, $DT = 4,99$), residents of the Autonomous Community of the Basque Country. Of these, 134 were women and the remaining 11 were men. The participants were divided into two groups: those who had children (women = 100, men = 5) and those who were childfree by choice (women = 34, men = 6). The results showed significant differences between groups, where parents obtained a greater satisfaction with life in comparison to *childfree* individuals. In addition, it was also observed that the participants who had children reported higher scores in the dimensions Self-Acceptance, Mastery of the Environment and Purpose in Life, of the psychological well being, than those who were childfree.

Keywords: *Parenthood, perceived social support, life satisfaction, psychological well-being, childfree.*

1. Introduction

Parenthood is one of the most significant and impactful life events for a person, since the person's life changes completely (Taubman-Ben-Ari, 2019). This event causes a significant change of roles and identities in the person's life, as it is an experience of personal growth (Saxbe et al., 2018). Despite this, the desire to reproduce is not always something instinctive, as there are many people who freely make the decision not to have children (Bhambhani and Inbanathan, 2020). This is also an important step since there are people who consider that they will have a fuller life without children and therefore choose not to become parents (Utamidewi et al., 2022).

In relation to someone's decision to become a parent, or not to do so, this may be related to several factors. Parenthood is a vital project for many people, who have an autonomous motivation to have a child and adopt the parental role at their own free will (Gugliandolo et al., 2021). Becoming a parent may also represent for someone the judgment of his or her own life and the conviction that it is his or her duty to procreate as one's social or family purpose (De Roubaix, 2021). Also, taking into account the meaning of religion, Klobučar (2016) states that a child means the continuation of a quality couple relationship.

Despite this, there are also those who for various reasons decide to not have children. Childfree people are those who are not parents simply because they do not desire it. Powell (2020) affirms that having personal freedom is one of the most motivating aspects for remaining childfree. According to Stegen et al. (2021), one of the main profiles of childfree individuals is made up of those who are characterized by not experiencing a sense of longing to be parents and take care of their children. There are also people who throughout their lives voluntarily develop and deeply internalize a series of ideas such as those related to global warming, that later contribute to them being childfree (Burkett, 2021). In any case, there is not a specific response to why do parents and childfree people reach their decision, as there are infinity of reasons for taking both paths.

The social support perceived by a person refers to the subjective assessment that each individual makes about whether the people around them care about them and are willing to provide help (Ciarrochi et al., 2017). Thus, assessing the perceived support, both emotional and material help of others, could be a very relevant factor when making a decision as important as that of becoming a parent or not (Thompson et al., 2015).

Psychological well-being refers to a human being's positive feeling about himself or herself, but it is a subjective concept that comes from personal experiences (Mirabella et al., 2022). In this regard, Mayordomo et al. (2016) state that some dimensions of psychological well-being, such as Mastery of the Environment, acquire great relevance in the adaptation to new stages such as the transition to parenthood or child rearing. Regarding those who choose to be childfree, the still-present stigma about not having children can have a negative effect on the psychological well-being of these individuals. This is because individuals who deviate from the traditional life path during the reproductive years often suffer some disapproval from their environment (Tanaka and Johnson, 2016).

Life satisfaction is a cognitive evaluation that one makes about life as a whole and an indicator of well-being and positive functioning of the individual (Proctor et al., 2017). Feeling satisfaction with life could push a person to take a further step in life, since people prefer to feel that they have successfully finished one stage before getting involved in the next one (Bodin et al., 2021). The life satisfaction of childfree people should also be taken into account, since women who choose to be childfree seem to be satisfied with their lives without children, as well as with their level of freedom and independence (Clarke et al., 2018).

Many studies have been carried out on the socioeconomic factors that are involved in the decision to become a parent or not. In this case, the study aims to find out whether differences exist in the variables perceived social support, psychological well-being and life satisfaction in people who are parents and those who are childfree. In relation to the objective of the study, it is expected that parents show a higher level of psychological well-being in comparison to those who are childfree. It is also expected that participants who are parents report a higher level of life satisfaction than those who are childfree. Lastly, those who have children are expected to score higher on the variable perceived social support compared to the childfree ones.

2. Methods

2.1. Participants

The sample of participants consists of 145 subjects between 25 and 45 years of age, residents of the Autonomous Community of the Basque Country. Of the study subjects, 92.4% are women and the remaining 7.6% are men. As for the age ranges of the participants, more than half of the women (59.7%) are between 31 and 40 years old while more than half of the men (63.6%) are more than 40 years old. The origin of the participants is mainly from Bizkaia, with 67.9% of women and 54.5% of men belonging to this group. The sentimental situation of the participants is mostly in a couple for more than six months, both for women (87.3%) and men (72.7%). In relation to the marital status of the participants, approximately half of the women (57.1%) and 37.5% of men are married. These are followed by half of the men (50%) and 29.4% of the women that are in a couple but without a legal relationship. It is noteworthy that in the case of both women (88.8%) and men (81.8%), those with a university education predominate.

2.2. Design and procedure

The present research follows a cross-sectional design, The data collection to carry out the study is done through a digital questionnaire. This allows the data collected to be anonymous and to be entered into a database for subsequent analysis. Lastly, the participants of the study are divided into two groups: those who are parents and those who are childfree.

2.3. Instruments

Sociodemographic questionnaire: This was created ad hoc and included several variables such as age and sex, marital status, current employment status and reasons for deciding whether to have or not to have children, among others.

Multidimensional Scale of Perceived Social Support (EMASP; Zimet et al., 1988 adapted to Spanish by Landeta and Calvete (2002): This instrument consists of 12 items that reflect the level of social support perceived by the subject who completes it. It has a 7-alternative response scale, where 1 means "Strongly disagree" and 7 "Strongly agree". This scale has a Cronbach's $\alpha = .85$, indicating that its internal consistency is good. Finally, it has three dimensions which are as follows: Perception of support

received from friends ($\alpha = .92$), Perception of support received from family members ($\alpha = .89$), and Perception of support received from other relevant people ($\alpha = .89$).

Ryff's psychological well-being scales (Ryff and Keyes, 1995) adapted to Spanish (Díaz et al., 2006): This instrument has a total of six scales and 39 items to which participants must respond with a response format where scores range from 1 to 6, meaning 1 "totally disagree" and 6 "totally agree". This scale contains six subscales and are the following: Self-acceptance (Cronbach's $\alpha = .84$), Positive Relationships (Cronbach's $\alpha = .78$), Autonomy (Cronbach's $\alpha = .70$), Environmental Mastery (Cronbach's $\alpha = .82$), Personal Growth (Cronbach's $\alpha = .70$) and Purpose in Life (Cronbach's $\alpha = .71$).

Satisfaction with Life Scale (SWLS; Diener et al., 1985) Spanish version by Vazquez et al., (2013): It is composed of five items that evaluate the overall judgment that each person makes about his or her general satisfaction with life, with the understanding that a higher score reflects greater satisfaction. The response options range on a likert scale from 1 ("totally disagree") to 7 ("totally agree"), with a minimum total score of 7 (low satisfaction) and a maximum of 35 (high satisfaction). Finally, the level of internal consistency of this scale is good, since it has a Cronbach's $\alpha = .82$.

2.4. Ethical considerations

The voluntary nature of the participants and the confidentiality of the data were guaranteed at all times. Participation was completely voluntary and complete anonymity was guaranteed. Participants were also informed that, in case of doubt when completing the protocols, they could contact the principal investigator of the study and that they were free to decide to leave the study at any time.

2.5. Data analysis

The analyses were performed using the SPSS 25.0 statistical software. For comparison of the scores obtained in the parents and childfree group, Student's t-test for independent samples was carried out. To interpret the effect size of the differences, the Cohen's d criteria (Cohen, 1988) was used, according to which values below 0.20 are small, up to 0.50 are moderate and above 0.80 are large.

3. Results

Considering the differences observed between the two groups in relation to the variables, there are only significant differences between groups in some dimensions of psychological well-being. As can be seen, those who are parents score higher on these dimensions compared to childfree individuals: Self-acceptance ($t(140) = 2.69, p = .01$); Mastery of the Environment ($t(57.73) = 2.22, p = .03$); and Purpose in Life ($t(141) = 3.86, p < .001$). In all cases, the effect size is moderate. With regard to the life satisfaction variable, statistically significant differences are found between the two groups, with those who have children scoring higher than those who are childfree ($t(50.40) = 1.94, p = .05$). Considering the effect size, this was moderate ($d = .44$). In the remaining variables analyzed, no statistically significant differences were observed (See Table 1).

Table 1. Group differences.

	Mean (SD)		t	p	Cohen's d
	Parents	Childfree individuals			
Total perceived social support	75.74 (17.12)	78.63 (13.55)	-.96	.34	-
Perception of Support Received from Friends	26.02 (5.33)	27.30 (3.70)	-1.63	.10	-
Perception of Support Received from Family Members	24.79 (6.64)	24.75 (6.82)	.03	.97	-
Perception of Support Received from other Relevant People	24.93 (7.08)	26.58 (5.25)	-1.52	.13	-
Self-acceptance	23.89 (4.40)	21.45 (5.88)	2.69*	.00	.50
Positive Relationships	23.89 (4.96)	23.72 (5.56)	.18	.85	-
Autonomy	29.50 (5.80)	28.45 (6.20)	.95	.34	-
Environmental Mastery	25.20 (3.44)	23.51 (4.25)	2.22*	.03	.46
Personal Growth	29.11 (3.86)	29.26 (4.49)	-1.99	.84	-
Purpose in Life	25.56 (4.43)	22.20 (5.25)	3.86**	.00	.72
Satisfaction with Life	20.85 (3.72)	18.92 (5.75)	1.94*	.05	.44

* $p < .05$, ** $p < .001$

4. Discussion

The aim of this study was to check whether differences exist between people who have children and those who are childfree, for the variables psychological well-being, life satisfaction and perceived social support. Participants who were parents were expected to obtain higher scores than childfree participants for the variables in the study.

The results reveal that participants in the group of parents obtained a higher score than those who are childfree, for the variable satisfaction with life. These results go in line with those obtained by Pollmann-Schult (2014), who affirms that parents show significantly higher levels of life satisfaction compared to those who do not have children. Moreover, Nelson-Coffey et al. (2019) propose that aspects such as the sense of efficacy of those who are parents, in addition to the positive relationships with their children, predict higher satisfaction with life. On the contrary, Peavoy (2021) suggests that life satisfaction in parents and childfree individuals did not appear to differ, as both groups could consider their situation as a source of life satisfaction.

With regard to psychological well-being, those who were parents scored higher than childfree people in the subscales Self-acceptance, Environmental Mastery and Purpose in Life. Herbst and Ifcher (2012) support these results when stating that although there has been a general decline in adult psychological well-being in recent decades, this is not entirely true for parents. Furthermore, according to Avison and Furnham (2015), not being a parent may be associated with poorer psychological well-being in countries that are strongly pronatalist and have ingrained beliefs against childlessness. By contrast, Corbett (2018) conducted a study in which both mothers and childfree women showed similar levels of psychological well-being.

This study provides relevant information because, while there is a great deal of recent research on the relationship between sociodemographic variables and parenting decisions, on the contrary, psychological variables have been little studied. Therefore, the results obtained from this study may provide a basis for future research.

In relation to the limitations of the study, one of the main ones would be the notable difference in the number of women and men in the sample, since the participation of men is minimal, compared to the majority of women. In addition, the study sample is not very homogeneous, as most of the participants who took part had a similar profile in relation to some aspects such as the educational level or the current sentimental situation. Lastly, only three psychological variables have been studied of the many that may show differences between groups of parents and childfree individuals. Therefore, future lines of research should continue to study childfree individuals in order to learn more about their reasons and how these have an effect on themselves. In addition, the participation of men should be encouraged in order to obtain data that adequately represents both sexes. Finally, a more homogeneous sample could be used, including participants with more educational levels or a wider range of origin, among other aspects, to obtain more significant results. Even to study the differences between the two groups for more psychological variables other than those included in this study. All this would allow to know better the profile of those who are childfree that have been little studied, and the differences found between them and parents.

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TRACKING THE INCIDENCE OF US HATE CRIMES BY KEY LEGISLATIVE MARKERS (1991-2020)

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Abstract

The *Hate Crime Statistics Act (1990)* in the US requires that the Attorney General collect and publish annually the incidence of hate crimes in the US based on a victim's race, religion, disability, sexual orientation, or ethnicity. With almost 220,000 hate crimes committed from 1991-2020, the present study tracked changes in the incidence of 163,375 racially-motivated hate crimes, as perpetrated against each of the following groups: Arabs, Asians, Blacks, Hispanic, Indigenous, Jews, and Whites. Crimes ranged from intimidation to homicide. Legislative markers included both widely publicized incidents (viz. James Byrd and Matthew Shepard, 1998), as well as significant changes to law enforcement and criminal punishment including the *Violent Crime Control Act (1994)*, *Church Arson Prevention Act (1996)*, *Hate Crimes Prevention Act (2009)*; and most recently the *Emmett Till Antilynching Act (2022)*. We tracked changes in crime rates by six 5-year time periods and region in the US. Initial analysis indicated changes in hate crime rates over time, but with a unique pattern for each racial group. For instance, hate crimes against both Asian and White victims were at their highest in 1991-1995, but steadily decreased despite a rise in 2016-2020. Crimes against Indigenous were lower in the first two decades only to increase in 2011-2020. Black victims (routinely with the highest incidence) saw a zigzag pattern: low in the early 90s, then high; low again in the early 2000s, then high; but lower from 2011-2020 (likely due to wider news coverage). Hispanics saw a steady rise in incidence over time, whereas Arabs were targeted more following Sept.11/2001. Crimes against Jews were largely invariant across the 30 years. Implications of these data to the wider social arena are discussed, as are directions for future research.

Keywords: *US, racial hate crimes, 1991-2020, demographics, legislation.*

1. Introduction

American entertainer Billie Holiday sang in 1939 of lynchings in the South:

*Southern trees bear a strange fruit, blood on the leaves and blood at the root.
Black bodies swinging in the Southern breeze; strange fruit hanging from the poplar trees.*

This song, *Strange Fruit*, became a battle cry for social change in the 1940s and although public intolerance to prejudice and discrimination today has grown loud and far-reaching, acts of violence are not unheard of. The United States has gone so far as to specifically identify criminal activity directed at members of a designated group as a hate crime. In particular, federal jurisdictions label a criminal (often violent) act as a hate crime if it is motivated by prejudice on the basis of race, religion, gender, gender identity, or disability. Violent acts may be committed against people, property, or society. In short, if a violent act was motivated by the victim's membership to a designated (often marginalized) group, federal authorities may classify it as a hate crime and prosecute the accused thusly. Moreover, prior to designation as a 'hate crime,' law enforcement requires sufficient evidence to conclude the crime was motivated by bias. The *Hate Crime Statistics Act (1990)* in the US requires that the Attorney General collect and publish annually the incidence of hate crimes in the US. Based in Clarksburg, West Virginia, the FBI's Uniform Crime Reporting Program logged over 220,000 hate crimes from 1991-2020, drawn from 15,000 law enforcement agencies across the United States (Federal Bureau of Investigation, nd).

Given that most of the hate crimes reported in the US to date are spurred by racial bias, and given that different racial groups have unique (but largely consistent) hate crime incident rates (Statistica, nd), we limited our analysis to just racial biases, but further divided our analysis of US hate crimes according to specific racial bias. In the wake of social movements such as *Pink Wallets* and *Black Lives Matter*, it is important to recognize the social, political, and historical context in which hate crimes are committed, and

we propose that the pattern of their occurrence can be traced to such events, especially in the wake of wider publicity. These could entail the publication of more heinous crimes (viz. Matthew Shepard and James Byrd Jr. in 1998), yet these could further incorporate state or federal legislation following passage of key hate crime bills to empower local, state, and federal law enforcement agencies. The present study tracked the incidence of 163,375 racial hate crimes on the basis of victim racial bias. In order to identify more regional trends, we further tracked the incident of hate crimes by US state.

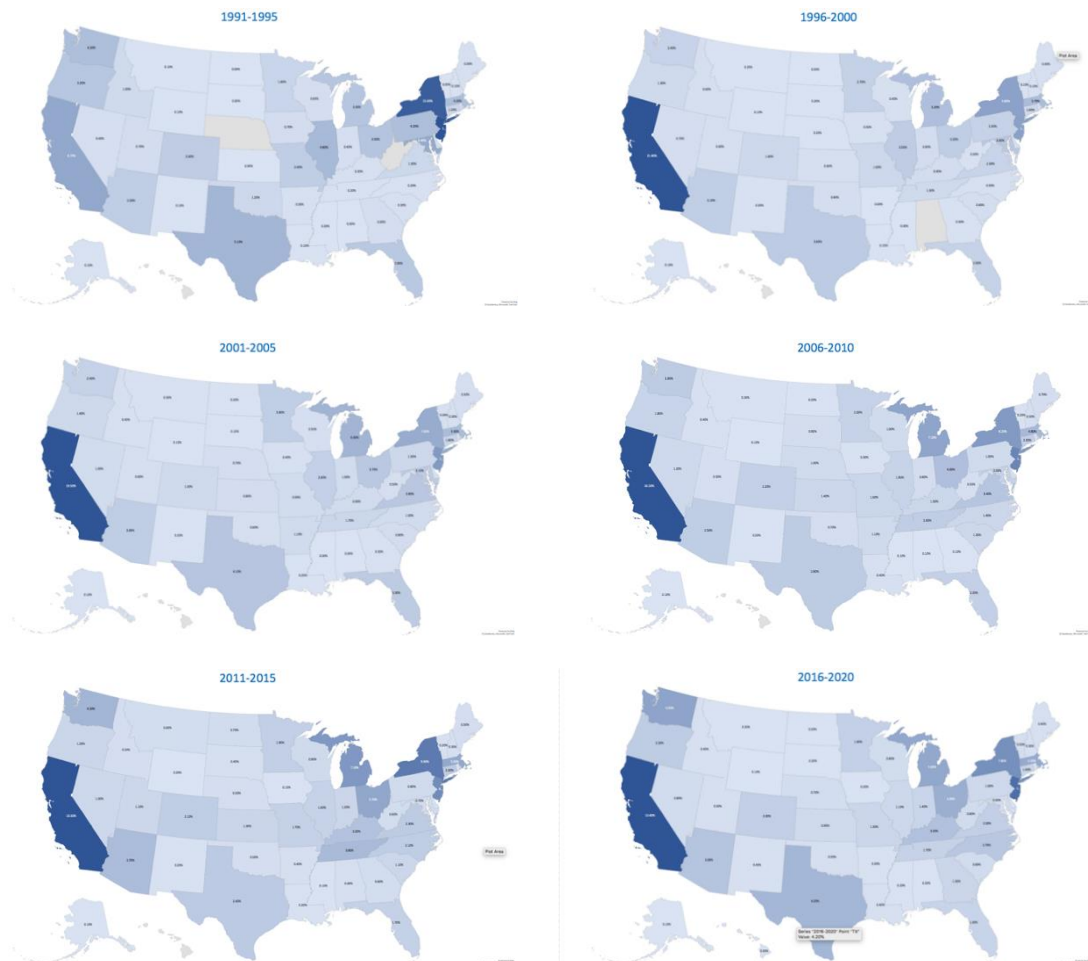
2. Method

The Attorney General Office makes publicly available each reported incident of hate crimes committed in the United States, dating back to the inception of the program in 1991. We compiled those data from 1991 to 2020. and included the following variables: US state plus date of incident, race of victim, number of victims, urban size, and type of crime – be it to people, property, or society (Federal Bureau of Investigation, nd). We elected not to include race of perpetrator since records were largely listed as ‘unknown.’ Years were divided into six uniform categories: 1991-1995, 1996-2000, 2001-2005, 2006-2010, 2011-2015, and 2016-2020. Our analysis only considered those hate crimes motivated out of a racial bias (74% of all hate crimes; the remainder are based on religion, gender, etc.).

3. Results

Across the 30 years, the Department of Justice logged 219,575 hate crimes (1991-2020). However, these statistics varied by state, as shown in the Figure 1 heat diagram (where darker blue shades denote a higher number of hate crimes for that state). Arguably, larger populations states such as California, New York, and Texas should harbour more hate crimes than comparatively underpopulated Vermont and Wyoming.

Figure 1. State change in hate crime rates over time.



Whereas one may assume that the incidence of hate crimes should be uniform over time, a chi squared statistic confirmed significant variation, $\chi^2 (219577) = 2411, p < .001$. As expected, the incidence was comparatively lower in 1991-1995 (27,485), 2006-2010 (26,675) and 2016-2020 (26,465), but higher in 1996-2000 (32,001) and 2001-2005 (29,998) and lower than expected in 2011-2015 (20,747). However, further inspection showed differential changes to particular racial groups over time (see Figures 2 and 3). To begin, crimes against White and Asian victims reached a peak in 1991-1995, but witnessed a steady decline over subsequent years (despite a rise in 2016-2020). Crimes against the Indigenous were lower in the first two decades but increased in the third. Alternatively, Hispanic Americans had seen a steady rise in incidence over the decades. Whereas violence against Black victims has historically been higher, these data reach the same conclusion. However, we observed a cubic zigzag pattern over time, likely fueled by social factors such as the *Black Lives Matter* movement. Specifically, hate crimes against Black victims were low in the early 90s, then increased; it was low again in the early 2000s, then increased. Since 2011, the trend in incidence has decreased – one might expect a coming rise. Conversely, crimes against Jews remained steady across the decades. Finally, we noted a spike in hate crimes directed at Arabs shortly following Sept.11, 2001; incidence thereafter decreased but has returned to higher levels in 2016-2020.

Figure 2. Hate crime incidence across time by racial bias.

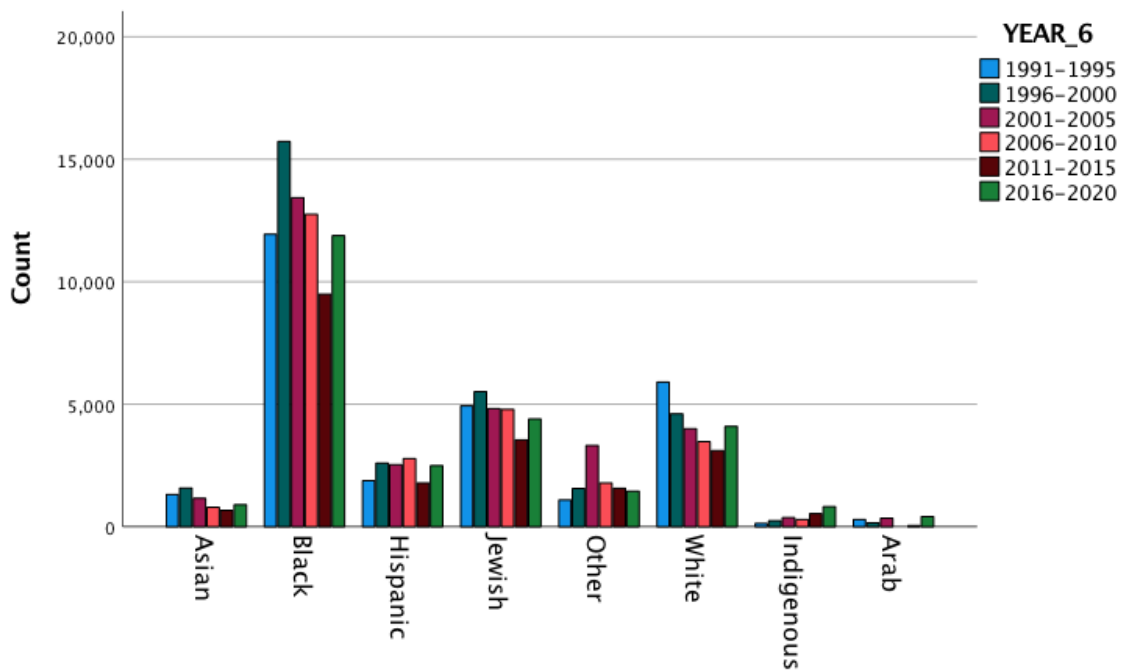


Figure 3. Hate Crime Incidence Across Racial Bias by Time.



In our legislative analysis, we considered whether hate crime incidents changed by race based on well-publicized events. For example, the case of James Byrd Jr. from Jasper Texas in 1998 shocked the nation for its savagery and stirred citizen groups to demand change and accountability. Another example can be found in the September 11, 2001 Al-Qaeda attack on US soil. We ask presently whether those news events would mark the record of subsequent hate crimes in the US. Following up from the data presented in Figure 3, we conducted a crosstabs analysis comparing racial bias with year of study and reviewed the standardized residuals (see Table 1). Values outside the range ± 2.0 suggest rates either greater than expected under the null hypothesis (viz. with positive values) or lesser than expected (viz. with negative values). Review of Table 1 shows that following the expected drop in hate crime incidents for Black victims in 2001-2005; but rebounded to prior levels in the 5-year period thereafter. The same can be said about the sizable drop in incidence in the 2016-2020 period, that witnessed wider publicity amidst the *Black Lives Matter* movement. So too, the incidence of hate crimes committed against Arab Americans rose sharply following the 9/11 attacks.

Table 1. Standardized residuals of racial bias by year.

YEAR_6		Bias							
		Asian	Black	Hispanic	Jewish	Other	White	Indigenous	Arab
1991-1995		7.2	-6.4	-10.0	3.2	-17.0	25.6	-13.6	5.6
1996-2000		9.1	8.2	-3.0	.4	-12.0	-4.6	-10.2	-5.5
2001-2005		-.5	-3.2	-.9	-4.5	30.1	-9.2	-3.1	7.6
2006-2010		-7.9	4.3	10.1	3.3	.7	-10.0	-5.1	-14.4
2011-2015		-5.2	-.6	-.1	-.1	5.5	-1.6	13.0	-9.1
2016-2020		-4.3	-2.7	4.5	-2.0	-7.1	.3	22.0	14.8

4. Discussion and conclusions

The present study analyzed the US Department of Justice hate crime data from 1991-2020 so as to track differential incidence rates by racial bias. We further considered key legislative markers as both social and public watersheds that could predict changes in incidence rates.

Whereas the incidence of hate crimes for Black Americans remained high over the 3 decades, a zigzag pattern, spurred by greater public awareness, would suggest a forthcoming rise in incidence. Conversely, the incidence against White victims dropped steadily over time, only to rebound in the most recent time block. Alternatively, hate crimes committed against Jewish victims was largely invariant over time. Finally, Arabs saw a key rise in hate crimes following the 9/11 attacks. Overall, this suggests a unique model by racial bias is required so as to predict rising or falling incidence according to ongoing social and political factors. One may anticipate for instance a rise in hate crimes by an Asian bias in the shadow of the COVID-19 pandemic (Gover, Harper, & Langton, 2020).

Of course, how social scientists and public policy makers in the field of law enforcement anticipate changes in hate crimes should build into unique models by relevant social factors. Legislation may be one factor, but more public designations of outcry should prove more effective. Consider the rise and fall of the Ku Klux Klan in the decades following the first World War. Bruce (2019) states that national membership peaked at over 2 million; however, the fall came from widely heard radio broadcasts based on the rogue infiltration of the organization by Stetson Kennedy (family to inventors of the famous hat). By revealing inner clandestine operations (such as passwords and organizational structure like the role of the 'Kleasurer' who managed the money), public disinterest rapidly turned to outrage in light of their vicious criminal conduct – membership plummeted. Indeed, the Georgia chapter of the KKK closed as a result of Kennedy's radio broadcasts. Thus, the act of shining a light on the subject helps dispel the wickedness.

Future researchers should plan to analyze subsequent layers of hate crime data as they become available. Specific models and hypotheses, by racial bias, should help policy analysts to address public awareness and education in an effort to reduce incidence in regions of key concern. So too, given that the present study excluded approximately 50,000 hate crime incidents of a different nature – whether by gender or religion – should invite researchers to conduct a similar analysis therein.

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EXPERIENCES OF DOMINATING AND JEALOUS TACTICS, IMPACT ON MENTAL HEALTH AND ACCEPTABILITY OF VIOLENCE

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Abstract

Young adults' intimate relationships are generally respectful and based on equity. However, the literature has reported the high prevalence of psychological violence in this age bracket (Connolly & Mclsaac, 2011), being these rates higher than physical violence (Fernández-González et al., 2014; Orpinas et al., 2013; Ybarra et al., 2016). In terms of psychological violence, one of the most frequently reported types is the expression of dominance and jealousy. Following Kinsfogel and Grych (2004) and Sears et al. (2007), the acceptability of violence is not only a function of having witnessed violence at home but having being exposed to peer-perpetrated and community violence. Thus, it seems relevant to explore the acceptability of violence, learned from earlier experiences, and the role it plays in the context of a young adult intimate relationship, especially in terms of the psychological impact it might have in people experiencing those dominating and jealous tactics (Eshelman & Levendosky, 2012; Reidy et al., 2016).

The aim of the present study is therefore to analyse the relationship between the victimization of dominating and jealous tactics in young couples, as well as the acceptability of violence, and the psychological impact in terms of mental health. A cross-sectional quantitative study was designed, with a sample of 274 participant between 18 and 30 years of age (194 women and 80 men; overall mean age was 25.21 (dt = 3.9); the females mean age being 25.15 (dt = 3.84) and males mean age being 25.39 (dt = 4.26). All participants completed measures of victimization of dominant and jealous tactics by their intimate partners, acceptability of violence and mental health symptoms (anxiety, depression and interpersonal sensitivity).

The results showed that the acceptability of violence mediated the relationship between having being exposed to dominant tactics, but not for jealous tactics, in the context of an intimate relationship and overall mental health symptoms. Further mediational analyses showed that this indirect effect was present for all three indicators of mental health and victimisation of jealous tactics. However, when we analysed in detail the victimisation of dominance tactics, this indirect effect only remained for interpersonal sensitivity. Limitations of the study and implications for practice and future research will be discussed.

Keywords: *Dating violence, dominating and jealous tactics, psychological violence, mental health, acceptability of violence.*

1. Introduction

Young adults' intimate relationships are generally respectful and based on equity. However, the literature has reported the high prevalence of psychological violence in this age bracket (Connolly & Mclsaac, 2011), being these rates higher than physical violence (Fernández-González et al., 2014; Orpinas et al., 2013; Ybarra et al., 2016). This type of violence has been defined as behaviours, attitudes and communication styles based on the humiliation, control, hostility, domination and intimidation, and jealousy towards the intimate partner (O' Leary & Smith-Slep, 2003).

In terms of psychological violence, one of the most frequently reported types is the expression of dominance and jealousy. Dominant tactics consist of controlling the activities of the partner, including isolating them from family and friends (Smith & Donnelly, 2001), whereas jealous tactics have been conceptualised as the desire to control and possess one's own partner, checking what they are doing and demanding information about their whereabouts (Muñoz-Rivas et al., 2007). These authors have reported prevalence rates for these types fo behaviours of between 60%-70% for the use of jealous tactics and around 30%-40% for dominant tactics. This type of violence has an important psychological toll. Dating violence, or violence, in young couples, has been linked to anxiety symptoms, depression, physical

injuries, post-traumatic stress symptoms, drug misuse and suicidal ideation (Eshelman & Levendosky, 2012; Reidy et al., 2016).

Acceptability of violence has been found to be related to what behavior is considered violence in intimate relationships. Thus, violence might be considered acceptable when it is not seen as very severe (Gracia, 2014; Worden & Carlson, 2005). Cauffman et al. (2000) found that generally speaking, dating violence is viewed as unacceptable, but it might be seen as justified under circumstances such as self-defense, playing around or revenge and this was strongly associated with dating violence. Following Kinsfogel and Grych (2004) and Sears et al. (2007), the acceptability of violence is not only a function of having witnessed violence at home but also is related to having being exposed to peer-perpetrated and community violence. Thus, it seems relevant to explore the acceptability of violence, and the role it plays in the context of a young adult intimate relationship, especially in terms of the psychological impact it might have in people experiencing those dominating and jealous tactics (Echeburúa & Corral, 2010).

The aim of this study is therefore to explore the mediating role of the acceptability of violence in the relationship between victimisation experiences of dominant and jealous tactics in the context of an intimate relationship in young adults and the psychological impact in terms of mental health.

2. Methods

2.1. Participants

The sample was made of 274 participants between 18 and 30 years of age, with an overall mean age was 25.21 (dt = 3.9). The inclusion criteria included being between 18 and 30 years old, and having had an intimate relationship which had lasted at least 3 months.

Over one-third of participants were female (n = 194, mean age = 25.15, dt = 3.84), males being the 29.2% of the sample (n = 80, mean age = 25.39, dt = 4.26). Of the participants, 65.9% had studied at university or had a master degree. Around a third of the participants reported being a student (33%) and another third being employed (32.5%). The remaining participants reported both being working and studying (30.5%) or being unemployed (3.9%).

Slightly over half the participants were living with their parents (52%), whereas 33% were living with their partners, 8.1% were living on their own and the remaining 7% had another living arrangement. In terms of relationship status, most participant reported being currently in an intimate relationship (74.6%), with an average duration of 3.92 years (dt = 3.14).

2.2. Design and procedure

This study used a cross-sectional design. Data collection was conducted via an online questionnaire and using a snowball sampling method.

2.3. Instruments

Ad-hoc sociodemographic questionnaire: This included a number of variables such as age and sex, educational level, current employment status, and relationship status.

Acceptability of Intimate Partner Violence against Women scale (A-IPVAW; Martín-Fernández et al., 2018): This scale assesses to what extent violence against women is accepted. It is a 20-item instrument with a 3-point Likert scale (from 1 = “not acceptable at all” to 3 = “acceptable”). This instrument has good psychometric properties, with a reported Cronbach’s alpha of .89 (Martín-Fernández et al., 2018). In this study, we found a Cronbach’s α of .58, which suggests that the finding should be taken cautiously.

Dominating and Jealous Tactics Scale (Kasian & Painter, 1992, adapted to Spanish by Muñoz-Rivas et al., 2018). This 11-item instrument measures to what extent, using a 5-point Likert scale, respondents have used and experienced themselves dominant (7 items) and jealousy (4 items) tactics in the context of an intimate relationship. Respondents answer each statement depicting a psychological violence tactic twice: once of their own perpetration, and a second time for their own victimisation. In this study, we only used the victimisation form. This instrument has been found to have a good internal consistency (Cano et al., 1998). In this study, a Cronbach’s alpha of .72 was found for the dominating tactics victimisation scale and an alpha of .80 for the scale of jealous tactic victimisation.

Spanish adaptation of the Symptom Checklist 90-R (Derogatis et al., 1977): This checklist, adapted to the Spanish context by González de Rivera et al. (1989), measures mental health symptoms, in 9 symptom subscales, using a Likert scale (from “absence of distress” to “maximum distress”) in 90 items. In this study, only the subscales of anxiety (10 items measuring indicators of emotional tension and psychosomatic manifestations), depression (13 items measuring the main symptoms, such as dysphoria, lack of motivation, and hopelessness) and interpersonal sensitivity (9 items assessing shyness and the tendency to feelings of inferiority, as well as a hypersensitivity to others’ opinions and a inhibition when

interacting with others) were utilised. An overall score was also computed, adding all three subscales. The alpha coefficients found were: anxiety .92, depression .91 and interpersonal sensitivity .86. For the overall score, the alpha was .96.

2.4. Ethical considerations

Before having access to the online set of questionnaires, participants were briefed about the aim of the study, the voluntary nature of the study and the confidentiality of the data was going to be guaranteed at all times. Participant needed to check that they were happy to participate before being able to get access to the questionnaire.

3. Results

Descriptive and correlation analyses of the study variables are presented in Table 1, indicating that the frequency distributions of the study variables are not normal. In addition, K-S tests were carried out for all study variables. All the scores were significantly non-normal: acceptability of violence, $D(243) = 0.22, p < 0.001$; Dominance Tactics victimisation, $D(243) = 0.19, p < 0.001$; Jealousy Tactics victimisation, $D(243) = 0.19, p < 0.001$; anxiety, $D(243) = 0.21, p < 0.001$; depression, $D(243) = 0.17, p < 0.001$; interpersonal sensitivity, $D(243) = 0.16, p < 0.001$; and overall symptoms, $D(243) = 0.17, p < 0.001$. Correlation analyses were conducted using Spearman’s Rho, yielding all positive significant correlations (see Table 1).

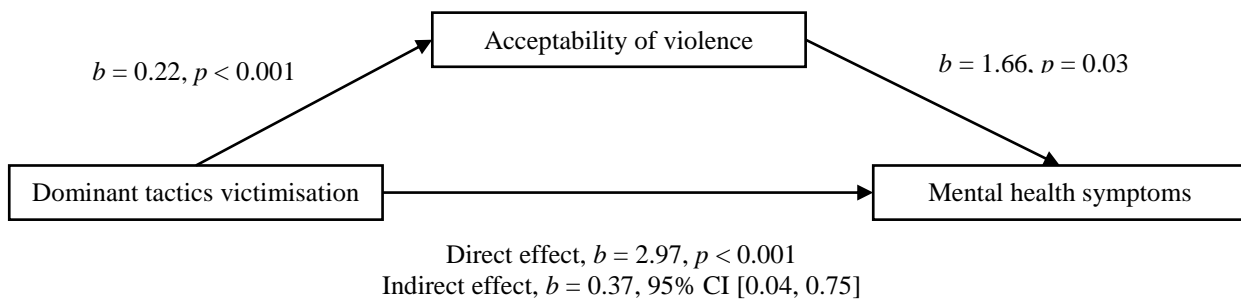
Table 1. Descriptives of acceptability of violence, victimisation and mental health symptoms.

	<i>n</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Acceptability of Violence	243	21.27	1.58	--						
2. Dominance Tactics vict	243	9.50	2.89	.34**	--					
3. Jealousy Tactics vict	243	6.79	3.03	.17**	.50**	--				
4. Anxiety	243	15.74	7.05	.27**	.31**	.34**	--			
5. Depression	243	24.99	9.68	.25**	.36**	.33**	.72**	--		
6. Interpersonal Sensitivity	243	14.80	5.70	.28**	.30**	.28**	.62**	.62**	--	
7. Overall symptoms	243	55.53	20.27	.27**	.36**	.33**	.86**	.92**	.82**	--

Note. ** $p < .001$

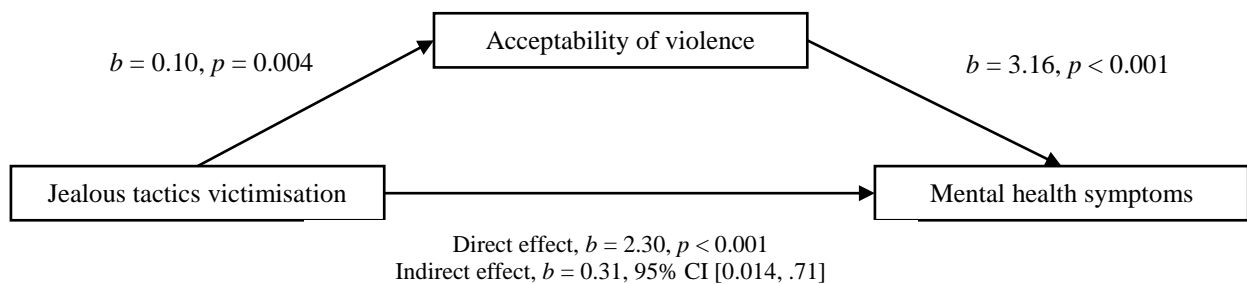
Next, the mediating role of the acceptability of violence in the relationship between the victimisation experiences and mental health symptoms was explored. Thus, a series of mediation analysis using model 4 in PROCESS (Hayes, 2022) were conducted. The results showed that the acceptability of violence mediated the relationship between having being exposed to both dominant and jealous tactics in the context of an intimate relationship and overall mental health symptoms. There was a significant indirect effect of dominant tactics victimisation on mental health symptoms through acceptability of violence.

Figure 1. Model of dominant tactics victimisation as a predictor of mental health symptoms, mediated by acceptability of violence. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 5000 samples.



A similar mediational model with jealous tactics victimisation yielded a significant indirect effect (see Figure 2) of this type of victimisation on mental health symptoms through acceptability of violence. Figure 2 displays this model.

Figure 2. Model of jealous tactics victimisation as a predictor of mental health symptoms, mediated by acceptability of violence. The confidence interval for the indirect effect is a BCa bootstrapped CI based on 5000 samples.



Further mediational analyses using the specific symptoms of mental health indicators of mental health indicated that there was not a significant indirect effect of dominant tactics victimisation on anxiety through acceptability of violence, $b = 0.12$, 95% BCa CI [-0.003, 0.27]; a non-significant effect of dominant tactics victimisation on depression through acceptability of violence, $b = 0.11$, 95% BCa CI [-0.03, 0.28]; and a significant effect of dominant tactics victimisation on interpersonal sensitivity through acceptability of violence, $b = 0.16$, 95% BCa CI [0.05, 0.27].

The mediational analyses of the three specific mental health symptoms regarding the jealous tactics victimization yielded a significant indirect effect of jealous tactics victimisation on anxiety through acceptability of violence, $b = 0.09$, 95% BCa CI [0.005, 0.21]; a significant indirect effect of jealous tactics victimisation on depression through acceptability of violence, $b = 0.12$, 95% BCa CI [0.009, 0.29]; and a significant indirect effect of jealous tactics victimisation on interpersonal sensitivity through acceptability of violence, $b = 0.10$, 95% BCa CI [0.005, 0.12].

4. Discussion

The aim of this study was to explore the mediational role of the acceptability of violence in the relationship between having experienced dominant tactic and jealous tactics by an intimate partner and mental health symptoms. The direct relationship between the two latter variables has been found in this study, consistently to what has been reported in the literature (Henning & Klesges, 2003). In this regard, it has been suggested that the psychological violence might have a more severe impact on the mental health than other form of violence (Williams et al., 2012)

In addition, the acceptability of the violence against women emerged as a relevant factor explaining the association between having experienced psychological violence and experiencing some difficulties in terms of mental health. This was true for both having being the victim of dominating and controlling as well as jealous behavior. The literature suggests that having being the witness of domestic violence in childhood might be linked to the acceptance of violence (O'Keefe, 1997) because in those circumstances, violence might be being modelled as an acceptable way of dealing with conflict (Meltzer et al., 2009). The acceptability of violence might also be related to the idea of "romantic love", which will lead to minimising violent behaviors such as control or jealousy (Soldevila et al., 2012). Finally, acceptability of violence has been linked, in adult females, to the way they respond to their victimisation (Barnett, 2001; Rizo & Macy, 2011).

Our findings point out the relevance of the acceptability of violence in the context of psychological violence. Furthermore, our findings highlight the significant impact that the experiences of dominating and controlling behavior might have on how a person tackles their interpersonal relationships, as our finding suggest that in those situations, the person might have feelings of inferiority, as well as a hypersensitivity to others' opinions. In regards to jealousy behaviour, it seems to be related to a wider range of psychological impact through the acceptability of violence. It seems reasonable to develop preventative intervention strategies to intervene on the acceptability of violence.

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COGNITIVE BIASES: DO THEY IMPACT INSTANT DECISION-MAKING BASED ON ETHNIC SIMILARITY?

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Abstract

Motivation: Due to recent media coverage (war coverage of Ukraine vs. Palestine vs. Congo), religious phobia-based issues during World Cup 2022, or lack of exposure to other(s), the authors' curiosity was triggered to examine how potential cognitive biases might impact decision making concerning global environmental issues. Since the effects of the biases are not fully understood nor fully valued, this paper is exploring the topic further.

Objectives: The paper illustrates the mediating effect of cognitive biases on decision-making (DV = dependent variable) based on global environmental issues concerning natural disasters (IV = independent variable in the form of flooding). Natural disasters from three continents are displayed and bio-sensory data was collected to measure participants' biological responses to the video clips shown. The decision-making (DV) following these displayed events (IV) is mediated by possible cognitive biases present during the decision-making process (here how personal or public funding is distributed in a simulation). Based on these situations evaluated merely centered around media coverage, subjects make decisions on relief funding, similar to how UN decision-makers are appropriating emergency response funds. Ultimately, the study shows that the personal impact perceived by individuals and their respective nations through natural disasters or crises is moderated by cognitive bias.

Methodology (what was done, how was it done) and validation: The study is based on a between-subject design of three groups of participants including subjects from Asia, Africa, and Europe. Utilizing different biosensors (eye tracking, facial expression analysis, and galvanic skin responses), biodata visualizations and statistics are collected and their correlation to decision-making was examined. Subjects are composed of a convenience sample of tertiary education students in southern Bavaria, aged 18-35 years. Validation takes place based on standard quality criteria measures.

Major results: Decision-making is based on a perceived needs basis (social security, economy, and support system in the country) and mediated through cognitive biases based on similarity to own cultural, ethnic, and geographical background.

Conclusion: Research shows that cognitive bias is omnipresent with an ethnocentric focus on decision-making.

Keywords: *Cognitive bias, decision-making, bio-sensory data, global environmental issues, ethnocentricity.*

1. Introduction

While the perspectives of media coverage of the ongoing crisis situations during the last years sparked the interest of the authors, the research question arose of how different human subject groups might perceive suffering and the need for humanitarian relief based on their own cultural and ethnic background. In particular, the authors considered a student population from three continents as a basis for analysis who were from different socio-economic backgrounds, ethnicities, and nations, therefore reflecting broad population segments. Some of the students had been affected to differing degrees by similar situations, whether flooding, earthquakes, or other natural disasters. Some of them also shared real-life personal stories after the experiment that may have impacted on their decision-making processes.

2. Theory

Psychological distance plays a vital part in the perception of others and situations perceived and is defined as the perception of where and when an event occurs, but also to whom it occurs (Trope

& Liberman, 2010). Similarly, the quality of the judgments made by humans is influenced by their preconceived notions, biases, and abilities (Gigerenzer & Gaissmaier, 2001). Knowledge, beliefs, and expectations about certain social groups are contained in the form of cognitive structures called stereotypes (Landy & Sigall, 1974). Additionally, the context of situations plays a role in social perception, either more positively or negatively (Plessner, 1999). Furthermore, social identity theory (Tajfel & Turner, 1979) postulates that self-identity is formed based on the definition individuals assign to themselves based on social group membership. The outcome then is one's identification with a collective, usually infused with positive aspects (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987).

In the context of social identity theory, cognitive biases (Tversky & Kahneman, 1974) refer to the systematic decisions and judgments heuristically taken without employing major cognitive abilities (Wilke & Mate, 2012) and then leading to preferential treatment of the own in-group, called in-group bias (Everett, Faber, & Crockett, 2015; Axt, Moran, & Bar-Anan, 2018).

The authors particularly looked at potentially ethnocentric subconscious roots for heuristics based on social distance or proximity, which base in social identity and in-group bias. These biases and the reasoning provided for decisions taken need to be examined further, leading to the following hypotheses:

H₁: Participants show greater arousal displayed in Facial Emotion Analysis (FEA) when watching a video sequence of a disaster concerning their own in-group.

H₂: Participants show greater arousal displayed in Galvanic Skin Response (GSR) when watching a video sequence of a disaster concerning their own in-group.

H₃: The amount of humanitarian relief differs among continents.

H_{3a}: The amount given to Nigeria (NG) differs among continents.

H_{3b}: The amount given to Bangladesh (BD) differs among continents.

H_{3c}: The amount given to Italy (I) differs among continents.

H₄: The reason funding was provided differs among continents.

H₅: The reason funding was declined differs among continents.

H₆: Participants tend to provide financial aid for humanitarian relief to their respective in-group.

3. Methodology

The study was conducted on locations in Erlangen and Weiden, Germany. Participants were invited for the experiment either through personal contacts or via lecturers on campus in Weiden. In a face-to-face setting, participants were introduced to the equipment, were wired with the GSR sensors on their non-dominant hand, and then were provided with instructions to watch the video clip cut together showing major flooding events of 30 seconds each from 2022 in Bangladesh (BD), Italy(I), and Nigeria (NG). To avoid possible ordering effects, the researchers edited three different sequences, showing the respective disasters in alternating routines. General background information concerning each country's population and Gross Domestic Product (GDP) were given prior to each flooding scene. Additionally, participants were asked to take a deep breath prior to each 30 second clip for 5 seconds to establish a baseline and "neutral" setting; during this time, the same relaxing ocean scene was displayed while calm and relaxing music was audible in the background.

The between-subject design of the convenience sample of tertiary education students in Southern Bavaria, Germany, with n=115 respondents was composed of the following subgroups: n=35 from the African, n=50 from the Asian, and n=30 from the European continent. Of the subjects, 40 had experienced flooding or similar natural disasters according to self-report. The group of participants was composed of 41 female, 73 male, and 1 divers individual. With all the subjects, the bio-sensor data of FEA and GSR was collected while watching the clips. After watching the clip, the subjects were asked to fill out a brief paper-pencil questionnaire collecting their demographic data as well as an indication whether they had experienced a flood before themselves, how they would divide emergency relief funding between the three different countries of Bangladesh, Italy, and Nigeria, and what type of reasoning they specify for proving or not providing the amounts they offered.

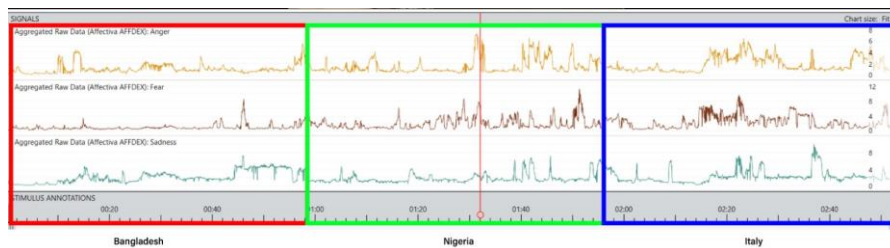
The collected data was evaluated using the Statistical Package for the Social Sciences (SPSS) as well as visually aggregated reports and graphs generated with the bio-sensory software iMotions, which was also used to collect the bio-sensor data, in particular, their software modules Affectiva AFFDEX for the FEA and Electromyography/Electrocardiography EMG/ECG module for the GSR.

4. Data collected and analyzed

Between the genders, distribution of funds amongst the affected countries did not differ significantly, even though the mean distribution differed by about 5 % for each country.

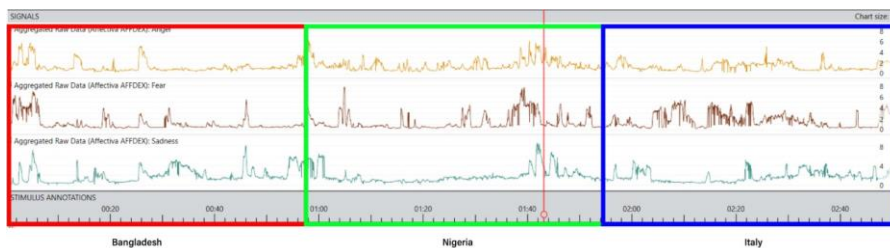
To test H_1 , the FEA data needed to be analyzed. It was not possible to export some of the data taken via GSR or allow for data to be matched to the questionnaire for privacy issues. The aggregated data for the respective continental groups indicate that Africans showed higher emotional involvement with the clip showing Nigeria and also Italy (assumably due to the human cries), but did not show similar involvement for Bangladesh (see Figure 1).

Figure 1. Affectiva AFFDEX aggregated data for Africans on the emotions Anger, Fear, and Sadness.



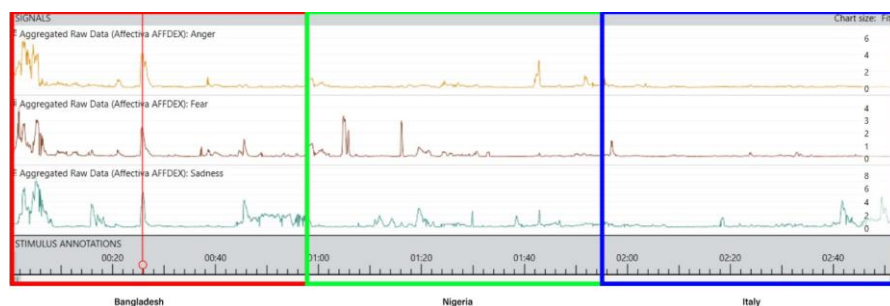
Asians, however, show a higher involvement when it comes to their own continent as well as one particular scene in the Nigerian sequence (old suffering woman), while the arousal in the Italian sequence is ongoing, but not at the same high peak level as the other scenes (see Figure 2).

Figure 2. Affectiva AFFDEX aggregated data for Asians on the emotions Anger, Fear, and Sadness.



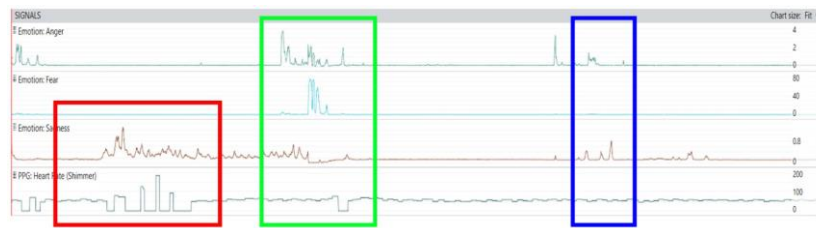
Europeans' aggregated data amounts to a "flat-liner" in most areas, in particular for Italy. More emotion and affect is shown for Bangladesh (one moment depicting children wading through high water), but overall, Europeans display less detectable emotion.

Figure 3. Affectiva AFFDEX aggregated data for Europeans on the emotions Anger, Fear, and Sadness.



Testing H_2 with the GSR data was also not possible for the same reasons, but wherever the data was collected, it mirrored and/or supported the FEA graphs.

Figure 4. Affective AFFDEX overlayed with the heart rate of GSR.



When analyzing H_3 , the maximum funding amounts do not significantly differ among continents, whereas the analysis for the individual countries (with NG: $p=0.103$ and I: $p=0.665$) provides only a significant difference in funding amounts for BD ($p=0.041$; see Bonferroni Test) between the continents Asia and Europe, with Asian subjects funding BD more. So H_{3b} : *The amount given to BD differs among continents* can be accepted, while H_{3a} for Nigeria and H_{3c} for Italy must be rejected.

As for H_4 : *The reason funding was provided differs among continents*, no significance can be determined using X^2 ($df\ 6, N = 111$) = 8.544, $p = .201$ for the reasons provided in funding for the respective countries and the hypotheses needs to be rejected.

However, when it comes to reasons to decline funding to any country, H_5 : *The reason funding was declined differs among continents* can be accepted with X^2 ($df\ 6, N = 69$) = 16.412, $p=.012$. The prevalence of corruption (27.5%) and weak infrastructure (21.7%) were provided as a determining factor for not allocating emergency relief funds. This did not apply to most of the Asian subjects, even though the differences were not significant. Also, Europeans were the least inclined to respond to the audible complaints of flood victims in the Italian sequence and simultaneously provided less relief funds to Italy; here, the reason given was often that insurances would cover much of the damage, the infrastructure would be a better one, and the economy a more stable one, therefore granting more aid to countries like Bangladesh and Nigeria.

Based on our data, H_6 : *Participants render financial aid for humanitarian relief to their respective in-group* needs to be rejected due to lack of significance X^2 ($df\ 6, N = 115$) = 6.825, $p=.337$.

5. Conclusions

In general, some scenes caused far more arousal than others. In particular, in the face of human suffering (kids wading through hip-high muddy water, an old woman sitting on top of a table in an entirely flooded room, rooftops sticking out from the surface of large, flooded areas, and people screaming when their cars were washed away by the flood streams), the arousal peaked for most subjects.

When it came to the African and Asian participants, most of them gave a justification as to why and how they distributed the funds; on the other hand, hardly any European participants provided a justification, somewhat possibly implying a more privileged position not needing reasoning.

Similarly, it seemed to cause cognitive engagement when reading the introductory slide to each sequence, and it appeared that at least for those individuals ($n=7$) that distributed the funds equally to the affected countries, the engagement and emotions were highest during the text slides, clearly indicating that the decision was taken more rationally and fact-based.

Interestingly enough, the subjects considered to a significant part that corruption and weak infrastructure would provide justification not allocating relief funds. In the sample scenes chosen, this reason primarily applied to Bangladesh – something mostly in the minds of many subjects since the corruption report of Transparency International was released shortly before the experiment was conducted. This report had been highly covered in the (social) media in Germany and was a much-debated topic amongst students at the university.

5.1. Limitations

Due to the convenience sample, many of the participants belonged to either Germany or Bangladesh, so no balanced distribution of participants existed for the continents of Europe and Asia.

When searching for the video sequences to be used, the researchers were unable to find entirely comparable clips. The intent was to show human suffering, but in one of the nation's clips, more aggravated screams were audible, and the clip was in portrait format, while the other two clips were segments from news reports in landscape format. Furthermore, the clips were rather short to cause emotional connectedness to the suffering depicted. Therefore, future research should utilize longer video sequences.

The 5 second image used to establish a calm base line between the respective flood scenes caused a spike in pulse for several male participants since the scenery looking onto the ocean and surrounding mountains had a female depicted small and from behind, fully dressed and arms stretched out as if taking the view in. While the researchers did not see any reason for arousal, for some of the male subjects it caused increased values in pulse.

Another issue faced were primarily hardware troubles, and even though the researchers were working with Shimmer3-D64D, which is supposed to be a reliable tool, sometimes the Bluetooth connection with the laptop was not working properly, causing loss of data. Additionally, the lab equipment was new and the learning curve big and fast, causing additional tension and stress as well as support calls to the software provider.

Ideally, the experiment would have been conducted in soundproof meeting boxes to eliminate any external influences such as movement or noise generated by other individuals entering the laboratory, since these influences sometimes may have an impact on the results.

5.2. Future research

A larger focus needs to be placed on detailing ingroup preferences in allocating funds and making any type of (declined) support decisions; this, however, would only be possible if the experiment would be limited to a design entailing participants from three different nations on three continents to make the data more distinguishable.

It would be very interesting to further emotionalize the clips by providing viewing on a large TV or even movie screen with surround sound, 3-D, or even Virtual Reality; however, the amount of equipment needed at this point would not be realistic for a small university, and even though GSR data could be collected with the proper amount of GSR devices, the FEA would be impossible to collect in such a setting.

To ensure a better distribution of participants across all nations, one of the simulations offered through the Model United Nations (MUN) with young and inspired leaders in a parliamentary setting could be arranged for future experiments. Because the access to real-life leaders is quite impossible, it would be highly interesting to consider the outcomes from a true leadership perspective through MUN.

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DO DEFICITS IN SPECIFIC DOMAINS IN EXECUTIVE FUNCTION PREDICT THE RELATION BETWEEN THEORY OF MIND AND SYNTAX UNDERSTANDING IN CHILDREN WITH AUTISM?

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Abstract

Theory of mind, executive function and language could be three overlapping cognitive variables in children development. A large literature in psychology and developmental sciences support this assumption. Results in the perspective of this hypothesis come from two lines of research which grew up separately for a long time: studies on the theory of mind - executive function link and theory of mind – language link, in children development. The actual challenge is whether the relationship of these three cognitive processes may implicate the reality that one should be an explanatory factor of the two others correlation. Thus, we conduct an experience in the aim to verify if executive function as a general cognitive domain is a predictor of the developmental theory of mind-syntax understanding relationship, in children with autism. A large matching age sample of children is recruited to participate in the experience. We used both first order and second false belief tasks, three EF tasks assessing inhibition, cognitive shifting and planning, and two tasks of syntax in the experimental material. We expect having results allowing to describe the predictive and explanatory links between executive function, syntax understanding and theory of mind. We also expect to obtain results explaining the relation of planning tasks with first and second order false belief tasks. We wish discussing the pattern of inhibition and cognitive shifting in the perspective of the cognitive complexity and control theory. Results of planning – theory of mind relationship is expected to discuss the effect of age in processing false belief tasks. The sense of syntactic understanding variable will be discussed in the results patterns for both children with autism and typically developing control group, in order to verify the consistency of our results with the literature about findings on syntactic processing in children with autism.

Keywords: *Theory of mind, executive function, syntax understanding, autism, children development.*

Ability of theory of mind (ToM) emerge in children around of the age of 4 years old (Perner, 1999, 2000; Wimmer & Perner, 1983). ToM refers to a core of competences allowing to impute mental states to self and others, in order to predict behaviors about a specific context (Baron-Cohen et al., 1985; Wimmer & Perner, 1983). In fact, understanding the development of ToM leaded researchers to question other cognitive processes, supposed having considerable implication in ToM development. Cognitive functions, like executive function (EF) and language have been question in ToM development according to the fact they involve the same period of development than ToM abilities (Perner, 1998; Russell et al., 1991). Questions regarding the relationship between ToM, EF, and language abilities generated a literature divided in two main research lines, in children development. One line sought to investigate the possibility of a prediction link between ToM and EF (Benson et al., 2013; Carlson, 2005; Devine & Hughes, 2014; Pellicano, 2007). The other line concentrated more interest in understanding the nature of the ToM-language relationship in children development (J. De Villiers, 2000; J. de Villiers, 2007; J. G. De Villiers & De Villiers, 2000; Tager-Flusberg, 2000; Tager-Flusberg & Sullivan, 1995).

In this communication, we debate the ToM, EF and language relationship as a unique research problem in atypical children development. We want to deepen the relation between these three cognitive variables in order to clarify whether EF might be a potential predictor for the developmental link between ToM and language notably syntax processing, or if EF process explain only the ToM development. Our focus is on children with autism, as the development and links between these processes may be different from those observed in typically developing children and these differences could explain at least part of difficulties encountered by children with ASD.

Results obtained in the literature showed that EF skills have large implication in ToM development in children with autism (Hala & Russell, 2001; Hughes & Russell, 1993; Pellicano, 2007, 2010). Thus, results of a longitudinal study by Ozonoff and McEvoy (Ozonoff & McEvoy, 1994) showed significant correlation between ToM and EF, in autistic children. According to several researchers, the correlation between ToM and EF in autism is discussed in the perspective of a more primary deficit in EF which has significant implication in the ToM operations (Devine & Hughes, 2014; Hughes & Russell, 1993; Pacherie, 1997). Results from multiple regression analyses supported the hypothesis that EF could be an important predictor for ToM development in children with autism, but not validated the opposite possibility (Pellicano, 2007, 2010). In typically developing children, the role of inhibition as a predictor of ToM was described, with a clear developmental effect in the EF-ToM correlation (Carlson & Moses, 2001). These results have shown that 4 years old participants outperformed 3 years old participants in both EF and FB tasks. Other results in autism allowed to document that EF processes implicated in both ToM deficits and in behavioral autistic feature expressions, in children with autism (Joseph & Tager-Flusberg, 2004; Lukito et al., 2017). In this view, a 12 years longitudinal study revealed that better relationship between EF and ToM was associated with fewer autistic traits (Kenny et al., 2019). Indeed, researchers supposed that inhibition and cognitive flexibility are two critical executive factors having more implication in ToM when considering the structure of false belief (FB) tasks (Benson et al., 2013; Carlson, 2005; Fujita et al., 2022; Russell et al., 1991). The implication of working memory had been shown by other results, in both autistic and typical children (Keenan et al., 1998; Polyanskaya et al., 2021). In other papers, a statistical significant correlation between scores of FB tasks and executive planning tasks was found in typical and atypical participants (Kouklari et al., 2018; Pellicano, 2007).

A large number of results support the hypothesis that language could be an explanatory factor for ToM development (M. C. Burnel et al., 2017; J. de Villiers, 2007; Durrleman et al., 2017; Hale & Tager-Flusberg, 2003). In this view, a link between understanding certain structures of language and perform FB tasks was found in children with autism (Tager-Flusberg & Sullivan, 1995; Ziatas et al., 1998). Results have shown that understanding syntax is a predictor for ToM development in typical and autistic preschool age children (Lind & Bowler, 2009; Paynter & Peterson, 2010; Tager-Flusberg, 2000). Conclusions about the relationship of ToM and syntax understanding led to certain consensus on the fact that children with autism use their knowledge of syntax as a compensatory strategy to achieve FB tasks without developing maturity of ToM (Fisher & Happé, 2005; Happé, 1995; Tager-Flusberg, 2000). Indeed, results from several papers showed that complement sentence structures might be an effective predictor for achieving FB tasks in the group of autistic children (J. de Villiers, 2007; J. G. De Villiers & De Villiers, 2000; J. G. de Villiers & de Villiers, 2014; J. G. de Villiers & Pyers, 2002). A significant correlation between morphosyntax task and verbal FB tasks was found in children with autism (Durrleman et al., 2016). Schroeder and colleague's results demonstrated that embedded clause constructions should be a predictor for autistic children performance in metarepresentational tasks (Schroeder et al., 2021). In this view, other results showed that comprehension of relative clauses allowed children with autism performing FB tasks (Durrleman et al., 2016, 2018). Also, it has been found that complement of cognitive verbs were significantly correlated to verbal FB tasks in children with autism (M. C. Burnel et al., 2017).

To go forward in the debate, some researchers wanted to know more on the hypothetic possibility that EF as a more general cognitive domain, predict the relation of ToM and syntax processing. In this way, results obtained by Burnel and his colleagues have shown that syntax was a predictor of ToM in typically developing children, but not EF (M. Burnel et al., 2021). In fact, this question was asked in a first paper published by Carlson and colleague, in the perspective of general language abilities (Carlson et al., 2002). The importance of this question is associated in the idea that these three cognitive functions refer to the same critical period in the development of children.

About our experience, the goal is to investigate the relationship between ToM, EF, and language as one and unique problem. Indeed, there is very few researchers who approached the question in this perspective. Results obtained do not allow until now clear explanation about which really predicted the ToM development, between EF and language. In this view, if certain results obtained in autistic children and in typically developing children (M. Burnel et al., 2021) showed the effect of syntax processing as a predictor of ToM, while those obtained by Polyanskaya and colleague (Polyanskaya et al., 2021) described a double profile: in typically developing children the significant predictor of ToM was working memory EF, and in children with autism syntax understanding was found as a predictor of ToM. The first remark is there is very little research on this extension of the debate interesting to know between EF and syntactic language, if one of these two variables predicts the relation of ToM with the other. The second remark is an inconsistency of results to answer the new concerns concerning the relation of ToM with the two other variables. Thus, our specific objective is to verify if particular domains in EF, like inhibition, cognitive flexibility, and planning predict deficit patterns in ToM in children with autism. We hypothesize that EF is a predictor of ToM development in children with autism. This experience is an occasion for us to question

the relation between EF and ToM in the perspective of two micro-problems in the literature. In one side, the role of inhibition and cognitive flexibility in coordinating conflicting rules (cognitive complexity and control (CCC) theory), and on the other side, the correlation between FB tasks and planning tasks.

Currently, our experience has as a status of ongoing study. Recruitment of a large sample of participants is in progress. The methodology part should allow to answer an important question regarding previous results obtained specifically on the relation of ToM, EF and syntax understanding in autistic and typical children. So, the sample size may be a crucial factor explaining certain result profiles, in previous papers interest to describe the link between these three cognitive variables. In this view, we recruited French speaking participants aged between 4 and 7 years old, with a diagnostic of autistic spectrum disorder (ASD) in IME (Institut Médicaux Educatifs) at Tours and at Paris Île de France.

We used several cognitive measures to evaluate skills related to general ability of language, ToM, EF, and syntax understanding. Indeed, to assess ToM abilities, three tasks of FB were chosen in the NEPSY-II (Korkman, Kirk, Kemp, 2012). The first task is an unexpected-contents false belief, the second is a type of perception knowledge, and the third is an appearance-reality task. Three tasks are used to measure ability of EF, one measure inhibition process from NEPSY-II (Korkman, Kirk, Kemp, 2012). The dimensional card changes sorting (DCCS; Zelazo, 2006) is used to evaluate cognitive flexibility, and the tower of London (TOL; Shallice, 1982) allowed to evaluate planning skills. Language abilities are measured by two vocabulary tasks: reception and production lexicon, chose in ELO test (Khomsi, 2001). We used two tasks of syntax from the CELF-5 (Wiig, Semel, Wayne & Secord, 2019) test to assess syntax and morphosyntax skills. All tasks were chosen according to the literature and the age criteria linked to the standardization of the tests.

We expect having results justifying our hypotheses. Results expecting should show significant correlation between EF and ToM in both groups of participants. The regression analyses must show that EF predict significantly ToM in autistic children. We hope obtaining results justifying a significant correlation between TOL test and the FB task – perception knowledge. Syntax understanding will not be expecting as a predictor of the ToM-EF relationship.

The results will be discussed in the perspective of previous results in the literature. Deficits pattern in the correlation between inhibition and cognitive flexibility with ToM will be an important aspect of discussion. We consider that the CCC theory is important to know more about the correlation between inhibition and cognitive shifting and ToM abilities, in autism. We discuss also results allowing to understand whether EF is a predictor of the relation between ToM and syntax understanding, in children with autism and in typically developing participants. Our interest is to present our results in this scientific event and give possibilities to other researchers to debate with us about and on specific methodological elements of the experience.

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REVIEW OF THE EFFECTS OF COGNITIVE TRAINING INTERVENTION ON SLEEP QUALITY IN OLDER ADULTS WITH INSOMNIA

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Abstract

Objectives: The risk of both, reduction in sleep quality and cognitive decline, increases with advanced age, raising the question of whether cognitive training intervention could improve sleep quality in older adults with insomnia. The current review aims to characterize existing literature on the possible effects of cognitive training intervention on sleep quality in older adults with insomnia. Evidence suggests that among older adults with insomnia cognitive training intervention (either personalized or in a group) improved sleep quality. The possibility of improving sleep quality among these patients via a non-pharmacological treatment is an encouraging new concept that requires in-depth testing.

Keywords: *Older adults, sleep quality, insomnia, personalized cognitive training intervention, group cognitive training intervention.*

1. Insomnia in older adults

Insomnia, the most common sleep disorder, is defined by difficulty initiating or maintaining sleep that are associated with daytime consequences which occur at least 3 nights a week for at least 3 months despite adequate opportunity to sleep (American Psychiatric Association, 2013; Van Someren, 2021). Late-life insomnia is a chronic sleep disorder which affects over 40% of older adults, according to epidemiological data, and may have a significant negative impact on quality of life and psychological wellbeing (Patel et al., 2018). Late-life insomnia is specifically associated with poor health and cognitive decline (Espiritu, 2008; Patel et al., 2018). Unfortunately, the first-line treatment for insomnia, Cognitive Behavior Therapy for Insomnia (CBTI), is only moderately effective in cases of late-life insomnia (Epstein et al., 2012). It is thus crucial to identify the best treatment for improving sleep quality of older adults suffering from late-life insomnia.

2. Cognitive performance of older adults

Aging not only brings about changes in sleep quality but has also been found associated with cognitive impairments: for example, deterioration in the performance at various cognitive tasks (Lufi et al., 2015; Lufi & Haimov, 2019). Several studies have shown that the cognitive impairments observed in older adults with insomnia is far more severe than those observed in older adults without insomnia (Haimov, 2006; Haimov et al., 2007, 2008).

One effective tool for the prevention of cognitive decline in healthy aging individuals is cognitive training. This includes any intervention aimed to improve, maintain, or restore mental function in which the individual repeatedly practices mentally challenging tasks in a structured manner. Numerous studies have demonstrated the beneficial effects of cognitive training on cognitive functions (e.g., memory, attention, processing speed, and executive functions) and on distal, untrained domains (e.g., reading and walking) among both aging populations (Shatil, 2013) and populations with cognitive deficits (Shatil et al., 2010). Cognitive training can be implemented in 2 ways: in either a personalized setting or a group setting. Recently, personalized cognitive training exercises have been progressively integrated into computerized training: computers and game consoles as well as smartphones and tablets (Bonnechère et al., 2020). Moreover, group programs of cognitive training have been developed alongside computerized personalized cognitive training (Srisuwan et al., 2019).

3. The relationship between sleep quality and cognitive functioning

The interplay between sleep and cognitive functioning has been investigated extensively over the past 2 decades. A multitude of findings have demonstrated the central role of sleep in brain plasticity, memory consolidation, and optimal cognitive engagement (Diekelmann & Born, 2010; Walker & Stickgold, 2004). On the other hand, learning may have positive effects on sleep architecture (Cerasuolo et al., 2020; Fogel & Smith, 2006; Huber et al., 2004).

4. The beneficial effects of cognitive training on sleep quality of older adults with insomnia

Literature review revealed that only 2 studies to date have investigated the beneficial effects of prolonged cognitive training (either personalized or in a group) on sleep quality of older adults with insomnia (Haimov & Shatil, 2013; Keramtejad et al., 2019). First, Haimov and Shatil (2013) demonstrated in a pioneering study the beneficial effects of personalized computerized cognitive training on sleep quality and cognitive function among older adults with insomnia. Their study revealed that, among this population, an improvement in sleep quality is predicted by an improvement in cognitive performance.

In their study (Haimov & Shatil, 2013), participants in the cognitive training group ($n = 34$) completed a homebased, personalized, computerized cognitive training program (using the CogniFit cognitive training program). Participants in the active control group completed a home-based program involving computerized tasks that do not engage high-level cognitive functioning (“Word and Paint”). Both programs were similar in time commitment of 20–30 minutes per session and both regimens were similarly structured - three sessions each week (with a no-training day between sessions), for a duration of 8 weeks (24 training sessions). At the beginning of the study all participants completed a broad spectrum of questionnaires. In the two weeks immediately before the onset of the intervention and following the end of the intervention, baseline and post-training objective sleep quality data were collected i.e., during these two weeks participants’ sleep was continuously monitored by actigraph and participants filled a daily sleep diary. In addition, before the onset of the intervention and following the end of the intervention participants’ cognitive performance was evaluated using the CogniFit computerized neurocognitive evaluation program.

Results of this study (Haimov & Shatil, 2013) revealed between-group improvements for the cognitive training group on both sleep quality (sleep onset latency and sleep efficiency) and cognitive performance (avoiding distractions, working memory, visual memory, general memory and naming). Hierarchical linear regressions analysis in the cognitive training group indicated that improved visual scanning is associated with earlier advent of sleep, while improved naming is associated with the reduction in wake after sleep onset and with the reduction in number of awakenings. Likewise, the results indicate that improved “avoiding distractions” is associated with an increase in the duration of sleep. Moreover, the results indicate that in the active control group cognitive decline observed in working memory is associated with an increase in the time required to fall asleep.

In the second study, Keramtejad et al. (2019) examined the beneficial effects of prolong group cognitive training intervention on subjective sleep quality and cognition performance among older adults suffering from both insomnia and mild cognitive reduction and revealed that group cognitive training promotes their cognitive function and their sleep quality.

The participants in their study (Keramtejad et al., 2019) comprised 108 insomniacs older adults with mild cognitive reduction. Participants were randomly allocated to an experimental group ($n=54$) and a control group ($n=54$). Experimental group samples were undergoing group cognitive training intervention for two months. Data were collected using Mini-Mental State Examination (MMSE) questionnaire, Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI) and Clinical Dementia Rating Scale (CDR). Data were collected one month before-and after the intervention. Results revealed that the group cognitive training intervention promotes the cognitive function and improved subjective sleep quality in the intervention group compared to the control group.

5. Conclusions

As insomnia is a highly common chronic condition among older adults, the possibility of a non-pharmacological treatment which can improve their sleep quality is auspicious and should be further examined. Both personalized and group cognitive training should be investigated as one such promising non-pharmacological option which could benefit both the initiation and the maintenance of sleep. To further address the beneficial effect of cognitive training on sleep quality throughout the aging process, future studies should evaluate both methods of cognitive training among a broader elderly population. These studies may pave the way for the development of effective non-pharmacological interventions that may improve sleep quality among older adults with insomnia.

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SIMULATION OF DEVELOPMENTAL TRANSITIONS BELOW AND ABOVE FORMAL REASONING IN A NEURAL NETWORK MODEL

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Abstract

The Model of Hierarchical Complexity (MHC) is one post-Piagetian theory that shows that humans develop through stages beyond post-formal reasoning. At each developmental transition, simpler knowledge self-organizes into more complex knowledge without overwriting itself, however, the nature of transitions is poorly understood. We used neural networks to simulate this stage incremental process and to explore whether conclusions about transitions could be taken from the developing structure of the model, specifically when solving problems below and above formal reasoning. We simulated stage-wise human performance on the balance-beam test. The MHC analyzed the order of hierarchical complexity (OHC) of balance-beam tasks, identifying 4 OHC subtasks (9, 10, 11, and 12), each being solved by individuals at the following stages: concrete (stage-9), abstract (stage-10), formal (stage-11) and systematic (stage-12). Hence, two stages below formal, where individuals operate with concrete information until they transform it into abstract information, and two stages above formal, where individuals operate with abstract information. In our method, we segregated the input set into the four disjoint OHC subsets. Then, we trained the minimal neural network model structure to solve each OHC subset separately. The best performing model for each OHC subset was selected and the evolving structure across sequential models was evaluated. Developmental transitions are represented by the recruitment of new neurons and connections from one OHC network to the next. First, results showed that segregating inputs by disjoint OHC led to the best performance of networks in the formal-order subtasks (torque difference calculus) among the literature. Second, transitions from concrete to abstract rely mostly upon an increase of memory resources of the existing connections. From abstract to formal and from formal to systematic, there is an increase in the number of neurons and connections. More than one transition pattern was found, which points towards the dynamic of self-organization. We either observed that there is an increase of 120% in both the number of neurons and connections from abstract to formal and a decrease of 50% from formal to systematic or that there is an increase of 80% in the number of neurons and connections, which maintains stable during the systematic performance. Limitations of this work concern the operations that were being learned at each OHC subtask, which conflict with the mathematical nature of neural network models. Even so, the scaling of network elements is worth exploring by simulating further OHC subtasks.

Keywords: *Stage of development, developmental transitions, simulation, neural networks, complexity.*

1. Introduction

Human cognition is incremental in nature and dependent upon learning, experience, and biological maturation (Commons & Pekker, 2008; Inhelder & Piaget, 1958; Klahr & Siegler, 1978). Developmental psychology theories soon suggested that human cognition passes through a series of steps (or stages). These stages are generally defined according to the problem-solving capabilities of

individuals, either within or across domains (T. Dawson et al., 2003). “Stage” is assessed through sets of specifically designed problem-solving instruments that span through different domains (Giri et al., 2014). Since Piaget’s experiments, these instruments have been improved, have progressively uncovered the building blocks of human cognition and have increased their power of explanation of how these building blocks develop throughout life (Dawson-Tunik et al., 2005). Since the 80’s, this knowledge has given rise to computational models of cognitive development using neural networks, enriching the advances of the discipline of artificial intelligence (McClelland, 1988, 1995; McClelland & Jenkins, 1991). In fact, if we overlap the disciplines of developmental psychology and artificial intelligence, an immediate conclusion is that in order to maximize the similitude between artificial models and human cognition, one should adopt the longitudinal perspective-taking of learning and model the development of cognitive abilities (Leite, 2019; Leite & Rodrigues, 2018). The difficulty of this is that while stages of development have been identified by different theories with little variation, the dynamics of stage transition are still poorly understood. No theoretical or experimental references exist with sufficient detail that can inform simulation works (Maas & Hopkins, 2011). In fact, recent perspectives point towards the increasing validity of complex systems approach, where it is not so much a sequence of operations that is identified, but a whole network of interdependencies that gets modified (Mitchell, 1998). This present work addresses the developmental aspect of problem solving in an artificial learning model, exploring the dynamics of stage transition from the perspective of complex systems. We used neural networks to simulate this stage incremental process and to explore whether conclusions about transitions could be taken from the developing structure of the model, specifically when solving problems below and above formal reasoning.

The specific objective concerned the quantification of stage transition by observing the progression of the structure of the model as it learned increasingly complex problems. This was done by identifying the elements of the neural networks model structure while solving each order of complexity problem, with order of complexity being defined by the Model of Hierarchical Complexity (MHC). Three specific developmental transitions were targeted, concrete to abstract, abstract to formal, and formal to post-formal.

1.1. The Model of Hierarchical Complexity

One important developmental psychology theory is called Model of Hierarchical Complexity (MHC). It is a general-stage theory that has been extensively tested for assessing human development in different domains of knowledge and for creating different applications (<https://www.dareassociation.org/>). The MHC proposes that the assessment of developmental stage starts by measuring the complexity of problems to solve. This measure is a one-dimensional variable called the Order of Hierarchical Complexity (OHC) (Commons & Pecker, 2008). Problem complexity can be attributed a discrete value between 0 and 16. Hence, in total, 17 orders of hierarchical complexity have been found, which stand for identifying 17 stages of development. The highest problem complexity that an agent is able to successfully solve will be used for determining the stage of development of that agent, a human, non-human animal, or machine. The OHC of a problem is defined according to three simple axioms and further detailed in the literature (Commons, Gane-McCalla, et al., 2014; Commons, Li, et al., 2014). The MHC is reflected in the concepts and dynamics of complex systems theory. First, it differentiates horizontal and hierarchical complexity, assuming that only hierarchical complexity participates in stage transition (Commons & Pecker, 2008). This follows from the observation that only when two or more lower-order elements are combined, a higher-order stage emerges in a self-organizing way, reason why it has been difficult to trace the stage transition developmental route. There is evidence that stage is imprinted in the brain as a specific pattern of brain activation (Harrigan & Commons, 2014; Ribeirinho Leite et al., 2016), but this mapping has not been identified yet, let alone the process of transition from one mapping to the emergent one. Furthermore, the MHC has systematically observed in human behaviour that stage of development, as previously defined, acts as an attractor of the system. This means that the problems encountered in the environment will be perceived with a given complexity and solved accordingly. For example, a child and an adult facing the same situation will have different ways of perceiving and responding to it. The adult’s stage, supposedly higher than the child’s, acts as an attractor in the way that the adult is automatically led to be in the situation through the lens of their higher stage, unless they focus on assuming the child’s lens to improve communication.

2. Methodology

We simulated the balance beam test, a developmental test applied to children. As the name indicates, the test is a balance beam that is presented to the child with different possible configurations of weights placed at different distances on each side of the fulcrum. The child should guess whether the beam would fall right, left, or balance if supporting blocks were removed from below. Some

configurations are more difficult to guess than others because they display a more complex distribution of weights throughout the pegs. Extensive research on developmental psychology has shown that children respond to more difficult configurations of the test as they develop (Commons et al., 1995; Dawson-Tunik et al., 2010; Klahr & Siegler, 1978; Siegler & Chen, 2002). The MHC clearly characterizes difficulty in the balance beam problem by the mathematical operations that should be used to correctly predict the result of a given configuration (Dawson-Tunik et al., 2010), such as counting (at the concrete-stage-9), sum (at the abstract-stage-10), multiplication (at the formal-stage-11), and the distributive law (at the systematic-stage-12).

The simulation method we propose requires three steps. First, we simulated the balance beam with all possible configurations. Second, we grouped input vectors that represented problem configurations of the same order of complexity. Third, we created disjoint subsets of sequential OHC problems, following the order in which they are solved in the developmental trajectory. Fourth, we trained independent neural network models for solving each OHC problem, ensuring that the minimal model was found. We allowed the models to have a maximum of two layers, 20 units per layer, and 5 different patterns of connections where the simplest one was a pattern of feedforward connections. Fifth, we compared neural network models that solved adjacent OHC problems. Lastly, we quantified stage transitions based on the structural changes from one model to the next, both in terms of neurons and in terms of active connections.

3. Results

Among the best performing networks for each OHC sub-problem, some have been selected based on how their components (layers, units and connections) could be hierarchically organized across OHC. Networks performed with 100% accuracy for all stages but the systematic stage, where a slight decrease was observed. Table 1 represents the obtained results. Table 2 presents this quantification, done by a process of discretization.

Table 1. Numeric description of the selected networks.

OHC	Option 1		Option 2		Option 3	
	Nodes	Connections	Nodes	Connections	Nodes	Connections
Concrete stage 9	4	6	4	6	4	6
Abstract stage 10	4	8	4	8	4	8
Formal stage 11	12	135	11	103	8	88
Systematic stage 12	16 (2 layers)	195 (2 layers)	19 (2 layers)	194 (2 layers)	16 (2 layers)	195 (2 layers)

Table 2. Discretization of the transition process.

Transitions	Option 1		Option 2		Option 3	
	Nodes	Connections	Nodes	Connections	Nodes	Connections
First	0	2	0	2	0	2
Second	8	127	7	95	4	80
Third	4	60	8	91	8	107

In terms of how transitions are quantified in each option, given that in the first transition there was no change in the number of nodes, the second transition departs from a comparison with zero. Comparing to zero is an absolute increase. Hence, in each option, we are quantifying the increase in the number of in relation to the increase in the number of connections. In option 1, from abstract to formal there was an increase of 120% in both the number of neurons and connections and, from formal to systematic, there was a decrease of 50%. In option 2, from abstract to formal, there was an increase of approximately 80% to 90% in the number of neurons and connections, which remains stable during the systematic performance. In option 3, from abstract to formal, there was an increase of 80% in the number of neurons and connections, which, in the transition to the systematic stage, increased again by 50% in the number of nodes and in 25% in the number of connections.

4. Discussion and conclusion

A methodological proposal has been delineated to identify how a networked system represents developmental transitions at different orders of hierarchical complexity (OHC), or developmental stages as defined by the Model of Hierarchical Complexity (MHC). In this work, the number of units and the connectivity pattern have been experimented as variables for the network structure. A methodology was conducted to ensure that the minimal structural model was selected for solving each problem at each stage. After the training and selection processes, models for adjacent complexity problems were structurally compared and three structural progressions could be identified. Importantly, the model structure for each complexity problem was searched separately and independently, which allows to infer that the OHC is a valid and reliable measure to capture the complexity of problem solving and that neural networks capture this problem dimension in the dynamics of problem solving.

First, results showed that segregating inputs by disjoint OHC led to the best performance of networks in the formal-order subtasks (torque difference calculus) among the literature (M. Dawson & Zimmerman, 2003; Hofman et al., 2015; Maas et al., 2007; McClelland, 1988, 1995; Rijn et al., 2003; Shultz et al., 1994, 1994; Shultz & Schmidt, 1991). Until now, the torque difference problem has not been solved with 100% accuracy, nor with stability. Second, more than one transition pattern was found, which points towards the dynamic of self-organization. Actually, three structural progressions were identified, with similar accuracy results and with interesting similarities across transitions.

Regarding the similarities across all three progressions, two types of transitions were found: memory-based and operationally-based transitions. Memory-based occurred in the transitions below formal stages — from concrete stage 9 to abstract stage 10 — with no change in the number of nodes and a slight increase in the number of active connections, i.e., memory resources. This is aligned with the proposal of the Model of Hierarchical Complexity regarding the process of hierarchical integration as the dynamics of stage transition. Hierarchical integration refers to the idea that two or more lower order actions become object of non-arbitrary combination at the emergent order. This process has been compared to the process of working memory increase by chunking blocks of information, increasing working memory capacity throughout development (Duran et al., 2018; Kesteren et al., 2012). Below formal stages individuals operate with increasing concrete information, requiring an increase in working memory resources, until they transform it into abstract information. Differently, the present work suggests that operationally-based transitions occurred in the transition to and above the formal stages, relying upon a change in the structure, requiring more nodes and more connections. In these formal and post-formal stages, individuals become able to operate with abstract information. In this experiment, this was consistently shown by a boost in the recruited structural resources.

Analyzing each individual progression across transitions, interesting parallelisms are found, too, between the increase in the number of nodes and the increase in the number of connections. In the first scenario, there is an increase of 120% in both the number of nodes and connections from abstract to formal and a decrease of 50% from formal to systematic. In the second option, there is an increase of 80% in the number of neurons and connections, which maintains stable during the systematic performance. In the third option, there was an increase of 80% in the number of neurons and connections, which increased again by 50% in the number of nodes and in 25% in the number of connections in the transition to the systematic stage.

Limitations of this work concern the operations that were being learned at the concrete and abstract orders — counting and sum — which conflict with the mathematical nature of neural network models and justify that the model structure for these orders is the simplest. Even so, the memory-based transition is worth exploring in future work in the domain of pre-formal stages. Future work also concerns the simulation of more complex configurations, namely quadratic sum, to continue exploring the increase in structural complexity throughout post-formal simulations.

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EXTREME EXPERIENCE AND HEIGHTENED CREATIVITY: FOUR HYPOTHESES ON THEIR CORRELATION

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Abstract

Once a prospective doctoral researcher came up with a proposal to work on the suicide notes written by farmers for whom life had become impossible due to drought and debts. Though the case was not one of *creativity* [in any academic sense] *under duress*, I was inspired to pursue interdisciplinary theoretical research, bringing together insights from psychology, philosophy, history, and literary/creativity studies, to explore the relation between extreme experience and heightened creativity: the connection between unbearable experience – war, genocide, and domestic violence – on the one hand, and paradigm shifts in thought, experimental art, and path-breaking discoveries, on the other. Creative process is elusive, complex, and often unamenable to empirical verification. I began by trying an existing explanation on the correlation: the theory of *sublimation* – channelization of anger and resentment into productive endeavours. A *second* explanation is that it is precisely the preceding experience that the consequent achievement requires for its *raw material*. Viktor Frankl's *Logotherapy*, based on the *will to meaning*, even in the most harrowing circumstances, as the source of survival, needed the experience of the concentration camp. A key factor here is the ability of victims to utilize possibilities provided by *narrativization* – by deducing and creating alternative meanings/implications from the same event. Further integrated psycho-philosophico-literary investigations into the cognitive processes that underlay the work of certain twentieth-century thinkers and writers who wrote amidst menacing macro-historical developments, offered *two supplementary explanations*. The inability of available *external forms* – limitations of language, existing models of thought or forms of art, modalities of interpersonal relationships – to capture the overwhelming intensity and true extent of extreme experience compels the experiencing subjects to break these forms/paradigms, and develop radical alternatives. Besides, when experience is overwhelming, the human psyche salvages the most delicate and vulnerable aspects of reality which it considers valuable.

Keywords: *Extreme experience, heightened creativity, sublimation, external forms, narrativization.*

1. Introduction

A few years ago, a prospective doctoral researcher came up with a proposal to work on the suicide notes written by farmers for whom life had become impossible due to drought and debts. Though the case in question was not one of *creativity* [in any academic sense] *under duress*, I, who was also teaching a course entitled *The Holocaust: Paradigms of Thought* at that time, was led to use this as a point of departure for interdisciplinary theoretical research, bringing together insights from psychology, philosophy, history, and literary and creativity studies, to explore the relation between extreme experience and heightened creativity. *Prima facie*, instances of such a possible correlation are many. Hungarian author Imre Kertész and Polish-American theoretical chemist Roald Hoffmann, Nobel Prize winners in Literature and Chemistry, respectively, were Holocaust survivors. Acknowledging Kertész's contribution through writing 'from the edges,' the Nobel Committee lauded his "writing that upholds the fragile experience of the individual against the barbaric arbitrariness of history."¹ Hoffmann was awarded the Nobel Prize in 1981 along with Kenichi Fukui, "for their theories, developed independently, concerning the course of chemical reactions."² Hoffmann, also known for his artistic interests, published poetry and plays and explored convergences between art and science, especially with a series entitled *Entertaining Science*, which he hosted at New York Cornelia Street Café. Fukui, who was engaged in the Army Fuel Laboratory of Japan during World War II, believed in the possibility of scientific breakthroughs through

¹ <https://www.nobelprize.org/prizes/literature/2002/press-release>.

² <https://www.nobelprize.org/prizes/chemistry/1981/press-release>.

“unexpected fusion of remotely related fields.” Fyodor Dostoevsky escaping the gallows at the last moment due to commutation of death sentence, not to mention his Siberian exile and imprisonment in shackles, and then going on to become the author of *Crime and Punishment*, *The Brothers Karamazov*, and *Notes from Underground*, is another popular case. Composer Igor Fyodorovich Stravinsky went to the extent of stating that one could be creative only under “huge constraints” (qtd. by Marcus du Sautoy 2015). Though its features can be discerned in a seminal form from late nineteenth century, literary modernism, with its crisis-centered world view, is widely believed to have been triggered by the catastrophes of World War I (We shall briefly explore the work of two authors, one each from the periods of the two world wars). The Great War also prompted Sigmund Freud to go “beyond the pleasure principle” in his theoretical approach to explaining human behaviour, adding a *Todestriebe* (death drive) to erotic behavioural determinations. The ensemble of cataclysmic events which consisted of the emergence of totalitarian regimes in Europe in the second quarter of the twentieth century, World War II, and the Holocaust was paradigmatic in many (uncanny) respects. It altered entrenched notions surrounding human motives, social psychology, rationality, morality, justice, suffering and trauma, historiography, and even reality and representation/representability of extreme experience.

As I have argued in my earlier work on the philosophy and psychology of ‘the other’ in relation to traumatic historical (and personal) episodes, extreme experiences are both a test case for ideas and a pretext for their emergence. Experiences such as that of war, of torture, of terminal illness, of other forms of encounter with death, of prolonged imprisonment, and of chronic isolation, to name a few, mostly from Judith Herman’s *Trauma and Recovery*, are at once overwhelming and delicate – so overwhelming as to trigger shifts in paradigms of understanding, and so delicate as to render fastidious *épistèmes* irrelevant. (George 2010, 109)

The catalogue of experiences could be extended to cover genocide, natural disasters, and domestic violence as well. This paper explores the possibility of subtle connections between unbearable experience on the one hand, and paradigm shifts in thought, experimental art, and path-breaking discoveries, on the other. A famous example of specific cases and an attempted generalization from literary criticism is Edmund Wilson’s *The Wound and the Bow*, which discusses the delicate relation between art and suffering in a quest for the sources of seven writers’ artistry and craftsmanship. Wilson’s studies surrounding Sophocles, Jacques (Giacomo) Casanova, Charles Dickens, Rudyard Kipling, Edith Wharton, Ernest Hemingway, and James Joyce were telling case studies of a possible correlation, albeit in different ways.

2. Extreme experience and heightened creativity: a possible correlation

Indeed creative process is an extremely elusive and complex one, often unamenable to empirical verification and fastidious methodological requirements. By and large, it is a delicate matter of sensitive understanding and informed conjecture. This recognition has a bearing on any methodology whatsoever of such an exploration. Though common, extrapolating the results of contemporary cognitive studies, mostly based on surveys and/or experiments, on to historical instances seems inadequate for two reasons. The first is the singularity of the past case: the combination of factors in each specific case is unique. The second is the presence of long-temporal factors, which cannot often be traced with certainty and/or in totality, involved in creative acts and processes, especially in cases such as those we explore. This also accounts for favouring a multiplicity of hypotheses here. Obviously, the attempt here is not to arrive at ‘laws’ on the said correlation (nor is this an impetus for romanticizing trauma!) but to arrive at probable explanations yielded by available historical, textual, and biographical information, when combined with psychological principles and philosophical insights on the human mind’s propensities to respond creatively to socio-historical situations as also to synthesize and transform world forces, and articulate the cumulative probabilities they lead to.

2.1. Hypothesis 1: sublimation

I began by trying an existing explanation on the correlation: the theory of *sublimation* – in this context, channelization of anger and resentment into productive endeavours. According to Freud, sublimation is a mature defence mechanism which enables socially unacceptable impulses or drives (*Triebe*) to be transformed into socially acceptable actions or behaviour, with the possibility of a long-term conversion of the initial impulse. Though Freud’s theory dealt with sexual sublimation and he is misunderstood as a pan-sexualist, especially on account of his early work, in *Civilization and Its Discontents*, he viewed it as “an especially conspicuous feature of cultural development,” making “it possible for higher psychological activities, scientific, artistic or ideological, to play such an ‘important’ part in civilized life” (1961, 79-80). Sublimation was the only one among the several defence mechanisms (others include repression, projection, displacement, and reaction formation) that Freud would consider

psychologically ‘healthy.’ Carl Gustav Jung (1974), who believed in the non-etiological aspects and immense potential of the unconscious, articulated sublimation in an anti-Freudian sense: “sublimation is part of the royal art where the true gold is made” (171). Empirical studies by Emily Kim, Veronika Zeppenfeld, and Dov Cohen (2013), published in the *Journal of Personality and Social Psychology*, claimed to have provided “possibly the first experimental evidence for sublimation and a cultural psychological approach to defense [sic] mechanisms” (639).

If we may extend this older theory of the correlation, going against the grain, going against conventions of one’s discipline/art could be seen as a sublimated reaction to social conventions and socio-historical circumstances. The avant-garde art of James Joyce, who extended the frontiers of fiction with his highly experimental writings, particularly the encyclopaedic *Ulysses* and polyglottal *Finnegans Wake*, could be theorized as a complex imaginative output of several elements: his degenerate home, marked by poverty and domestic violence at the hands of his drunken but life-loving father, his position as an oppressed colonial subject, the strategies of the subaltern, and his revolt against repressive Catholicism and violent, parochial Irish nationalism. Stephen Dedalus, Joyce’s autobiographical protagonist, tells the peasant student Michael Davin (modelled after George Clancy, the mayor of Limerick and Joyce’s friend, who, in March 1921, was dragged out of bed by the Black and Tans and shot in the presence of his wife): “When the soul of a man is born in this country there are nets flung at it to hold it back from flight. You talk to me of nationality, language, religion. I shall try to fly by those nets” (Joyce 2001). Having revolted against the institutions he found debilitating, Joyce was drawn to the Zürich and Paris avant-garde, but maintained his artistic (and idiosyncratic) individuality.

2.2. Hypothesis 2: extreme experience as raw material

A *second* explanation is that it is precisely the kind of preceding experience that the consequent achievement requires for its *raw material*. Viktor Frankl’s psychotherapeutic method *Logotherapy*, based on the *will to meaning*, even in the most harrowing circumstances, as the source of survival, needed for its emergence the experience of the concentration camp. Frankl, an Austrian neurologist and psychiatrist, was a Holocaust survivor who overcame the experience of Theresienstadt, Auschwitz, Kaufering, and Türkheim. In *Man’s Search for Meaning*, he argued, based on his own experience as an inmate, which he objectively analyzed as a psychiatrist, that a “striving to find meaning in one’s life” enables people to overcome painful, dehumanized, and even absurd conditions. Friedrich Nietzsche had argued that the “will to power” was the fundamental human impulse; for early Freud, it was pleasure. According to Frankl, the fundamental impulse is the search for meaning; human beings are meaning-seeking creatures. Even if one were to die, the ‘meaning-ful’ thought that one could save someone else or be an inspiring memory for survivors could sustain an individual. Frankl’s experience in the camp shaped both his therapeutic approach and life’s outlook, and, apart from existential psychology, with which he is associated, like Irvin Yalom and Rollo May, even influenced humanistic psychology. Drawing a similar connection between preceding experience and future praxis, Jung (1951) wrote a few days before his death: “Only the wounded physician can hope to heal” (116).

Frankl’s is a case of life-conductive self-theorization of one’s circumstances. It also illustrates the need of *narratives* when one is faced with excruciating circumstances. Clinical psychologist Patrick J. Bracken (2002) compares a person’s world to “a chequered board upon which a game of chess is played, a taken-for-granted frame in which pieces have roles and relationships” (1). The effect of the traumatic experience is that “all the elements of our lives are still present but the background sense of coherence retreats ... it appears that the chequered board has been removed. The pieces remain in place but their connection to one another becomes arbitrary” (1). It is “the meaningfulness of a person’s world” which traumatic experience “destroys” (9). Traumatic experience means termination of a personal narrative. The possibilities of re-narrativization – possibilities of deducing and creating alternative meanings/implications from the same event – have furnished victims of extreme experiences with opportunities to come out of their traumatic labyrinth. One cannot wish away the past; the past has to be incorporated in a meaning-giving (narrative) framework. We live by narratives. We can go to bed contented if we can ‘emplot’ the myriadness of the day into a meaningful and satisfying narrative. In negotiating the world, as social psychologists Susan T. Fiske and Shelley E. Taylor (2013) put it, the human mind is a “cognitive miser.” The mind looks for the simplest way to understand and deal with people and events. Being parsimonious in the expenditure of energy, it endeavours to negotiate the social world with the least cognitive effort. Narrativization, hence, has to be both effective and economical.

2.3. Hypothesis 3: overwhelming experience and the breaking of external forms

Further integrated psycho-philosophico-literary investigations into the cognitive processes that underlay the work of several twentieth-century avant-garde thinkers and writers who wrote amidst menacing macro-historical developments, offered *two supplementary explanations*. The inability of available *external forms*, be it limitations of language, existing models of thought or forms of art, or modalities of interpersonal relationships, to capture the overwhelming intensity, precise nature, and the

true extent of extreme experience compels the experiencing subjects to break these forms/paradigms, and develop radical alternatives. What triggers this development is discernible in situations of grief. Someone who is close to us passes away. We go home for the last rites. When we return to our place of work or study, a colleague or friend asks: "What happened?" Ordinary language is inadequate to convey the experience and emotion. Often the interpersonal relationships are also inadequate to absorb the shock. Trauma, by definition, is an experience beyond ordinary cognitive threshold.

If we compare the relationship, implied or otherwise, between reality and representation/language posited by realism, modernism, and postmodernism, we can see that for the first, reality is *out there* and is knowable and representable; for modernism, the reality is out there still, but has changed so drastically that traditional modes of representation are inadequate to the task, and hence the need to experiment; for postmodernism, reality is constructed in language. Avant-garde modernism emerged as a response to the epistemological inadequacy of the static, stable, mainstream Victorian common sense with regard to apprehension and representation of reality. It is not mere experimentation or innovation but a questioning of the very institution of art and entrenched assumptions thereof – a case of "emergent creativity," which involves bringing forth a principle or idea that is entirely new, has far-reaching effects on how we perceive reality, and transforms the very basis or received paradigms of the field in which the idea/principle appears. Joyce's fictional emphasis on the mundane and the commonplace at the expense of traditional narrative expectations as a mark of his shockingly jarring aesthetic is quite well known. He makes Leopold Bloom, the protagonist of his high-modernist magnum opus *Ulysses*, defecate in full view of his readers. One may account for the presence of such elements arguing that by incorporating inconspicuous occurrences, the author is raising a meta-literary question: 'What will count as literature?' The Joycean trivia is the transgressive avant-garde response to the arbitrariness of defining and delimiting art through bizarre violation of 'literary' expectations. After defecation, Bloom wipes himself with a copy of *Titbits*, where the prize story of "Matcham's Masterstroke" by Philip Beaufoy has appeared. Material that is conventionally unacceptable as art and frowned upon is self-reflexively brought in contact with the printed word.

Avant-garde movements of the twentieth century covering several arts (painting, music, sculpture, literature) mark an unprecedented epoch in art history. Singularity of the avant-garde, that is, vis-à-vis earlier epochs of experimentation, lies in its meta-engagement with the institution of art. The Dadaists, for example, sought to destroy canons of taste and logic, and show their contempt for bourgeois society. Since then, philosophers and artists have been asking 'What will qualify as art?'. Using his flippant anti-art (e.g., L.H.O.O.Q), Marcel Duchamp burlesqued the institution of art. With his interrogative meta-art, especially "Readymades," he showed that any found object could be rechristened as art by repositioning and signing – an idea which inspired George Dickie's postulate of an Artworld. Both Duchamp and Joyce lay bare the tools and devices of art (lines, colours, frames, words, techniques, conventions, and perspectives) in acts of what the former called "formal decomposition."

2.4. Hypothesis 4: salvaging the delicate

Though theoretically productive, the above hypothesis might not cover all cases. Nor does any of the preceding ones. When experience is overwhelming the human psyche also salvages the most delicate and vulnerable aspects of reality which it considers valuable. Let me illustrate with an example from World War II. Having lived under excruciating historical conditions,³ Günter Grass, in his fiction, salvages the 'little experiential truths' that could easily be crushed under the juggernaut of a hyper-sturdy Nazi state and a catastrophic war, or brushed aside by historic transformations which threatened to subsume life-trajectories of ordinary people (*kleine Leute*, in the terminology of *Alltagsgeschichte*, history of everyday life). His choice of child-narrators, his unapologetic emphasis on trivia, and his use of magic realism (particularly given the scepticism surrounding the efficacy of fiction and fantasy to 'do justice' to historical experience) indicate an attempt to capture and resuscitate singular, elusive human realities in the face of menacingly enveloping macro-historical developments. The psychological basis for the above claim is that when conditions of existence become unbearably harrowing, human consciousness develops a compensatory tendency to utilize even the smallest possibilities.

In *The Tin Drum*, Grass makes Oskar Matzerath, a perpetual child that refuses to grow up, the narrator of German history. This is significant in that children are the least-accounted historical subjects. Grass filters history through little Oskar's eyes, which enables him to dwell upon delicate realities and enunciate them in even more delicate ways. Oskar narrates the unfolding grand history in terms of how it impinges on his apparently insignificant preoccupations, the tin drum being the most potent symbol in this regard. What is most significant here is the inversion of priorities: repair of drums, playing of cards, the fizz-powder, Jan Bronski's stamp collection, the eels wriggling in salt, and observation of ants are greater concerns than the fate of Poland. Oscar's screaming and drumbeating are ways of drawing

³ In a 1978 interview to the French journalist Nicole Casanova, Grass revealed that his mother had been raped by Red Army soldiers when they conquered Danzig during World War II. Grass also belatedly revealed in 2006 that he was drafted into the Waffen SS. A repeated phrase in his Danzig trilogy, of which *The Tin Drum* is part, is "take it off one's chest."

attention of the greater world to his own needs. Little people (literally little!) have a higher stake in the delicate because it is their realities that are vulnerable to being brushed aside or trampled under.

Joyce wrote *Ulysses* through the Great War. If one historicizes the everyday, commonplace content of *Ulysses* – dining and defecating, teaching and learning, work and leisure, shopping, sleep, sex, and social camaraderie – one may see that it contrasts with a grand history that consisted of World War I, English colonial domination in Ireland, and the Irish struggle for independence at its peak, followed by a civil war. When cataclysmic events were happening, Joyce was preoccupied with either a narrative situation of extremely ordinary character, most often an exemplary act, or a send-up of what is commonly considered grand. While too much had been happening in the world, very little ‘happens’ in Joyce’s fictional world. But the little that ‘happens’ is of great value.⁴

3. The inward turn

The attempt to salvage delicate realities of life sometimes takes the form of a turn to the interiority of human subjects. Virginia Woolf, a writer who successfully utilized the medium of fiction to represent inner reality intimately, responds imaginatively to the interiority of another person when she makes Bernard reflect in *The Waves*: “I can never read a book in a railway carriage without asking, ‘Is he a builder? Is she unhappy?’” (1992, 61). These words acquire new significance when seen in retrospect against the bombing of Bloomsbury and Woolf’s own psychiatric problems. Woolf (1968) says, “Examine for a moment an ordinary mind on an ordinary day.” The ordinary mind might be in terrible agony. It might have wanted to say something but could not. The world may not lend its ears to what it wants to say. There is no recognition of what happens inside a man’s (or a woman’s) head. Social life is oblivious to it. In *Mrs Dalloway*, Septimus Warren Smith, a World War I veteran suffering from deferred traumatic stress, succumbs to the tragedy of living in a world that does not recognize what happens inside a man’s head. Smith’s suicide affirms that the inner world is more important for him than the empirical world outside. Failure to deal with the extreme might result in collapse.

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⁴ For the historicity of the Joycean everyday, see George 2016.

GENES AND GENDER: WHY THEY NOT ALWAYS MATCH

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Abstract

Sexuality is considered an essential element of human nature, not only in its procreative aspect but also, and above all, as an affective manifestation of the establishment of relationships with another human being. In turn, the gender has been an important issue, particularly in the last thirty years since it has been linked mainly to the human rights. In the various declarations and plans approved at the different United Nations World Conferences, the evolution of this concept, and of others associated with it, has been raising questions with implications at the most diverse levels. These implications can be internal to each individual or in societal and cultural terms and in their organization, such as in the legal aspects, and, above all, in the way we think and experience the society in which we are inserted.

Sexuality, however, may also be considered as the inter-relation of gene and hormone systems that will determine the formation of genitalia, that will eventually imprint the neuronal systems where the affective manifestations take place. However, sometimes the genetic sexuality is not in conformity with the self-definition of gender. This discrepancy may be related with some neuronal systems related with the definition of self, in the construction of each own identity, and the relationship with other people.

If medicine has a saying in this matter, the psychoanalysis and psychoanalytic thinking have an essential role, which is paramount in promoting reflection on gender issues, whether in identity, or in the experience of sexuality as a whole. This reflection will allow the constitution of itself as a science that is not restricted to psychology, but that encompasses several areas of knowledge, allowing, through the free association method, to analyze and reflect on the essence of the human being.

In this presentation, these two issues will be addressed and confronted.

Keywords: *Gender, genes, psychoanalysis, neurobiology.*

1. Introduction

According to several authors, (Canella & Nowak, 1997; Moshman, 2014) development in human beings is a continuous process that begins with the act of conception. Two questions then arise: what happens and how it happens in human beings during their growth. It is defended and generally accepted that this process stems from various factors and internal influences, such as heredity and maturation; external influences, such as learning processes and environmental changes, as well as the interaction of both. This development is, generally and in most situations, regulated and proceeds through an invariable sequence which, despite being continuous, may not be gradual and smooth. We are aware of situations in which there were interferences in this process which resulted in permanent dysfunctions. What happens to sexual development is no different (Canella & Nowak, 1997; Moshman, 2014). Human sexuality experiences several changes during the life span, from birth to death, with varying intensity that can be considered unique in the various biological functions of the human being. In addition, in the society, we know, male and female sexual life cycles also differ in several significant respects.

2. Sexual dimorphism in the human beings

The truth is that most sex differences in human behavior or physiology are small or negligible, since, in terms of percentages, they are not that expressive (Hines, 2020; Joel, 2021). At the moment, science considers that human sexual dimorphism results from genetic (XX or XY chromosomes) and hormonal (release of androgens that bind to the respective receptors) conditions (Arnold, 2020; Grabowska, 2017; Pallayova, Brandeburova, & Tokarova, 2019).

The brain's sexual dimorphism is also dependent on behavioral and educational factors, as the way children are brought up and their preferences and playing skills; and social factors, as the way children integrate into society and how society defines their social roles (Hines, 2020; Khorashad et al., 2020). Both factors of great relevance for the psychological and psychoanalytic component. These two psychological characteristics are increasingly relevant and should be considered as modulators of neuronal morphology, since it has already been demonstrated that experience changes the morphology of the brain.

Likewise, biological characteristics are also considered as complementary and independent factors. Two initial moments affect sexual differentiation: on one hand, the expression of the *Xist* gene by the X chromosome that annuls the duplication of the expression of genes contained in the X chromosome in XX beings, eliminating the sexual differentiation of this expression; on the other hand the expression of the *Sry* gene by the Y chromosome that induces the formation of the male gonad, leading to the expression of testosterone and the Müllerian inhibitory hormone, inhibiting the formation of the female gonad (Arnold, 2020; Grabowska, 2017; Hines, 2020; Pallyova et al., 2019). However, mouse studies show that there are other phenotypic variations induced by the X and Y chromosomes; that is, the chromosomal expression of the gonad was separated by the somatic expression (by placing the sex genes in autosomes). These results showed the existence of different behaviors, even in animals with the same gonad, suggesting that there are sexually differentiated responses that do not depend on hormonal changes (Arnold, 2020). Genes expressed by the Y are mostly implicated in the formation of male-typical characteristics, which are regulated by testosterone sensitivity (Arnold, 2020; Hines, 2020; Raznahan et al., 2016). There are, however, external factors that may affect this regulation, namely endocrine disruptors or modulators (Azevedo, Martins, Lemos, & Rodrigues, 2014; Hines, 2020). However, there is sexual dimorphism prior to hormone production, often caused by epigenetic factors, which can reduce testosterone sensitivity in XY people and increase it in XX people (Marrocco, Einhorn, & McEwen, 2020; Rice, Friberg, & Gavrillets, 2016).

3. Homosexuality

These sexually dimorphic characteristics are mainly related to sexual behaviors and show certain reciprocity. So how is it possible for “sexual” relationships to exist with someone who belongs to the same biological sex?

Science has realized that human sexuality is very different from that of most of the lower animals in that it is not dichotomous. This difference is due more to psychosocial factors than to hormonal or brain organization (perinatal) factors.

The brain of homosexual people does not seem to differ from that of heterosexual people of the same gender. When the difference exists, it seems to be due to hormonal variations in the perinatal period (variations in testosterone levels), with, however, a great influence on the way children grows and interact with the environment and with others, which also ends up influencing their brain morphology (Bogaert & Skorska, 2020; Hines, 2020; Roselli, 2018).

What seems to be widely accepted is the fact that there are more differences between the brains of heterosexual men and women than between homosexual men and women. This is due to the fact that men's brains are very different between homosexuals and heterosexuals and explains the fact that non-heterosexual men are mostly homosexuals. Likewise, the biology of the brains of homo- or heterosexual women is not very different, consistent with the fact that most non-heterosexual women are bisexual, and their sexuality is more fluid (Bogaert & Skorska, 2020; Kagerer et al., 2011; Manzouri & Savic, 2018; Safron, Sylva, Klimaj, Rosenthal, & Bailey, 2020).

Anyway, and in general, the differences found in the brains of homosexual or heterosexual people are not generalized and the studies about the effects of hormonal variations during development did not prove to be correlated with differences in sexual orientation (Bogaert & Skorska, 2020; Dickenson, Diamond, King, Jenson, & Anderson, 2020; Kagerer et al., 2011; Khorashad et al., 2020). Therefore, there are other approaches in science that can help us understand these differences.

4. Gender dysphoria

However, if sexuality is something intrinsic and innate to human beings, and if it is, in fact, binary, how can gender dysphoria be explained? People with gender dysphoria, by definition, do not accept their gender condition. The vision they have of their bodies is not the one represented in their mental scheme. This situation usually brings a lot of anguish and unhappiness, because people cannot make their body representation a positive value (Chew et al., 2020; Jahanshad & Thompson, 2017; Schudson & Morgenroth, 2022). Dysphoria can reveal itself very early (“early onset”), appearing during

adolescence or before puberty, or later in adulthood (Bogaert & Skorska, 2020; Hines, 2020; Khorashad et al., 2020; Roselli, 2018).

Gender identities tend to be in line with the person's biological sex; however, they are not fixed structures. According to Stoller (2020) gender identity is “a mixture of masculinity and femininity in an individual, meaning that both masculinity and femininity are found in all people, but in different forms and degrees. This is not the same as the quality of being male or female, which has connotations with biology; gender identity entails psychologically motivated behavior” (Stoller, 2020). Still according to Stoller, gender identity begins with the perception of belonging to one sex and not another, being initially given through socialization, first by parents and later by friends, school, among others.

This begins before the age of 2 and continues into adulthood. It will result from five factors: a) the genetic biological factor (XX and XY chromosomes, referenced above); b) the recognition of the sex of the baby from the observation of the external genitalia; c) the influence of this morphological characteristic on the part played by the parents and the interpretation of these perceptions by the baby; d) the bio-psychic phenomena related to the above and e) the development of the body ego, resulting from the qualities and quantities of sensations, mainly in the genitals, which define the body and the psychic dimensions of the person's sex. Silva (1999) says, however, that Stoller is defining sexual rather than gender identity. Louro (1997) says: “It is observed that individuals can exercise their sexuality in different ways, they can “live their desires and bodily pleasures” in different ways. Their sexual identities are thus constituted through the ways in which they live their sexuality, with partners of the same sex, of the opposite sex, of both sexes or without partners [sexual orientations]. On the other hand, they also identify themselves, socially and historically, as male and female and thus build their gender identities. It becomes evident that these identities (sexual and gender) are deeply interrelated; language and practices very often confuse them, making it difficult to think them differently [...] What is important to consider here is that – both in the dynamics of gender and in the dynamics of sexuality – identities are always constructed” (Louro, 1997), p. 26-27).

But what is actually known about what happens in the brains of gender dysphoric and transgender people?

Science has not yet been able to show, unequivocally, differences in neuronal structure that justify gender dysphoria. The small inconsistencies detected are due to many variables that may not be taken into account in the studies and to small sample numbers (namely, if people are effectively dysphoric and/or if they are already undergoing hormone conversion therapy). Studies have shown that the morphology of the cortex is more related to genetic sex than to the dysphoric sex (the one that is felt). However, it has been shown that the neuroanatomical signature of transgenderism is related to neuronal areas that process information from the “being” and consciousness of your body (Burke, Manzouri, & Savic, 2017; Hines, 2020; Roselli, 2018).

While homosexuality is about sexual attraction, in gender identity the question is in the sex and gender representation with which the person identifies itself. More recent data seem to point to a disconnection between the frontal, occipital and parietal cortices, where the neuronal circuits that interconnect and process self-perception and body-perception are located (Buchanan et al., 2013; Burke et al., 2017; van Heesewijk et al., 2022).

More recent studies have shown that the effect of activating sex chromosome genes is independent and has almost as much weight in sexual differentiation as hormones. This knowledge can help shed light on some of the sociocultural and clinical considerations of the transgender person.

After all, the brain of men and women is not that different, and most of the differences it presents are the result of compensatory measures of the differences introduced by hormones during the physical and psychosocial development of the individual (Grabowska, 2017).

5. Conclusion

We can thus appreciate at least two conclusions. On the one hand, the experience, the education, and the psychology of each one are external factors that modulate neuronal biology from day one. Therefore, it is understood that no two people are alike, even homozygous twins, since they do not experience the same things, nor in the same way. On the other hand, biology, genes from parents passed on to children and the different activation of genes that predispose the individual to certain physiological, hormonal and behavioral responses, also affect living, education, and psychology.

Although the main lines of thought continue to formulate that the differences between men and women are dependent only on hormonal variations (testosterone levels) circulating during fetal development, many studies already point to a very relevant role in the activation of genes, either to increase the predisposition of neuronal (and other) systems to different concentrations of testosterone, or to display sexually different characteristics that can be inherited by offspring of the opposite sex.

Therefore, the hypothesis that each one's experience can also promote neuronal differences that ultimately result from different orientations cannot be ruled out. Only then can we understand why individuals with the same hormonal inaccuracies' present different psychosocial responses (both in terms of sexual orientation and gender identity).

These inconsistencies in results and analyzes are mainly related to the fact that humans are the subject of the study. This is because: 1) people are very different, in order to have greater statistical power we need to study many people; 2) people's psychosocial profile is different and this greatly influences the results; 3) information about people's sexual orientation is dependent on the self-report, which may not correspond to the truth; 4) most reliable study and analysis techniques are invasive and unethical.

This type of incongruity also appears in transgender people. Some transgender people do not experience dysphoria; the definition of sexual orientation for transgender people is more complex; the hormonal treatments they undergo for gender transition increase (or introduce) the gender difference that might or might not exist.

There is still a long way to go in understanding the neurobiology of sexual orientation and gender identity. We think that as long as the biological sciences and psychology keep their distance, more time will take to be traversed.

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FROM IMPASSE TO DIALOGUE IN PSYCHOTHERAPY: TRAINEE PERSPECTIVES ON USING PSYCHOANALYTIC THINKING IN TERTIARY PSYCHIATRIC SETTINGS

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Abstract

Psychotherapy in tertiary psychiatric settings necessitates structured, symptom-focussed approaches which can be applied by trainees and staff. However, given the complex presentations, impasses in psychotherapy are common, and may result in unplanned termination if unaddressed. Containment in supervision, and using elements of psychoanalytic thinking may be especially helpful in such situations; here we discuss trainee perspectives from a tertiary psychiatric institute in India.

Patient presentations at the institute include chronic and severe psychiatric illnesses including dissociation/conversion, personality disorders, substance abuse and self-harm, and psychotic conditions; commonly low-education and low-income; a complex history of previous psychiatric/psychotherapeutic consultations; from across the country and neighbouring countries. Clinical psychology trainees at the institute undertake a two-year full-time advanced training, with a focus on diagnosis, psychopathology, assessment, and psychotherapy. The psychotherapy training emphasises structured, manualised treatments (e.g., cognitive-behavioural, dialectical behaviour therapy, mindfulness), which are suited in these settings for providing a structure and framework, building trainee confidence, and quick symptom relief.

However, trainees frequently encounter impasses in psychotherapy, such as patients displaying excessive verbal compliance without matching insight or action, too much/too little verbal content in sessions, frequent crises, boundary violations, hostility/antagonism, and splitting of the multidisciplinary team. When “the techniques don’t work”, trainee therapists often struggle with feelings of ‘stuckness’ and self-doubt, resulting in avoidance and potentially, unplanned termination.

In supervision, psychoanalytic thinking offers several insights. Firstly, for trainees burdened by outcome expectations, there is immense relief in noticing and verbalising a difficult therapist-patient dynamic. Secondly, containment in supervision allows for a greater tolerance of the patient’s affect in the session. Third, shifting the focus to listening and ‘not-knowing’ allows the patient to explore previously forbidden experiences. Trainees highlight the experience of “using no technique at all...only the basics of therapy”, using themselves and the relationship as vehicle of change. These elements of psychoanalytic thought appear to stabilize trainee therapists when the ground shifts, and manual-based techniques fall short. More importantly, when used within a multidisciplinary team, psychoanalytic thinking may make room for an understanding of the patient’s internal psychic reality as it plays out in external events, rather than acting on it.

Trainee psychotherapists may lack skills to navigate roadblocks, particularly with difficult-to-treat patients, in tertiary settings. This is a critical gap to be bridged in training and supervision, and indeed, training of supervisors. It is important that psychoanalytic thinking be accessible and usable alongside other psychotherapeutic approaches in tertiary settings.

Keywords: *Impasse, tertiary settings, psychoanalytic, supervision, containment.*

1. Introduction

Tertiary psychiatric settings often manage severe and long-standing psychiatric conditions with a complex history of previous consultations. Psychotherapy in such settings often comprises structured, short-term approaches. Such approaches are suited for quick symptom relief, and are suitable for use by trainee psychotherapists in appropriate stages of the training.

However, given the breakdown in symbolic functioning which is the hallmark of chronic and severe mental illnesses (Evans, 2016; Lucas, 2013), psychotherapy with such presentations may often run into difficulties, which challenge the structure and framework. Such impasses in psychotherapy may result in unplanned terminations, adding to the general sense of helplessness surrounding such patients.

Supervision focused on containment and elements of psychoanalytic thinking may be uniquely helpful in such situations. Psychoanalytic thinking offers a mode of thinking that takes into account the unconscious forces that influence various aspects of psychotherapy - relating to the symptom presentation, the therapist, the therapeutic relationship, and the enactments within the treating team. The psychoanalytic model can especially be helpful in restoring the emotional meaning to concrete acts or enactments (Evans, 2016).

Here we discuss perspectives from psychotherapy training and supervision using psychoanalytic thinking in a multidisciplinary team, at a tertiary psychiatric institute in India.

2. Method

2.1. Setting

The study was set in an adult psychiatry unit at a 1000-bedded tertiary care facility dedicated to mental health and neurosciences, serving the whole of India and neighbouring countries. Adult psychiatry units at the institute offer inpatient and outpatient services through a multidisciplinary team comprising psychiatrists, clinical psychologists, psychiatric social workers and psychiatric nurses, with a three-tier system of clinical care and training.

Psychiatric presentations at the institute span severe and chronic illnesses including dissociation/conversion, personality disorders, substance abuse, self-harm, and psychotic conditions. Patients are commonly low-education and low-income, and often have multiple previous psychiatric/psychotherapeutic consultations with little success.

2.2. Participants

The participants in this study were postgraduates in clinical psychology (having previously completed a Bachelor's and Master's degree in Psychology). The postgraduate course in clinical psychology offered by the institute is a two-year full-time advanced training comprising theory lectures and supervised clinical work, with a focus on knowledge and clinical competencies in psychiatric diagnosis, psychopathology, assessments, and psychotherapy. Across the two years, trainees go through rotations in adult psychiatry, family therapy, child and adolescent mental health, neuropsychology, cognitive and behaviour therapies, psychiatric and neurological rehabilitation, addiction medicine, and community mental health.

The psychotherapy training emphasises structured, manualised treatments (e.g., cognitive and behavioural approaches), which are suited in these settings for providing a structure and framework, building trainee confidence, and quick symptom relief. All trainees are required to submit records of psychotherapy work carried out, including a case summary, case formulation based on a theoretical model, assessments, and details of psychotherapy goals, techniques and process, followed by their own reflections.

The eight participants included in this study were supervised by a single supervisor during their clinical rotation, at different points in their 24-month course, and worked in the multidisciplinary team led by a senior consultant psychiatrist. Supervision for trainees was offered individually, and integrated didactic, therapeutic and parallel process models (Thorbeck, 1992). Following their three-month clinical rotation, the trainees moved on to other postings, but most of these participants continued providing therapy to these patients. The supervision space was left open, and was accessed flexibly by each of them throughout their course. The supervisor was a consultant clinical psychologist, attending weekly group psychoanalytic clinical and reading seminars, led by an experienced and qualified psychoanalytic psychotherapist.

2.3. Data collection and analysis

The data was collected between Dec 2019-Dec 2022, and comprised trainees' psychotherapy case record reflections, and responses to an additional set of semi-structured questions described below.

The eight trainees were at various stages of the course when they were first allotted the cases with the current supervisor (five were in the first six months of the course, and three in the final six months), but all submitted their case records at the same stage (in the 21st month of the course). While the minimum mandated sessions for the psychotherapy case records is eight sessions, the participant submissions used here had 15-70 sessions, seen across 3-20 months, in either inpatient, outpatient or both settings.

Given some similar themes noticed in the therapist reflections, and in supervisory discussions, all eight trainees were invited, (after course completion, with no implications on their examination scores) to respond to a set of questions sent out by the supervisor to facilitate deeper reflections on the process. This included questions regarding their stage of training, previous experience of being a therapist, difficulties encountered in the current case, experiences in supervision, reflections on learning, and shifts in approach if any, vis a vis their own other cases. Two of the trainees returned the completed reflections, in addition to their psychotherapy case record reflections.

The data was qualitatively analysed through an iterative reading of trainee case records, supervision notes, and responses to the set of reflective questions, noting common themes.

3. Results and discussion

The study aimed to understand trainee experiences with psychotherapy in tertiary psychiatric settings, and the usefulness of psychoanalytic thinking in supervision, through an analysis of trainee reflections on their psychotherapy case records and additional reflections on the process of supervision with a single supervisor.

The common themes emerging from analysis included trainees' experience of difficult moments in therapy. These included a sense of "*therapy not going according to plan*" or "*structured techniques not working*". This often occurred with patients being either openly hostile and antagonistic in session, attacking the trainees' most vulnerable area - their lack of experience; or, in contrast, displaying excessive verbal compliance without matching emotional engagement, insight or action. Trainees also struggled to manage too much/too little verbal content in sessions, and frequent crises. Enactments were common and often shook therapists off balance – for instance, one patient was convinced he had a diagnosis of attention deficit hyperactivity disorder but refused to engage in diagnostic exercises or a dialogue around it; belittled all the therapist's suggested techniques, and surprised the therapist by turning up unplanned with an overbearing mother in tow, as if 'presenting' her for the therapist to 'experience'. Another patient with depression and polysubstance abuse, dressed only in dark muted colours with the curtains always drawn, would sometimes face the wall and refuse to speak for the entire session. Several trainees experienced patients who challenged the framework of therapy by frequently missing scheduled sessions, turning up just before/after the session had ended, furious that the therapist had not "reminded" them, and demanding additional sessions. Some patients reached out to therapists several times between sessions, requesting to talk "just ten minutes" to manage a crisis, and resisted efforts at holding the therapy framework. One trainee had to deal with the patient calling in a crisis (despite having a crisis plan that included emergency contact), just before the trainee was about to go in to an exam. Trainees struggled to think, in sessions with patients who blindsided them with personal remarks or overtures and fused them to it concretely. One trainee was celebrating a minor gain that a patient with dissociative mutism was actually beginning to talk in sessions, and fielded a seemingly innocuous comment on the therapist's similarities in age and cultural-linguistic background (striking in India, where diversity is the rule rather than the exception). The patient then revealed that she had a 'secret plan' post-discharge, and refused to disclose further details unless the trainee promised unconditional confidentiality. Such moments were particularly striking because they often occurred over the long-term, in the presence of a strong therapeutic alliance, leaving trainees even more bewildered and frustrated. Trainees often grappled with feelings of 'stuckness' and self-doubt, feeling detached in sessions, or resentful and burdened by the patient's incessant demands on therapist attention. This was often accompanied by an urge to avoid sessions with such patients. As one trainee wrote, "*Without a framework in mind, nor an engaging relationship, the therapist felt unsure of this patient... did not wish to continue seeing him and/or was tempted to be mechanical with him*". Such feelings of the therapist, if unaddressed in supervision, potentially lead to unplanned and violent terminations, or frequent presentations to emergency or inpatient care, adding to the patient's already complex history of consultations and sense of futility (Evans, 2016). The themes also highlighted the usefulness of using psychoanalytic thinking to understand the dynamics within the session, discussed in detail below.

Trainees were unanimous in noting the emphasis on dialogue and the process of thinking together, (rather than directive/didactic supervision), which they were able to carry back into the therapy session in a parallel process (Thorbeck, 1992). Such dialogue facilitated a shift in the focus of therapy - from the outcome to the process, from the end goal, to the 'journey' of therapy. Trainees highlighted the power of "*using no technique at all*", "*only the basics of therapy*" using themselves and the relationship as vehicle

of change (Freud, 1993). One trainee wrote, *“My biggest take away from this case was choosing to build a therapeutic alliance over the use of explicit techniques. As a novice therapist, it was easy for me to stand behind techniques, blaming them for not working in improving the client...”*

Shifting the focus to listening and ‘not-knowing’ may allow the patient in therapy to explore previously forbidden experiences. Not-knowing, as described by Bion, refers to a therapist’s willingness to tolerate frustration and uncertainty (Green, 1973), and when cultivated in supervision, may allow for a greater tolerance of the patient’s affect in the session. As one trainee put it, *“My experiences of therapy were heard. I had a space, much like this patient, to express my opinions without being shot down for them”*. Containment in supervision also allowed therapists to stay with their own anxiety (Thorbeck, 1992), rather than, as one trainee put it, *“being in a hurry”*, trying frantically, with one technique after another, to move things along to the next level. According to one trainee, *“In other approaches, I’m the director of the sessions: I ask, I educate, I teach skills. Here, I take the back seat, see the world... as the person sees and experiences the world, no matter how it may seem to my principles”*. This may relate to recognising the distinction between the patient’s ‘need for understanding’ and the ‘need to be understood’ (Joseph, 1983). Another trainee therapist, daunted by a hostile and antagonistic patient who had terminated with over a dozen previous therapists wrote, *“I was more aware of my feelings this time... and used this... to try and put myself in the patient’s shoes, trying to see how it would feel...being invalidated all the time, feeling lonely and disliked”*. Therapists were also less avoidant of conflicts in session, *“...bringing more relationship conversations into the sessions... to increase tolerance of conflicting viewpoints, staying with the conflict.”* Acting as the third point in the therapist–patient–supervisor triangle, the supervisor provides the space to reflect about the impact of the clinical work and reduce the pull towards re-enactments. Importantly, perhaps, the psychoanalytic framework ‘makes room for madness’ (Evans, 2016), allowing the patient a safe space to reveal his/her unique difficulties, and the more infantile parts of the self, and for therapists to understand and tolerate these.

Evans (2016) discusses that effective work in mental health settings is dependent on professionals allowing themselves to be disturbed by the patients and their presentations while still maintaining a professional stance - this includes the therapist being willing and able to respond to the various forms in which these present during the course of treatment - denial, avoidance, deceptions, enactments within the teams - and the important role that supervision plays in helping the therapist find a safe space from which to take in the whole experience. Through this, psychoanalytic thinking may also shift the focus from the ‘outer reality’ (concrete behaviours and enactments) to the ‘inner reality’ (significance of behaviours). As one trainee therapist wrote *“I’m more aware of the meaning of events in and out of sessions. I’m able to “connect the dots” and reflect with myself and the patient on conflicts, patterns, and meanings”*.

In a busy multidisciplinary team, it was also not difficult for patients to recruit team members and staff to work against their appointed therapist. Trainees often had to deal with patients’ splitting of the multidisciplinary team into ‘good’ and ‘bad’ objects, and had to manage the resultant confusions, miscommunications and ruptures with teammates. Psychoanalytic thinking may be particularly helpful for clinicians to appreciate the ways in which the aspects of the clients’ internal world/self can be located in various external objects - therapists, nurses, psychiatrists and other members of the treating team (Evans, 2016).

The striking feature in supervision in all of the eight cases was the long-term nature of treatment, and the nature of dynamics, not often evident within short-term therapies. This, of course, highlights trainees’ commitment and persistence with the cases beyond their three-month clinical rotation, along with their reflective capacities and sensitivity to the dynamics evolving moment-to-moment in each session, and their authenticity in bringing these to work through in supervision. Complementing these necessary and noteworthy attributes of a good therapist, however, may have been the mode of thinking offered by psychoanalysis in supervision, which allowed these eight trainees to persist with their cases long beyond submission requirements, or what was typical of the setting. Foremost among these, for trainees burdened by outcome expectations, there is immense relief in noticing and verbalising a difficult therapist-patient dynamic in supervision, and in thinking together around the emotional symbols of concrete events. These elements of psychoanalytic thought used in supervision appear to stabilise trainee therapists when the ground shifts, and manual-based techniques fall short, regardless of the approach to therapy being used.

Trainee psychotherapists may lack skills to navigate impasses, particularly with difficult-to-treat patients, in tertiary settings. This gap needs to be bridged in training and supervision, and indeed, training of supervisors, to minimize poorer outcomes in treatment. Crucially, within a multidisciplinary team, psychoanalytic thinking may allow for an understanding of the patient’s internal psychic reality as it plays out in external events, without necessitating concrete action. This underscores the utility of psychoanalytic thinking, even alongside other psychotherapeutic approaches in tertiary settings.

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THE EXPERIENCE OF GRIEF IN A CHILD ORPHANED BY THE PANDEMIC OF COVID-19

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Abstract

In the context of Covid-19, talking about mourning and death acquires even greater repercussions, with the advent of the pandemic and the frightening number of deaths, especially in adults and the elderly. The urgency of thinking about the situation of orphanhood was revealed, since thousands of children and adolescents lost mothers, fathers, legal guardians and/or other relatives, and many of them started to live in a situation of great vulnerability, a situation that must be considered to be a matter of public health emergency. The sudden death of family members, as can occur due to Covid-19, due to its potentially traumatic nature, can generate numerous challenges for children. Based on this assumption, the objective of this study was to know the expression of mourning in its biopsychosocial statutes in a child orphaned by the Covid-19 pandemic through interviews and the Drawing Procedure Story with Theme and free drawing. It was a qualitative, exploratory research, characterized as a clinical case study, with a psychoanalytical approach. The study complied with all the ethical requirements established in the resolutions that regulate research involving human beings and with the approval of the Research Ethics Committee. A 09-year-old child, who went through a situation involving the death of her mother due to Covid-19, and an older sister who took care of her, participated in this study. Four meetings were held with the child, one for each collection procedure. For the analysis of the data resulting from the application of the projective technique, it was used in the procedure manual for Drawing Story with Theme. For the integration of data and construction of the clinical case, the psychoanalytic theory, especially Winnicott's contributions, supported the articulations. As a result, it is understood that the symptoms that a child may experience soon or long after the loss of who exercises the maternal function, can have repercussions in all fields of their development. Thus, the study brings findings about the biopsychosocial expression of the bereaved child, the experience of family mourning and finds secondary losses as a complicating factor. Thus, in the grieving process, it is necessary for the child to experience the feelings and be able to get in touch with the fantasies that result from the loss. From these data articulated to psychoanalytic theory, it was possible to think that the work of mourning can benefit from the child's ability to create a transitional space where there is the possibility of reconstructing reality through a creative and spontaneous impulse, even in conditions difficulties such as mourning the death of the mother. Finally, the need for an interdisciplinary look in the care of the bereaved child is highlighted.

Keywords: *Grief, child, death, pandemic, Winnicott.*

1. Introduction

Death is a complex process to be faced, which is often crossed by feelings of sadness and anguish. Talking about mourning and death, in the context of Covid-19, has a much greater impact, and the psychological effects were even more intense (Penariol & Flores, 2021). With the advent of the pandemic, the frightening number of deaths, especially in adults and the elderly, revealed the urgency of thinking about the situation of orphanhood, since thousands of children and adolescents lost mothers, fathers, legal guardians or other relatives, and began to live in very difficult situations and without support, whether financial or psychological, a scenario that must be understood as a public health issue (Rodrigues, 2022).

The sudden death of family members, as can occur due to Covid-19, in addition to being traumatizing, can generate numerous challenges for children and adolescents, such as: dealing with the moment of pain and grief, often without support to express their grief ; the impact of the death(s) on the

situation family finances; the increase in the incidence of street children and orphans; the increase in emotional disorders, for example depression and anxiety, in people who survived; the drop in school performance; among other consequences that can persist into adulthood (Hillis et al., 2021; Nakajima et al., 2022).

The consequences of the death of those who care for the child go beyond the moment of mourning, and can have serious repercussions on their development, especially for those most vulnerable, where the loss of a family member of reference can result in several consequences. privations, (Winnicott, 2019/1987).

Children bereaved by the loss of a father and mother may be more vulnerable to disorders even in childhood and adulthood, and early interventions can prevent some of the difficulties and dysfunctions suffered by bereaved children (Bowlby, 2002a). It is even more challenging when a parent's death is sudden (as we saw in the Covid-19 pandemic). A series of changes inherent to the disappearance of the person who died, the child also loses the family dynamics the way they were before from the point of view of places and positions in the relationship (Franco & Mazorra, 2007).

Regarding the loss of the main caregiver, it is important to explain that the first and most persistent affective bond is usually with the mother (who exercises the maternal role), a bond that not even death dissociates. The loss of parents and, consequently, the mourning resulting from this loss can provoke in the child a need to search for a transitional object and a potential space where the pain can be expressed (Winnicott, 1996, 1999, 2007).

For Winnicott (2020b) creativity is the basis of healthy living. In this sense, enabling the bereaved child to express creativity becomes a very important moment for the constitution of the subject and for the continuity of his development. Thus, it is possible to think that the work of mourning can happen through the ability to create even in difficult conditions, making the suffering child find a transitional space and feel again that life is worthwhile (Barone, 2004).

In this way, playfulness and creativity can be possible outlets for expression and communication with the bereaved child, such as playing, drawings and narratives such as tales, stories and fables (Affonso, 2009a; Paiva & Kovács, 2008). Playful and projective resources allow access to the child's fantasies and unconscious conflicts as they enable the expression of affections and thoughts, opening up so that one can know their psychic functioning and their experiences in the face of a situation of mourning and orphanhood as a result of the Covid-19 pandemic (de Mello & Baseggio, 2013; Gascon et al., 2012).

2. Objective

To know the expression of mourning in its biopsychosocial statutes in a child orphaned by the Covid-19 pandemic through interviews and the Story Drawing Procedure with Theme.

3. Method

In order to investigate the representation and expression of grief experienced by orphaned children due to the mother's death by Covid19, this research is characterized as qualitative, exploratory, cross-sectional and which was operationalized through a clinical case study supported by psychoanalytic theory.

In addition, it met all the ethical requirements established in the resolutions that regulate research involving human beings, obtaining approval opinion No. 5,781,809 from the Research Ethics Committee. A 9-year-old child participated in this study, who went through a situation involving the death of her mother due to Covid-19, and an older sister who took care of her.

A meeting was held with the guardian to carry out the semi-structured interview. With the child, 4 meetings were held, in which the Procedure of Drawings and Stories with Theme (DE with Theme) was carried out, which consists of asking the child to draw and tell stories about a certain proposed theme. After the phases of drawing and telling stories, the "survey" is carried out and the title is requested (Trinca, 2020).

Bearing in mind that drawings are a way for children to express their fantasies, desires and experiences, the use of these resources aims at instrumentalizing their communication possibilities. Story with Theme. For data integration and construction of the clinical case, psychoanalytic theory, especially winnicottian contributions, supported the articulations.

4. Discussion

The study under analysis refers to the case of a 9-year-old female child, which we will call Luna¹. Luna's mother died of Covid-19 in early 2022 after a 3-day hospitalization period. Luna resided with her mother and her 4 siblings. After her mother's death, she moved in with her older sister, 19-year-old Luana. Due to her mother's death, her other siblings moved to different cities.

In the first contact with Luana, responsible for the child, despite having shown herself willing to participate in the research, her speech demonstrated the use of the defense mechanism of denial from which she repeatedly emphasized that everything was fine, that she and her sister were well and happy. This demonstrated that, in addition to the experience of mourning the mother's death, these statements denounced a possible even greater fear of once again dealing with the possibility of a new loss, similar to that experienced by the distancing of her siblings.

The interview with the person in charge, in addition to data collection, was also intended to offer a place where that grief could be put into words, could function as a listening space, thinking about the holding of the holding, that is, to offer beware of the bereaved caregiver who needs to take care of a bereaved child. Thus, Luana was able to talk about the fear of losing her siblings, the fear of not being able to take care of Luna, how much she was suffering from the lack of her mother, her loneliness when experiencing all this without family and social support.

Luana, as she is also experiencing mourning for the loss of her mother, has difficulty offering holding and care for her sister, as she is also sad and shaken. Thus, as a way of working with the feelings of loss, the child tends to repeat the behaviors of the caregivers (Lima and Kovács, 2011), when Luana denies the repercussions of the events and feelings in the face of the loss, the child tends to deny it too, repressing the feelings of loss. feelings.

Those who take care of the child, after the loss of the mother, may have difficulty sharing their feelings. Luana, in her report, emphasizes this anguish in sharing her suffering with her sister, and her silence reflects on Luna's way of expressing her grief. As for Luna's questions regarding the loss, Luana reports that *"today she doesn't ask anymore, I thought it was good that she didn't ask anymore, because I don't even like to bring up this subject with her, because when I do I get sad. Imagine her!"*. The fantasy that one cannot talk about death made Luna inhibit her questions about death and loss. Thus, when adults remain silent, the understanding of death and the emotions associated with the loss of the child may be impaired (Winnicott, 1958/2012).

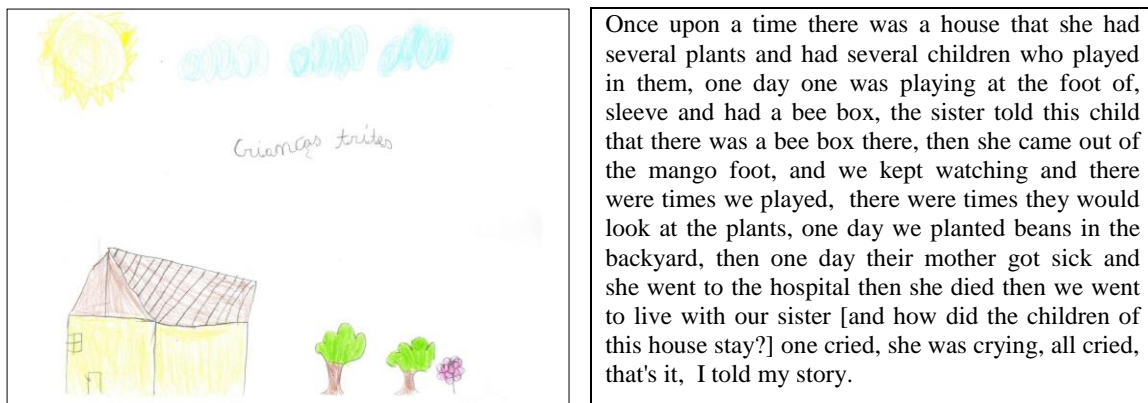
Faced with the non-answer to some questions about the loss, silencing becomes Luna's privileged way of communicating *"she stays in the room more"*, avoiding expressing her feelings and inhibiting herself in the face of grief. Communication arises a posteriori through the phobic symptoms of the fear that at any moment someone may die a sudden death (such as the loss of their mother by Covid-19), or that they may suddenly receive bad news, or even fear reported by Luana that the child began to be alone: *"she was afraid of sleeping alone and is afraid of the dark, if I go out she wants to go with me because she doesn't want to be alone"*. In addition, Luana describes bodily expressions such as *"agitation"*, which, according to the literature (Lima and Kovács, 2011), often reflect difficulty in the process of symbolization, and it is common in bereaved children for their feelings to be manifested through the body. Regressed behaviors, social and academic losses and the maintenance of a fantasy relationship with the dead person through the internalization of pain are also described by the literature as common behaviors in bereaved children.

The experience of loss is complicated not only by the family's inability to communicate their feelings, but also because in the death of a loved one, many other losses occur. Green (1988) stated that this situation is characterized as a grief *"wrapped"* in another grief, as a loss represents many other secondary losses that lead to a need for readaptation and changes. Luna, in addition to her mother's death, which in itself is already potentially traumatic, experienced the estrangement from her siblings, moving house, the (dis)configuration of family.

For children, who are still developing, this is an even more difficult adaptation, since a child who has lost a mother will possibly also lose, even if for a short period of time, the feeling of belonging to a family. As it was possible to perceive in the analysis of the case, in which the secondary losses made Luna experience the grieving process even more lonely, with even less external support, without having the opportunity to share the same feeling of *"sad children"* with their siblings.

¹ Fictitious name in order to preserve the identity of the participant.

Figure 1. Drawing Story.



In the grieving process, it is necessary for the child to experience the feelings that arise from it. Therefore, during the meetings, through the projective material, Luna was able to express what she was feeling, and express her fantasies, with death content, as well as her mourning. In the set of the Drawing-Story technique, she expresses her process of elaborating the loss of her mother, moving from the feeling of unnamable loss to perceiving herself as part of the story.

Even in the face of so many losses, it was possible to see signs of hope, as Luna expressed her feelings. Despite the fragility of the new home, after all the changes experienced in her family environment resulting from her mother's death, she expresses the desire to recover her family, rescuing in her older sister, the role of mother in this new family. Thinking about the experience of a possible grief for the child, Bowlby (1997) emphasizes the importance of the child having a person who acts as a permanent substitute, so that when accepting the loss as being irremediable, he can, through this new figure of care, reorganize your inner life. Thus, in cases of loss due to death, the child can embark on a reconstruction movement to recover his family, especially the figure of care.

Luna also demonstrates to find hope in the school environment, a place where she felt safe to be creative, described by her as an environment where she could play and spend time, perceives the external environment as a possible collaborator in her development and the school environment, appears as a facilitator of this development, representing the hope of spontaneous expression.

The ability to be spontaneous and connect fantasy with reality (using transitional passages) facilitates working through feelings of grief. With the expression of mourning through creativity, Luna can guarantee the memory of the deceased mother without having to deny the loss, which allows the re-signification of feelings without compromising the continuity of the feeling of being (the self and emotional development), to the detriment of the need to do (Barone, 2004).

5. Conclusions

The experience of experiencing the death of a family member due to Covid-19 in a context of many changes has a dimension that can interfere with the mourning of the people involved. Due to the context of the pandemic and its specificities, the most frequent deaths, many of them abrupt, without the possibility of being experienced through the rituals with which our culture is familiar (wake and burial), directly reflect how this mourning will be expressed and experienced: abruptly and interrupted.

With the completion of the research, it was possible to understand that for the bereaved child, it can be difficult to deal with the loss of those who exercise the care function, because in addition to having to deal with the sadness of the maternal loss, the confused feelings and the family changes can exacerbate their state of helplessness.

Since it is a very painful reality to lose your mother during the pandemic, the way to find a way to reconcile with her may be through the use of creativity and the ability to symbolize, acquired in transitional experiences (in which the internal world and the external world can interact). Thus, the contributions of this study reveal that with regard to the experience of the loss of the mother, the fantasies and the creative potential of the children can work as an attempt to reframe the suffering, elaborate the mourning and express their painful feelings.

Thus, the study brings findings about the biopsychosocial expression of the bereaved child, namely: the experience of family mourning, the aggravating factor brought about by secondary losses, the difficulty of finding support in an environment transformed by the sudden loss of family configuration,

feelings of helplessness and phobic and psychosomatic symptoms. Thus, in the grieving process, it is necessary for the child to find space to experience feelings and be able to get in touch with the fantasies that result from the loss.

Based on these data articulated with psychoanalytic theory, it was possible to think that the work of mourning can benefit from the child's ability to create a transitional space where there is the possibility of reconstructing reality through a creative and spontaneous impulse, even in difficult conditions such as mourning the death of the mother. Finally, the need for an interdisciplinary look at the care of the bereaved child is highlighted, since the death of one of the parents, and in particular the mother, can lead to adverse outcomes throughout life. Orphaned children are more vulnerable to emotional and behavioral problems, which requires intervention programs to mitigate the biopsychosocial consequences of orphanhood.

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POSTERS

VIGOROUS PHYSICAL ACTIVITY AS STRESS BUFFER IN ADOLESCENTS AND YOUNG ADULTS FROM THE GENERAL POPULATION

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Abstract

The adverse effects of stress and the positive effects of physical activity on health are well established but their interaction is less clear. The present study investigated whether vigorous physical activity may buffer the negative effects of stress on depressive symptoms in adolescents and young adults from the general population. A random community sample of 14 to 21 year-olds was drawn from the population registry of Dresden (Germany) in 2015 and reported, among others, about perceived stress (Perceived Stress Scale, PSS-4), the weekly number of days with vigorous physical activity, and depressive symptoms (Patient Health Questionnaire, PHQ-9) cross-sectionally at baseline ($n = 1,053$) and longitudinally at one-year follow-up ($n = 651$). Linear regression analyses with interaction terms were applied both cross-sectionally and longitudinally with PHQ-9 sum score as outcome variable and stress and activity as interacting predictor variables, adjusting for baseline age, sex, body mass index and – in prospective analyses – also for baseline depressive symptomatology. In cross-sectional analysis, no significant interaction emerged between baseline stress and physical activity on baseline depressive symptoms; there was only a main effect of perceived stress. However, prospective-longitudinal analyses supported the stress-buffering-hypothesis. There was a significant interaction between baseline perceived stress and physical activity on follow-up depression symptomatology ($p < .05$). Decomposing the interaction showed that among those with high perceived stress at baseline, a higher number of days with vigorous physical activity at baseline was linked to lower depression levels at follow-up. These findings suggest that vigorous physical activity exhibits prospectively an antidepressogenic effect under high perceived stress conditions and may be a useful target for prevention or early intervention efforts during the crucial developmental period of adolescence and young adulthood.

Keywords: *Epidemiology, mental health, adolescence, young adulthood, cohort study.*

1. Introduction

The adverse effects of stress and the positive effects of physical activity on health are well established but their interaction is less clear (e.g., Neumann et al. 2022). The present study investigated whether vigorous physical activity may buffer the negative effects of stress on depressive symptoms in adolescents and young adults from the general population.

2. Methods

2.1. Sample and assessments

A random community sample of 14 to 21 year-olds was drawn from the population registry of the city of Dresden (Germany) in 2015 and $N = 1,180$ (21.7%) were assessed at the baseline wave (11/2015-12/2016) of the epidemiological Behavior and Mind Health (BeMIND) study (Beesdo-Baum et al., 2020). Among the comprehensive assessments, perceived stress during the past month (4-item Perceived Stress Scale, PSS-4; Cohen & Williamson (1988)), the weekly number of days with vigorous physical activity in the past three months (single item: “How many days a week are you intensively physically active, so that your breathing and pulse rate increase sharply and you break a sweat?; Scheidt-Nave et al., 2012), and depressive symptoms during the past two weeks (Patient Health Questionnaire, PHQ-9; Kroenke et al., 2001) were assessed. Complete data in these questionnaires were available for $n = 1,053$ subjects, forming the baseline analysis sample. Of these $n = 651$ participants completed the PHQ-9 again during the one-year follow-up wave, forming the prospective-longitudinal analysis sample.

2.2. Statistical analyses

Linear regression analyses with interaction terms were applied both cross-sectionally and longitudinally with depressive symptoms (PHQ-9 sum score) as outcome variable and perceived stress (PSS-4) and physical activity as interacting predictor variables, adjusting for baseline age, sex, body mass index and – in prospective analyses – also for baseline depressive symptomatology. Baseline sample weights were applied (weighted percent, means, regression coefficients), ensuring that the overall BeMIND sample is representative for the population of the 14–21-year-old residents of Dresden with regard to sex and age. *N* are reported unweighted. STATA 15.1 was used for analysis (STATA Corp, 2018).

3. Results

3.1. Sample characteristics

The baseline analysis sample ($n = 1,053$) consisted of $n = 431$ males (weighted percent [%w]: 50.7) and $n = 622$ females (49.3%w). Weighted mean age was 17.9 years (standard error [SE]: 0.08). Baseline weighted means for perceived stress, physical activity, and depressive symptoms were 5.6 (SE: 0.10), 2.5 (SE: 0.06), and 4.3 (SE: 0.11), respectively. Higher baseline perceived stress scores were related to lower odds of participation at follow-up (Odds Ratio: 0.94, 95% Confidence Interval [95% CI]: 0.90 - 0.99, $p = 0.011$).

3.2. Cross-sectional analyses

As shown in Table 1, no significant interaction emerged between baseline perceived stress and physical activity on baseline depressive symptoms ($p = .091$). The main effect of perceived stress ($p < .001$), but not the main effect of physical activity ($p = .146$) was significant.

Table 1. Association between baseline perceived stress and physical activity with baseline depressive symptoms: Results of linear regression analysis with interaction term (adjusted for age and sex).

Baseline Depressive Symptoms	B	SE	95% CI	p
Baseline Perceived Stress	0.63	0.07	0.49 - 0.77	<.001
Baseline Physical Activity	0.18	0.12	-0.06 - 0.42	0.146
Baseline Perceived Stress * Physical Activity	-0.04	0.02	-0.09 - 0.01	0.091
Baseline Age	0.07	0.04	-0.02 - 0.15	0.120
Sex	0.72	0.19	0.34 - 1.10	<.001
Baseline Body Mass Index	0.09	0.03	0.03 - 0.15	0.006
Constant	-2.71	0.98	-4.64 - -0.78	0.006

B: unstandardized regression coefficient, SE: standard error, 95% CI: 95% confidence interval, p: p-value

3.3. Prospective-longitudinal analyses

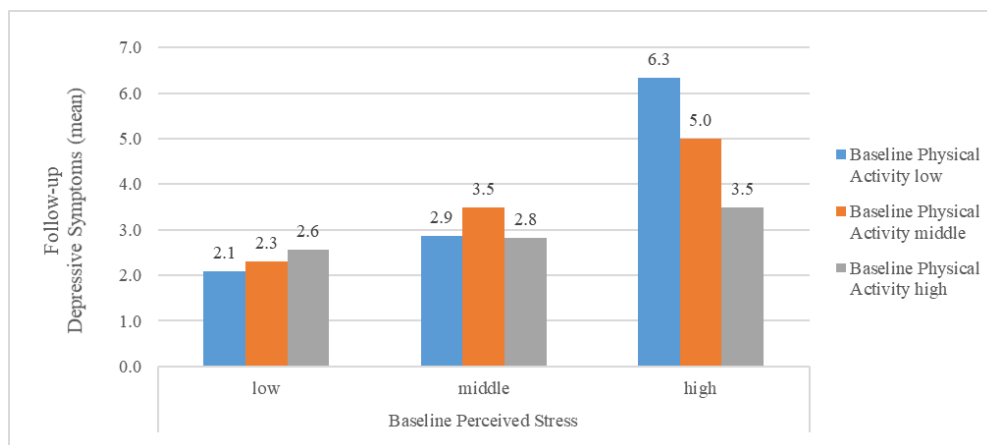
Prospective-longitudinal analyses supported the stress-buffering-hypothesis. As shown in Table 2, there was a significant interaction between baseline perceived stress and physical activity on 1-year follow-up depression symptomatology ($p = .006$). Decomposing the interaction showed that among those with high perceived stress at baseline, a high number of days with vigorous physical activity at baseline was linked to lower depression levels at follow-up (see Figure 1).

Table 2. Association between baseline perceived stress and physical activity with follow-up depressive symptoms: Results of linear regression analysis with interaction term (adjusted for baseline depressive symptoms, age, and sex).

Follow-up Depressive Symptoms	B	SE	95% CI	p
Baseline Perceived Stress	0.38	0.08	0.23 - 0.53	<.001
Baseline Physical Activity	0.26	0.11	0.04 - 0.48	0.022
Baseline Perceived Stress * Physical Activity	-0.06	0.02	-0.10 - -0.02	0.006
Baseline Depressive Symptoms	0.27	0.04	0.19 - 0.35	<.001
Baseline Age	-0.01	0.04	-0.09 - 0.08	0.888
Sex	0.05	0.21	-0.37 - 0.47	0.820
Baseline Body Mass Index	0.00	0.03	-0.05 - 0.06	0.922
Constant	0.31	0.96	-1.57 - 2.19	0.749

B: unstandardized regression coefficient, SE: standard error, 95% CI: 95% confidence interval, p: p-value

Figure 1. Display of interaction between baseline perceived stress and physical activity (low: $\leq 25^{\text{th}}$ percentile, middle $>25^{\text{th}}$ percentile & $\leq 75^{\text{th}}$ percentile, high: $>75^{\text{th}}$ percentile) on depressive symptoms at 1-year follow-up.



4. Discussion

These findings in this general population sample of adolescents and young adults indicate that vigorous physical activity exhibits prospectively an antidepressogenic effect under high perceived stress conditions. This suggests that higher physical activity may strengthen resilience and thus pose a useful target for prevention or early intervention efforts in highly stressed individuals during the crucial developmental period of adolescence and young adulthood.

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PTSD, SOCIAL SUPPORT AND RESILIENCE AMONG CHILDREN IN CHILD PROTECTION IN HAITI

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Abstract

This study aims to assess the trauma, social support and resilience of children entrusted to child protection in Haiti using quantitative measurement scales. Most of these children had a domestic life course before being entrusted to a child protection institution. They have been and still are victims of intentional and unintentional violence and trauma. Our study sample is 100 entrusted children aged 6 to 17 years old and from three child protection centers in Haiti. According to the results, 37% suffer from depression with a higher percentage in girls, 53% show clinical signs of Post-Traumatic Stress Disorder with a higher percentage in boys, 52% show peritraumatic distress scores. On the other hand, these children mostly show fewer clinical signs of anxiety. The Pearson correlations show that traumatic symptoms are much more present in primary school children, most of whom are former child domestics (*restavèk*). The experience of domesticity leaves deep traumatic traces in the child separated from his parents and forced for some to lead an inhuman life. However, despite mental suffering and a deleterious living environment 64, 3% of these children have a resilient profile. Social support is one of the factors that best predicts the resilience of these children. Indeed, these children separated from their families rely on what their immediate environment can offer them constructively while seeking stable support. This study makes it possible to draw up the psychological profile of children entrusted to child protection in Haiti, while providing details on the risk, vulnerability and protection factors on which we can rely in their care. Finally, it emphasizes the need to offer therapeutic placements to children in order to prevent the traumatic effects of their experience and of domesticity in the long term.

Keywords: *PTSD, Social Support, Resilience, foster children, Haiti.*

1. Introduction

Since the earthquake of January 12, 2010, several studies have focused on post-traumatic stress disorder, social support and the resilience of the Haitian people. The studies of Cénat and Derivois (2014) on polytrauma and the resilience of Haitian street children showed that these child victims of polytrauma demonstrate self-efficacy in coping with their traumatic experiences and less than 15% of them they achieved scores reaching clinical rates of post-traumatic stress disorder. Although various studies (Karray, Joseph et al., 2016; Derivois and Cénat et al., 2018) show that children have a level of resilience ranging from moderate to very high despite their precarious living conditions. Poverty, as Joseph and Derivois (2015) demonstrated to us, is an aggravating factor in violence because it is both more present and more serious in poor families. Some resort to informal arrangements for the placement of children with a trustworthy third party, others instead entrust their children to child protection centers. According to Fabre (2015), these placements are above all part of a logic of mutual aid and social solidarity. Bruchon-Schweitzer (1994) defines social support as the set of interpersonal relationships of an individual providing an emotional bond, practical help but also information and assessments relating to the threatening situation. According to Bozzini and Tessier (1985) and Streeter and Franklin (1992), this is a feeling of satisfaction with regard to the support received, the perception that the support needs are combined, the perception of the availability and adequacy of support. We will continue to reflect on these notions of trauma, resilience and social support, which we will assess using standardized measurement scales.

2. Method

Our study sample is composed of 100 entrusted children (n=50 boys and 50 girls) aged 6 to 17 who come from three child protection centers in Haiti. We gave them an observation notebook containing socio-demographic data as well as scales measuring: Beck's Anxiety Inventory (IAB), the Child Depression

Inventory or Child Depression Inventory, CDI, The Distress Inventory Peritraumatic (IDP), the Children's Revised Impact of Event Scale (CRIES), the Social Support Questionnaire (SSQ) and the Resilience Scale (RS). These quantitative data were collected over 3 months by a team of nine investigators.

3. Summary of results

Nearly a decade after the devastating earthquake of January 12, children entrusted to child protection show more traumatic clinical symptoms than street children. It must be said that in the meantime the country has experienced other natural disasters impacting the living conditions of families. The results presented in the tables below show that more than half of the children suffer from PTSD disorders and peritraumatic distress. On the other hand, they generally show fewer signs of anxiety.

Table 1.

Gender	Depression		PTSD		Péri traumatic	
	No clinic	clinic	No clinic	clinic	No clinic	clinic
Girls n=50	29	21	26	24	28	22
Boys n=50	34	16	21	29	20	30
Total n=100	63	37	47	53	48	52

Table 2.

Gender	Anxiety		
	weak	Moderate	severe
Girls n=50	30	15	5
Boys n=50	30	10	10
Total n=100	60	25	15

Children attending primary school who have a child of domestic origin (restavèk) show more traumatic symptoms. The experience of domesticity psychologically marks its children separated from their parents and exposed to all forms of abuse. However, despite their chaotic life course 64, 3% of these children present a resilient profile. The results of the t-tests show that the participants obtain a total score between 6 and 36. The average score for both sexes combined is (M=29.80; SD 5.84), which shows good satisfaction of children with their social support. However, boys are more satisfied with their social support than girls. This shows that these children are looking for stable support. They try to recreate a family atmosphere around them by relying on the resilience tutors available in their immediate environment.

4. Discussion

Can we speak of therapeutic placement in the context of placement in Haiti? The term "therapeutic family placement" is used by European authors such as Myriam David, Michel Soulé and Jenny Aubry, and paradoxically designates the separation of the child from his parents in order to help him build a bond, restore or cure it. As a result, placement is considered as a therapeutic response to intra-family dysfunctions. On the other hand, in Haiti, foster care, in most situations, creates a dysfunction in intra-family relations. The child is often separated from his family to fight against precariousness. The bonds of attachment come undone in the hope of helping the child to build himself personally, to "become someone". Indeed, family placement is part of a logic of survival; it paradoxically plays a role of social support for poor families, but also a vector of trauma for entrusted children

5. Conclusion

Our research shows the urgency of developing other types of more secure relationships with children in Haitian society and ensuring that their main rights are respected. It is important in the context of child protection in Haiti, to develop a mental health policy for children in order to treat their trauma and strengthen their psychic resources. This study aims to highlight certain invisible categories in Haitian society and the suffering of children in Haiti in general.

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COGNITIVE FUNCTIONS AND HEALTH STATUS IN PREVIOUSLY HOSPITALIZED VERSUS NON-HOSPITALIZED POST-COVID PATIENTS: A PILOT STUDY

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Abstract

Introduction: An increasing amount of evidence indicates that patients after having been recovered from COVID-19 are still experiencing various neurocognitive deficits, as part of the commonly described post-COVID sequelae. These deficits can significantly affect patients' perceived health status and quality of life.

Method: This study assesses global cognitive functions, executive functions, memory, attention, subjective cognitive functioning, perceived health status and quality of life. We compared 16 previously hospitalized (56% males, 44% females, age: 46.1±11.5 years, education in years: 14.9±4.2 years) and 16 non-hospitalized (50% males age: 46.8±15.7 years, education in years: 14.8±2.38 years) post-COVID patients who were matched based on age, education level and time elapsed since the end of COVID-19 infection (respectively 160±140 166±143 days). Objective neuropsychological tests such as the Montreal Cognitive Assessment (MoCA), forward and backward digit spans, Trail Making Test (TMT), verbal fluency test, Frontal Assessment Battery (FAB) and self-report scales such as the Perceived Deficits Questionnaire (PDQ), Post-COVID-19 Functional Scale (PCFS) and EQ-VAS were administered and analyzed.

Results: Previously hospitalized patients performed significantly worse on forward digit span task ($p < .05$), backward digit span task ($p < .05$) and lexical fluency ($p < .05$) compared to non-hospitalized patients. Moreover, hospitalized patients showed significantly higher scores on both parts of PCFS ($p < .01$ and $p < .05$).

Discussion: This pilot study found that previously hospitalized post-COVID patients demonstrate decreased short-term memory, working memory, lexical fluency and perceived quality of life compared to previously non-hospitalized post-COVID patients. Nevertheless, contrasting to previous literature, we did not find significant differences in global cognition, mental flexibility, overall frontal functions, subjective cognitive deficit, and perceived health status.

Keywords: *Post-COVID, cognitive function, subjective cognitive function, health status, quality of life.*

1. Introduction

An increasing amount of evidence indicates that patients after having been recovered from COVID-19 are still experiencing various neurocognitive and affective deficits (Ceban et al., 2022; Crivelli et al., 2022). Post-acute sequelae of SARS-CoV-2 infection is termed post-COVID syndrome or long-COVID. Executive functions, memory, attention difficulties, motor planning and psychomotor coordination impairments are observed after infection and in the longer term (Fernández-de-Las-Peñas et al., 2022; Helms et al., 2020; Heneka et al., 2020; Kaseda & Levine, 2020; Mazza et al., 2021; Nalbandian et al., 2021). Though the acute infection terminates, persistent symptoms often interfere with everyday life, therefore significantly reducing the quality of life of patients. The number of publications is dynamically growing in the field, however, there is still a lack of comparison between post-COVID patients who were hospitalized during their infection with non-hospitalized patients.

Therefore, the main focus of our research is to compare cognitive functioning, self-reported health status and quality of life of previously hospitalized and non-hospitalized post-COVID patients. We hypothesize that the hospitalized group will exhibit decreased cognitive functions (global cognition, executive functions, memory, overall frontal functions) and decreased subjective health status and quality of life compared to the non-hospitalized group.

2. Method

16 previously hospitalized and 16 non-hospitalized post-COVID patients participated in the study. Groups were matched based on age, education level and time elapsed since the end of COVID-19 infection. The hospitalized group consisted of 56% males and 44% females with a mean age of 46.1±11.5 years, 14.9±4.2 years spent in education and a mean of 160±140 days elapsed since the end of their COVID infection. The non-hospitalized group consisted of 56% males, 44% females as well, with a mean age of 46.8±15.7 years, 14.8±2.38 years of education and 166±143 days passed since the end of their COVID infection.

Objective neuropsychological tests such as the Montreal Cognitive Assessment (MoCA) (original: Nasreddine et al., 2005; Hungarian: Volosin, Janacsek & Németh, 2013), forward and backward digit spans (original: Wechsler, Coalson & Raiford, 2008; Hungarian: Rózsa, Kő, Kuncz, Mészáros & Mlinkó, 2010), Trail Making Test (TMT) (Brown & Partington, 1942), verbal fluency test (Tánczos, Janacsek & Németh, 2014), Frontal Assessment Battery (FAB) (Dubois, Slachevsky, Litvan & Pillon, 2000) and self-report scales such as the Perceived Deficits Questionnaire (PDQ) (Sullivan, Edgley & Dehoux, 1990), Post-COVID-19 Functional Scale (PCFS) (Siegerink, Boon, Barco & Klok, 2020) and EQ-VAS (original: The EuroQol Group, 1990; Hungarian: Kaló & Péntek, 2005) were administered and analyzed.

3. Results

During data analysis, independent T-tests were used in case of normal distribution and non-parametric Mann-Whitney U tests in case of violation of assumptions. Between-subject comparisons did not reveal any significant differences in age $t(30) = -0.128$, $p > .05$ (medium-sized effect $r = -0.45$); years spent in education $t(30) = 0.104$, $p > .05$ (medium-sized effect $r = 0.37$) and days elapsed since the end of COVID-19 infection $U = 127$, $p > .05$ (small-sized effect $r = 0.01$). Descriptive statistics showed that 81.3% of the hospitalized sample received oxygen support during hospitalization for a mean of 21.7±23.8 days.

Except for MoCA and PDQ, every score violated assumptions, therefore non-parametric Mann-Whitney tests were used. (*Details are shown on Table 1.*) Between-group comparisons showed that hospitalized patients performed significantly worse on forward digit span task $t(30) = -2.666$, $p < .05$, large-sized effect of $r = -.94$; backward digit span task $U = 72.5$, $p < .05$, medium-sized effect $r = 0.43$; and lexical fluency $U = 61.5$, $p < .05$, large-sized effect $r = 0.52$ compared to non-hospitalized patients. Moreover, hospitalized patients showed significantly higher scores on both parts of PCFS: on textbox score $U = 51.5$, $p < .01$, large-sized effect $r = 0.57$ and flowchart score $U = 70$, $p < .05$, medium-sized effect $r = 0.42$.

Table 1. Between-group data of cognitive measures and self-reported scales.

Test	Hospitalized M (SD) or Mdn	Non-hospitalized M (SD) or Mdn	t or U	df	p	r
MoCA	27	28	95.5	30	0.22	0.25
Digit span: forward	5.63 (0.81)	6.76 (1.48)	-2.666	30	0.012*	-0.94
Digit span: backward	4	5	72.5	30	0.031*	0.43
TMT B time	68.5	53.48	98	30	0.266	0.23
Lexical fluency	11.5	14.5	61.5	30	0.012*	0.52
FAB	17	18	92	30	0.139	0.28
PDQ	16.94 (11.31)	18.38 (12.38)	-0.343	30	0.734	-0.12
PCFS (textbox score)	1	0	51.5	29	0.003**	0.57
PCFS (flowchart score)	2	0	70	29	0.034*	0.42
EQ-VAS	85	85	111.5	29	0.749	0.07

Note. MoCA: Montreal Cognitive Assessment, TMT B time: time measured on part B of Trail Making Test, Lexical fluency: letter S, FAB: Frontal Assessment Battery, PDQ: Perceived Deficits Questionnaire, PCFS: Post-COVID Functional Scale, EQ-VAS: EuroQol Visual Analogue Scale

4. Discussion

This pilot study found that previously hospitalized post-COVID patients demonstrate decreased short-term memory, working memory, lexical fluency and perceived quality of life compared to previously non-hospitalized post-COVID patients. Nevertheless, we did not find significant differences in global

cognition, mental flexibility, overall frontal functions, subjective cognitive deficit, and perceived health status. The differences could be explained by more severe acute infection of the hospitalized patients, by direct effect of the virus to the nervous system, by hypoxia or by side effects of medications for the treatment of infection. Main limitations include small and unrepresentative sample size and the lack of PCR results for patients (patients provided self-reported COVID-test results). Based on the encouraging results, we aim to increase the sample size to 200 participants in order to obtain more representative data and results. Moreover, we intend to compare further affective aspects of patients as well.

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MINDFULNESS, SOMATIC AND COGNITIVE SYMPTOMS OF ANXIETY, AND SELF-ESTEEM: A RANDOMIZED CONTROLLED TRIAL

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Abstract

Empirical studies have demonstrated the beneficial impact of mindfulness on anxiety and well-being. However, there is a lack of research related to the relationship between mindfulness and symptoms of somatic and cognitive anxiety as distinct dimensions of anxiety. Thus, this study aims to investigate whether a mindfulness-based intervention may improve levels of cognitive and somatic anxiety and self-esteem. Cognitive symptoms of anxiety include feelings of tension, rumination, and negative thoughts, while somatic symptoms include sweating, hyperventilation, elevated heart rate, and blood pressure. A randomized experimental design with a 3x2 between-subjects design was employed. The intervention consisted of two experimental groups of guided meditation alone and guided meditation followed by deep breathing, and a control group. Overall, the intervention reduced symptoms of somatic and cognitive anxiety, while no effect on self-esteem was found. These findings fill a substantial gap in the existing literature and have important implications related to the potential of mindfulness as a tool for treating anxiety. Meditation provides a solution for these drawbacks, as it is cost-effective, does not require too much time (can last from 10 minutes to more than an hour depending on the patient's previous experiences with meditation), and is a stigma-free practice

Keywords: *Mindfulness, meditation, deep breathing, somatic anxiety, cognitive anxiety, self-esteem.*

1. Introduction

Cognitive symptoms of anxiety include feelings of tension, rumination, and negative thoughts, while somatic symptoms include sweating, hyperventilation, elevated heart rate, and blood pressure (Gelenberg, 2000; Parmentier et al (2019) found that mindfulness decreases symptoms of anxiety and depression in the general population by reducing rumination and worry, and by increasing cognitive reappraisal. Wielgosz et al (2016) found that long-term mindfulness is related to a slower respiration rate, a finding also supported by EEG spectral data (Ahani et al., 2014). Other physiological changes associated with mindfulness are decreased heart rate and blood pressure (Ditto et al., 2006). The aim of this study is to investigate whether a four-day mindfulness-based intervention will reduce cognitive and somatic anxiety and enhance self-esteem among a non-clinical sample. A randomized experimental design with a 3x2 between-subjects design will be employed. The intervention consists of two experimental groups which will practice guided meditation and guided meditation followed by deep breathing respectively, and a control group of music relaxation.

2. Literature review

Based on the evidence provided by existing empirical data, and the potential of mindfulness to be an alternative psychotherapeutic approach for treating anxiety disorders, this study aims to assess and compare the effects of guided meditation, guided meditation followed by deep breathing techniques, and music relaxation on anxiety levels, blood pressure, heart rate, and self-esteem. Guided meditation and deep breathing led to significant decreases in both systolic and diastolic blood levels and heart rate, meanwhile guided meditation alone led to significantly decreased systolic blood pressure and increased diastolic blood pressure. Our second hypothesis, that guided meditation and deep breathing would lead to a larger decrease

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in anxiety levels and increase in self-esteem levels than guided meditation alone and music relaxation, was partially supported by the data.

3. Method

The participants were distributed among the intervention groups through random assignment, with 11 participants in each group. Levels of cognitive and somatic anxiety and self-esteem were measured using the following scales: The State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA), is a validated self-report questionnaire designed to differentiate cognitive and somatic symptoms of anxiety (Ree et al., 2008). The Rosenberg Self-Esteem Scale (RSE), a validated survey instrument designed to assess global self-esteem (Rosenberg, 1965) consists of 10 items, which the participants had to rate on a Likert scale from 1 (strongly agree) to 4 (strongly disagree). Independent samples t-tests were conducted at a $p < .05$ significance level to test for gender differences in levels of somatic anxiety, cognitive anxiety, and self-esteem before and after the intervention. Paired samples t-test at a $p < .05$ significance level was conducted to evaluate the effect of the intervention on somatic anxiety, cognitive anxiety, self-esteem for each intervention group separately, and the overall impact of the intervention on all groups.

4. Results

4.1. Independent samples t-tests

Table 1. Results of the independent samples t-test for gender differences pre- and post-intervention.

Pre-Intervention						
Variable	F		M		t	p
	M	SD	M	SD		
Somatic anxiety	18.1	4	14.57	3.5	2.131	.0041
Post-Intervention						
Self-esteem	15.92	1.87	14	2.82	2.157	.039
Cognitive anxiety	16.84	4.59	13.42	2.22	2.773	.011

Note. M = Mean. SD = Standard deviation. m = Male. f = Female

Female participants showed higher levels of somatic anxiety ($p = .0041$). No significant gender differences were found in cognitive anxiety and self-esteem before the intervention. Post-intervention scores showed that female participants had higher levels of cognitive anxiety ($p = .011$) and self-esteem ($p = .039$). No significant gender differences were found in post-intervention scores for somatic anxiety. Follow-up assessments one month after the intervention found no significant gender differences.

4.2. Paired-samples t-tests

Table 2. Results of the paired samples t-test for mean differences between the three conditions (guided meditation, guided meditation, and deep breathing, and control group).

Variable	Pre-intervention		Post-intervention		t	p	η^2	η^2 95% CI [LL, UL]
	M	SD	M	SD				
Guided Meditation + Deep Breathing								
Cognitive anxiety	19.54	4.00	15.45	3.47	2.507	.031	.32	[.45, 7.72]
Control Group (Music Relaxation)								
Somatic anxiety	16.90	5.12	13.09	1.81	2.80	.019	.43	[.78, 6.84]

Note. M = Mean. SD = Standard deviation. η^2 = Partial eta square value. CI = Confidence interval. LL = Lower limit. UL = Upper limit.

No significant differences were found for cognitive anxiety, somatic anxiety, or self-esteem. Follow-up assessment found a significant decrease in self-esteem levels. The mean decrease in self-esteem level was 1.54 ($p < .043$) with a 95% CI [0.062, 3.028]. The partial η^2 (.35) indicated a large effect size.

5. Discussion

This study is the first to investigate the relationship between mindfulness, somatic and cognitive dimensions of anxiety, and self-esteem. However, no previous studies have assessed the relationship between mindfulness meditation and somatic and cognitive anxiety as distinct dimensions of anxiety. Guided meditation and deep breathing led to significant decreases in cognitive anxiety, while guided meditation only did not affect either. This study presents novel findings, as there is a lack of research on the relationship between mindfulness and the cognitive and somatic dimensions of anxiety.

6. Conclusion

The results of this study provide highly significant practical implications for the plausibility of meditation as an effective therapeutic approach. Guided meditation and deep breathing resulted efficacious in reducing cognitive anxiety among the study participants. Overall, the psychological and physiological impact caused by meditation and deep breathing needs to be investigated more in detail, in order to establish whether and how mindfulness may produce changes in psychological well-being, which may eventually have implications for perceived health, life satisfaction, subjective well-being, and overall quality of life. Meditation provides a solution for these drawbacks, as it is cost-effective, does not require too much time (can last from 10 minutes to more than an hour depending on the patient's previous experiences with meditation), and is a stigma-free practice.

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REFLEXIVITY AND EMOTIONS IN QUALITATIVE FIELDWORK WITH HEROIN USERS

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Abstract

Motivation for the paper: Doing qualitative research fieldwork implies some ethical and personal issues to take in account such as reflexivity and emotions. Objectives: Describe and analyze challenges in managing emotions while researching hidden populations with substance abuse problems. What was done: Results come from an ethnographic study with heroin male and female patients attending a methadone clinic. How it was done and validated: 100 open-ended qualitative interviews were done with the aim of reaching a subjective approach related to the onset of heroin consumption and the eventual assistance to the clinical space. Thematic analysis was use and saturation validity was obtained. Project was approved by the research and ethics committee of the National Institute of Psychiatry Ramon de la Fuente Muñiz, in Mexico Major results: Listening to complex personal, social and structural violence stories make evident researcher and interviewee vulnerabilities. Besides observing the wounded bodies due to the multiple injections, the extreme thinness, blank stares and death hovering in the environment, which made its appearance four times. Conclusions: Researcher identity has implications in all levels including themes of gender, ethnicity and status are involved in research process. Besides there are interactions that provoke emotions and feelings in the field work that provide a glance to culture and social dynamics that became a source to enhance clinical interventions. Previous psychotherapy and ethical training of the fieldwork team to be in charge of reflexivity, it is a must.

Keywords: *Reflexivity, emotions, qualitative research, ethics, hidden populations.*

1. Introduction

According to Pagano et al (2018), accessibility to a group involves various issues such as the legal status of the person, the public or private contexts in which they are intended to be addressed, and the status of the researcher as part of the community or as a subject. plausible to be reliable in the context. And in a very relevant way, his experience in managing his own emotions and those that can be expressed in the daily life of field work.

The presence of the researcher in the clinical environment and its methodological implications are important to mention. The view of the observer, participant or not, goes in two directions; it is a mutual questioning of the ethnographer and their informants, given that it is carried out through encounters, interactions, and conversations. Thus, reflexivity, also called biographical reflexivity, is defined not only by ascriptive characteristics, but also by the perceptions and judgments of others concerning the researcher. The people themselves who are actively involved give meaning to their own actions, which includes the research process itself: the mutual understanding between researchers and the actors who are being investigated [Whitaker et al. 2019]. Reflexivity can be defined in this way, as a consciousness of the mutual relationship between researcher and the object of study that shows how new ideas are generated, how the relationship is shaped by preexisting knowledge, and how research results are obtained [Whitaker et al. 2019]. The identity of the researcher has implications at all levels, including those of gender, ethnicity, and status that are involved in the process of research. (Pagano 2018) There are also interactions that provoke feelings and emotions during field work, which provide a look at the social dynamics of a culture, a group, or the life of a subject [56]. In this process there are therefore three levels of subjectivity and thus of reflexivity: that of the subject of the experience, that of the subject that knows, the epistemic subject, and that of language in a close relationship between the epistemic subject and the subject of the experience (Passegui, 2020).

2. Design

It is an ethnographic study based in medical anthropology theory that used narrative medicine approaches.

3. Objectives

Describe and analyze challenges in managing emotions while researching hidden populations with heroin abuse problems.

4. Methods

This study uses an ethnographic approach [Cortes et al. 2005; Pérez, G. 2012) with semi-structured open-ended interviews (Hammer, D., Wildasky, 1990) to give an account of the experience of heroin users of both sexes with use of this drug, and their eventual outpatient treatment in a private ambulatory methadone clinic in Mexico City. Results in this work comes from 100 open ended interviews study (Romero et al. 2022). It was approved by the Research and Ethics committees of the Instituto Nacional de Psiquiatría.

4.1. Sampling

The participants were a non-probabilistic convenience sample, a recruitment technique that does not give the same selection opportunities to all members of the population. (Heckarton, 1997).

5. Discussion

As has been mentioned in other works (Lalor, Begley, and Devane 2006), exploring the painful experiences of people with complex life trajectories imposes difficult epistemological, methodological, and emotional dilemmas on research teams. These authors point out three important challenges: 1) the issues of observation, 2) the issues of listening, and 3) the issues of support. Each of these areas requires specific skills from researchers.

In the first point, that of observation, which can be a participant or non-participant, following these authors, requires the protection of the subjects through "reciprocity and equity" (page 610), which are essential qualities. However, it could added that the physical and emotional protection of the researchers is necessary, considering the contexts in which they are interviewed, the activities in which the interviewees are engaged, and their emotional situation at the time of the interview. McGarrol (2017) affirms, social and professional lives are also affected by the exchange.

In the study with heroin users who came to take their dose of methadone, it was common for them to present in anxious states due to withdrawal from the substance, so taking the substitution treatment dose was prioritized first and wait for the anxious state to subside. On occasions, those of humbler origin had not eaten for days or came from other states of the country after having traveled for more than three hours, fatigue being a frequent state of mind and even when their desire was to participate in the investigation, they were he had to postpone the interview until a later time.

Some of the patients were drug dealers and had been in prison on many different occasions. Dialogue with them had to be particularly careful not to impose prejudice or stigma on them. On the other hand, professionally it was our first time coming into contact with heroin users and emaciated, scarred bodies that resonated with physical and emotional pain. The illnesses narratives (Charon, 2006) permeated by emptiness in the sense that Recalcati (2003) uses as the destructive use of one's own body as expressions of an experience that seems not to adapt to the subjective dimension of lack. In a reflexive way, it was inevitable to think about the series of privileges of age, gender, social support networks and all the issues of health determinants that the clinic staff and the researcher had, unlike the users being cared for.

In relation to the second challenge, the issues of listening (Lalor et al 2006), it is important to mention that all of the interviews were recorded, transcribed, and systematically analyzed. The approach used to review participants' stories was narrative analysis, which Riessman (2008) defines as "the family of methods used to interpret texts that share a historicized form" (p. 11). In this method, information retrieved from narratives is interpreted through the stories the individuals need to report, the chronology of successive events, and breaking points or epiphanies. A thematic analysis was also carried out, analyzing what was said or written during the collection of the information. The analysis was carried out by the research team. (Romero et al 2022).

Transcription of these narratives is a complex process.

The third and final challenge the issue of support (Lalor et al. 2006). Ideally speaking, qualitative research that is based on a dialogical relationship where the experience lived by the subject interviewed is shared to a researcher, should be able to offer a type of minimum containment or support.

Containment is a concept from psychoanalysis, developed by Wilfred Bion (1963) that describes the mind's ability to house elements from experience within it. These contents will be transformed into thoughts, through an assimilation process that implies tolerating anguish and building a personal sense between what is felt and what is experienced. Particularly when having a traumatic experience, the mental contents seem to have no meaning or coherence (Weightman, 2016).

Psychoanalytic listening makes use of the sensitivity of the interviewer who receives the experience of the other person. It will be necessary to reduce the anguish and later make the person see that it is possible to bear the traumatic experience as a manageable part of their history. It is essential that people being interviewed with painful experiences manage to realize that what they feel belongs to them, are their emotions. (Lazcano 2018)

6. Conclusions

After all these reflections a good qualitative researcher must have what Kvale (1996: 148-149) pointed out: many years ago: Knowledgeable, Structuring, clear, gentle, sensitive open, steering, critical, remembering and clarifying We must add to be brave, flexible, empathic but before all has a strong commitment with his/her emotions and trained in ethical themes in the fieldwork.

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THERAPEUTIC INTERVENTIONS ADDRESSING PTSD, SUBSTANCE USE, AND SEXUAL RISK FOR NATIVE AMERICANS IN THE U.S.A.

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Abstract

Background: Native Americans (NA) are reintroducing traditional knowledge and practices in clinical interventions to address health concerns. Multiple approaches have been taken such as “building from the ground up” or adapting westernized approaches. When the latter approach is taken, traditional ceremony and language complemented by community and cultural values are integrated into clinical practice. Cultural adaptations fall along two broad dimensions. Surface structure adaptations reflect surface aspects of a specific culture and deep structure adaptations which incorporate cultural, social, historical, environmental, and psychological factors of a population. Cultural adaptations can make western-based approaches more acceptable to other cultures for whom the intervention was not originally developed
Objective: Describe the procedures and identify common processes and differences in adapting two therapeutic interventions: 1) Narrative Exposure Therapy (NET), an evidence-based trauma therapy aimed at reducing PTSD symptoms and enhancing wellness, and 2) Motivational Interviewing plus Skills Training (MIST), an evidence-based substance use reduction treatment with cognitive behavioral therapy skills training (i.e., communication skills, problem-solving, and building positive social support networks), to improve outcomes. *Method:* We followed a three-step iterative process allowing for feedback from our community advisory board (CAB, $n=7$), counselors ($n=11$ in NET, $n=9$ in MIST), and NA clients (50 in each intervention). Acceptability was assessed through client surveys, client post-intervention debrief interviews, counselor post-training surveys, and counselor six-month follow-up surveys. *Results:* Surface-level changes included 1) incorporating guidelines for working with NA clients, 2) adjustments to the number and length of sessions, 3) reducing the complexity of the language in the treatment manual. 4) culturally tailoring the visual content and illustrations in the manual. Deeper changes included language revitalization, changing naming convention, modifying the included examples to better fit the lived experiences, and addressing historical trauma in a way that was validating for the community. *Conclusions:* NET and MIST were shown to be appropriate approaches for this community and should be considered as a treatment option for other Native American communities. Future work should consider strategies outlined in this adaption and following a similar process for working with indigenous communities to adapt and implement culturally appropriate interventions.

Keywords: Native Americans, trauma symptoms, substance use, sexual risk, adapting evidence-based interventions.

1. Introduction

Native Americans (NA) are enhancing westernized evidence-based intervention for their communities through the integration of cultural knowledge and practices to address health concerns. Practices of wellbeing are embraced through ceremony and language interwoven with community and cultural values. For many tribal nations in the U.S., these successful coping skills were suppressed through the loss of ancestral homelands and language punctuated by institutionalized and structural laws against cultural practices and forced assimilation policies.(United Nations 2009) In this presentation, we describe the framework used to adapt and assess the acceptability and feasibility of two therapeutic interventions to address the “triangle of risk” factors (Simoni, Sehgal, and Walters 2004) of (a) trauma, (b) substance use, and (c) HIV risk behaviors that put Native Americans at increased risk for HIV exposure (Pearson et al. 2020).

2. Design

We took a tribally based participatory research approach guided by tribal Elders and community leaders to conduct a mix methods study.

3. Objective

To describe the procedures and identify common processes and differences in adapting two therapeutic intervention: 1) Narrative Exposure Therapy (NET), (Neuner et al. 2004) an evidence-based trauma therapy aimed at reducing PTSD symptoms and enhancing wellness, and 2) Motivational Interviewing (Venner et al. 2018) plus Skills Training (MIST), an evidence-based substance use reduction treatment with cognitive behavioral therapy (i.e., communication skills, problem-solving, and building positive social support networks), to improve outcomes.

4. Methods

Setting: The study took place at a behavioral health clinic on a rural tribal reservation.

Ethical consideration: Approved by the academic IRB and through the tribal review process.

Intervention. The NET and MIST curricula were delivered by local counselors in up to six, 90-120 minute sessions. NET's first session consisted of laying out the lifeline with rocks signifying a traumatic event and flowers signifying a positive event. The size of the rock/flower corresponded with the impact of the event. MIST consisted of 1-2 sessions of motivational interviewing (MI) and 4-5 sessions of skill building (CBT). Combining these two therapies intended to reduce ambivalence towards change via MI while unlearning negative patterns of substance use via CBT.

Participants. Clients were NAs aged 16 and older residing in and around tribal lands, with past-year substance use and at least sub-threshold trauma symptoms as measured by the PTSD checklist for the DSM-5. Most (90%) were members of the participating tribe. We recruited 50 participants in each study arm (NET: Mean age 36.9 years old and 76% female; MIST mean age 36.0, 74% female). Providers Eleven providers for NET (2 males, 9 females; 5 NA, 1 Latinx, 3 Caucasian and nine providers for MIST (1 male, 8 female: 4 NA, 1 Puerto Rican, 4 Caucasian).

Cultural adaptation. We followed a three-step iterative process allowing for feedback from our community advisory board (CAB), counselors, and Native Americans clients.

Step 1) Revised the original manuals by removing jargon and improving readability (Flesch reading ease, NET: 58.4%, MIST: 65%; and grade level, NET: 9.0, MIST: 7.8), and incorporated previous study's findings regarding length of sessions, "homework", and number of sessions. For NET there was no "homework". For MIST, we deemphasized "homework". This was replaced with brief worksheets with the main session points explained. For clients worksheets served as a reminder of their new skills at home. For counselors, the worksheet helped focus on the content during the session and decrease preparation time. Step 2) Tribal Participatory research: Community leaders/Elders ($n=7$), providers for MIST ($n=9$) and for NET ($n=11$). For NET we held a 1-day meeting to review content and solicit feedback on the content and delivery method. The NET protocol remained mostly unchanged except for the removal of the community testimonial at the end to avoid harming others in this small community. For MIST, we held five, 2-hr CAB meetings and three, 1-hour meetings with providers. We identified the following relevant CBT skills: 1) Goal setting and substance use triggers; 2) Getting and increasing positive support; 3) Relapse prevention; 4) Communication; and 5) Negative Moods. Step 3) Counselor input during training, a 6-month follow-up to clarify concepts, materials, and fine-tune the intervention delivery.

Measures. Client survey: 14 items rated on a 10-point scale (ranging from 0 = not at all to 9 = extremely) assessed therapy expectations, counselor satisfaction, and acceptability of therapy format. (Ayala and Elder 2011) Two open-ended questions asked clients what they liked and what they would change to make it better. Client post intervention debrief interviews assessed counselor style, therapy approach, client outcomes, and cultural fit of treatment. Counselor post-training survey consisted of knowledge of intervention theory, core components, rationale and confidence in content delivery and treatment success, in reducing symptoms. Counselor six-month semi-structured interviews asked: how satisfied they were with the therapy; what they liked and disliked; and whether they thought therapy helped their clients in several domains and usefulness of the weekly supervision.

Data analysis. Completion rates: Client survey, NET ($n=44$, 88%) and MIST ($n=39$, 78%) and debrief interviews, NET ($n=18$, 36%) and MIST ($n=20$, 40%). Counselor post training and 6-month surveys: NET ($n=11$, 100%) and MIST ($n=9$, 100%).

5. Results

Surface structural adaptations to both interventions: 1) Presented guidelines for providers on working with NA clients; 2) Adjusted the number and length of sessions; 3) Reduced the complexity of language used in the treatment manual; 4) Culturally tailored the visual content and illustrations in the manual; 5) incorporated greater protections for confidentiality in a small community; and 6) Included information about linkages to traditional and cultural support systems. The decision to limit the number of

sessions to six was decided by the team; a priori to balance busy provider schedules and difficulties with getting clients into sessions. However, this is a deviation from how NET is typically delivered (i.e., 8-10 sessions) and required counselors and participants choose the most impactful traumatic and positive memories to process in each session. Preferring more time in session and a longer course of treatment was mentioned in the qualitative feedback from some participants, which suggests, that this may be a place where number of sessions is allowed to be more flexible in response to individual participant needs. *Deep structural adaptations*. For MIST: 1) We focused on language revitalization with the incorporation of the Nine Virtues of Níix Títáwaxt guided by the CAB for their appropriate use; 2) changed the naming conventions (e.g., goal setting was renamed as “personal vision”; “assertiveness” to “honoring your vision”) and treatment rationale. As the CBT component was skill based, clients chose the order that skills were developed, thus affirming client autonomy and control. For NET, we modified the examples to better fit the lived experiences of this tribe; 2) We addressed historical trauma in a way that was validating for the community but stayed within the core principles of NET; and 3) We added culturally acceptable ways to process recent deaths while still allowing for emotional processing of those traumatic memories. These adaptations required changes in therapy implementation but did not require changes in the basic approach of NET. For example, the lifeline was still utilized, and memories were still processed systematically, but individuals did not have to speak explicitly about the identity of someone who had died recently to align with cultural traditions. A novel approach was that historical trauma was processed as the memory of when one learned about those events, rather than being ignored or being processed as if one had experienced the event itself, neither of which would have been consistent with NET’s focus on processing and integrating significant autobiographical memories.(Elbert, Schauer, and Neuner 2015)

6. Discussion and conclusion

NET and MIST were shown to be appropriate approaches for this community.(Walker et al. 2023; Bedard-Gillgan et al. 2022) Overall, the adapted forms of NET and MIST were favorably received by the participants, and the implementation appeared to be feasible, with improved retention over past trials of culturally adapted treatments for trauma and substance misuse with this community and with highly positive satisfaction ratings and feedback. Traditional practices are a source of strength for NA communities and the adaptation framework used for both interventions present a model of successfully leveraging some of these practices into (a) a trauma-specific intervention as well as (b) an MI and CBT-based intervention. For NET, the use of a tactile intervention, without explicit written between-session practice, and with a foundation based on oral storytelling may have increased the cultural fit of the intervention for this community. Future work may consider strategies outlined in this adaption as well as following a similar process for working with indigenous communities to adapt and implement other culturally appropriate interventions.

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A COMPARISON OF AUTHORITARIAN AND PERMISSIVE APPROACHES OF HYPNOSIS FOR ANXIETY TREATMENT

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Abstract

Hypnotherapy has the potential to be a quick and cost-effective alternative to medicine in the treatment of anxiety disorders, particularly in children and young people. Although research on the use of hypnosis, in general, is encouraging, research on the use of hypnotherapy for treating anxiety disorders is insufficient to draw clear conclusions. This study is critical to improving the next generation of anxiety disorder therapies. Everything we know now about diagnosing and treating anxiety disorders is the product of research studies conducted over the years. Anxiety is an issue for patients who are about to have surgery, with more than half of them worried about anesthesia or not waking up afterward. Given the growing popularity of complementary and alternative medicine and the need for new anxiolytic preoperative therapies, we conducted a randomized attention-controlled trial to assess the efficacy of hypnosis as a therapeutic method for preoperative anxiety. Hypnosis has been demonstrated to reduce anxiety related to cancer, surgery, burns, and several medical/dental treatments. The method that is used in this study is the comparison between the authoritarian and permissive approaches of hypnosis for anxiety treatment and the systematic literature review to compare those techniques.

This research aims to assess the efficacy of two hypnotic induction and suggestion strategies: authoritarian and permissive. The results of this research imply that hypnotherapy recommendations and pain relief procedures should be adapted to the patient's specific situation.

As a result, the study we did finds that the evidence is insufficient to demonstrate the usefulness of hypnotherapy in treating anxiety disorders, and additional research employing a more rigorous approach is advised as a result. Better quality research on the effectiveness of hypnotherapy looks to be one of the most significant issues.

Keywords: *Hypnosis, anxiety, authoritarian, permissive, approach, treatment.*

1. Introduction

Hypnosis appears to have begun with Buddhism and other eastern meditation practices of ancient Indian civilizations (Otani, 2003), as it is the narrative of sleep temples in ancient Egypt (Okasha, 2001), Greece, and Rome (Hassan, 2014). Hypnotism has defined as a state in which an individual is placed in a sleep-like state, yet as we will see, it is a distinct state of sleep. Hypnosis as a modern science is documented in Paris as far back as the 18th century, where it was used as a medical tool in dealing with pain-resolving troubles, and the Austrian physician Franz Anton Mesmer (1734-1815) was the first to become famous in using a form of hypnosis referred to as "*animal magnetism*" and later as "*Mesmerism*" (Lanska & Lanska, 2007:302).

Anxiety disorders were recognized and separated from other negative mental health conditions (such as depression) as early as Biblical times. They were even acknowledged by Greek and Latin physicians and thinkers This paper aims to compare and evaluate the authoritarian and permissive approaches of hypnosis for anxiety treatment in patients.

2. Method

In this study, we have used the comparative method to see the differences and similarities between the hypnosis techniques such as permissive techniques and authoritarian techniques. This way we would make identification of which is the best to use in different clinical situations and with clients. So, a comprehensive literature study for method comparison. A systematic literature review (SLR) identifies, selects, and critically evaluates material to address a specific topic (Dewey & Drahota, 2016). Before

conducting the review, the systematic review should adhere to an established procedure or strategy in which the criteria are clearly outlined. This paper includes the findings of a literature review. A study of the literature assists the author in learning about the history and nature of their issue, as well as identifying research gaps and concerns.

3. Hypnotherapy in anxiety treatment

Hypnotherapy, in its most basic form, is the use of hypnosis in psychotherapy by professional psychotherapists. It is also used by sergeants, obstetricians, pediatricians, general practitioners, psychiatrists, and dentists (Erickson, Hershman & Selter, 2014). According to the British Psychological Society, "*hypnosis signifies a relationship between one person, the 'hypnotist,' and another person or individuals, the subject' or subjects*" (Heap, 2005:117). The hypnotist seeks to affect the participants' perceptions, feelings, thoughts, and behavior throughout this contact by urging them to focus on ideas and pictures that may elicit the desired outcomes. The verbal communications used by the hypnotist to create these effects are referred to as "*suggestions*" (Stewart, 2005:511).

3.1. The authoritarian techniques of hypnosis

The authoritarian style is one in which the hypnotist 'directs' the client into hypnosis by employing a rehearsed set of phrases. The hypnotist utilizing this method would usually have a consistent format for everyone. Authoritarian hypnosis scripts (also known as direct or paternal scripts) differ from permissive scripts only in the manner in which they are given (Tellegen, 1978).

The authoritarian technique to induction of hypnosis is frequently shorter than the permissive (maternal, indirect) approach and is administered in such a manner that the subject understands that you want them to follow your instructions. This anticipation may frequently produce the desired outcomes, but you must speak confidently. The authoritarian style entails the hypnotist making direct recommendations and directives to the patient, such as "*You are starting to feel calm, and this relaxation will extend throughout your body*" (Lindsay, Maynard & Thomas, 2005).

3.2. Permissive techniques of hypnosis

The hypnotherapist uses everything present, such as the client's issue, sensory experience, and immediate surroundings, to create a process in which a trance state is spontaneously attained. Because it is based on the late Milton Erickson's method, permissive hypnotherapy is additionally known as Ericksonian hypnosis. Milton Erickson stressed that recognizing the reasons for symptoms or the patient's difficulties does not inevitably lead to treatment (Erickson, 1980); We should also mention that hypnosis assists the client in readjusting to a more appropriate functionality at the proper time and activating the right action. Finally, the hypnotherapist directs the client's attention to bodily internal, and external feelings and emotions, allowing the customer to achieve a high degree of internal focus while blocking out external stimuli.

4. Authoritarian and permissive approaches of hypnosis for anxiety treatment in patients

The authoritarian is more conservative and is known for his directness. In comparison, the permissive approach is softer and often slower than the authoritarian. Coyle (1982) conducted research to determine which hypnosis approaches, authoritarian or permissive, would be seen by the participant as being more formal compared to reality. Each group was given a hypnotic induction, as well as 10 hypnotic recommendations that were either authoritarian or permissive in nature. Absorption, interpersonal trust, and opinions about hypnosis were examined and evaluated for association having both authoritarian and lenient tendencies in hypnosis situations. Recommendations in the authoritarian form imply that the subject is under the hypnotist's control; permissive suggestions are designed to stress the subject's thinking. To summarize, usage is a significant distinction between authoritarian and permissive approaches.

5. Discussion

Other cues to look for include, a visual modality person's stance and gestures may maintain a somewhat relaxed posture manner than a kinesthetic modality person and may be slimmer (Winsor, 1993). Other techniques are available to assess the client's therapist's appearance, and demeanor, and behavior-based methodology may utilize rapidly to get a notion of the client's location holding. Knowing the client's primary modality will assist the therapist in selecting phrases that will lead the client to deeper stages of both relaxation and resisting recommendations made by the hypnotherapist. A sensitive person,

for example, will respond favorably to terms like touch, smoothness, hotness, coldness, and so on. The current study, however, shows that authoritatively and permissively phrased hypnotic recommendations are equally effective, and that personal preference for a certain style of hypnotic communication has no influence on the amount of hypnotic receptivity.

6. Conclusions

This study aimed to make a comparison between the techniques of hypnotherapy which is the authoritarian versus permissive method. The effectiveness of authoritarian versus permissive hypnotic communication styles was studied.

Based on the systematic literature study, we can conclude that using the permissive method, the hypnotherapist uses everything available, such as the client's issue, sensory experience, and immediate surroundings, to enable a process in which a trance state is spontaneously attained.

In the treatment of anxiety disorders, hypnotherapy has the potential to be a quick and cost-effective alternative to medication, particularly in children and young adults. Although research on using hypnosis, in general, is encouraging, research on using hypnotherapy to treat anxiety disorders is insufficient to draw clear conclusions.

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NEGATIVE IMPACTS OF GESTATIONAL DEPRESSION ON QUALITY OF LIFE

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Abstract

Background: Perinatal depression, and particularly gestational depression, is an important and highly neglected public health problem. We have now a large body of evidence showing the negative impacts of depressive symptoms on quality of life (QoL) but very little is known about the association of gestational depression and QoL.

Methods: In this study we evaluated the impact of gestational depression (GD) on quality of life. We assessed 252 women in the second trimester of pregnancy using an abbreviated version of the World Health Organization Quality of Life questionnaire and the MINI International Neuropsychiatric Interview for depression diagnosis.

Results: In our sample, 20.6% (n= 52) were diagnosed with depression. We compared sociodemographic and clinical data and QoL domains of the two groups (with/without depression) using Chi-square tests, or Fisher's exact test, for categorial variables and Analyses of Variance for continuous variables. The results showed that depressed women scored significantly lower on all QoL domains, when compared with the group of non-depressed women.

Conclusion: In summary, prior and current depression are associated with worse quality of life. We suggest that clinicians should address not only depressive symptoms but also quality of life dimensions which include basic human needs such as life satisfaction and living conditions.

Keywords: *Gestational depression, quality of life.*

1. Introduction

Gestational depression (GD) is a prevalent psychiatric disorder, unfortunately still neglected. The GD prevalence can vary according to the populations and the diagnostic instruments used but it is well established that GD prevalence is higher in low- or lower-middle-income countries (Yin et al. 2021). The GD prevalence can also vary according to the time of evaluation of the gestational period and seems to be higher in the second trimester (Castro e Couto et al. 2016)].

A large body of evidence has shown that for offspring, GD can be associated with preterm birth or low birth weight and, more important, is associated with long-term negative neurodevelopmental consequences (Zhang et al. 2023). GD also impacts women significantly since they are at higher risk for substance abuse, suicidality, preeclampsia, postpartum depression, and edema (Yin et al. 2016; Castro e Couto et al. 2016). It is also known that a depressive episode negatively impacts the Quality of life (QoL), characterized by a global well-being and the ability in carrying out the tasks of living (Hohls et al. 2021). The impact of GD on women's Quality of Life remains a neglected matter of study, mainly in low-or middle-income countries (Soyemi et al. 2022).

2. Objective

This study aimed to assess the impact of GD on quality of life in a sample of second trimester pregnant Brazilian women, a middle-income country.

3. Methods

For this study, 252 consecutive women attending the Obstetrics and Gynecology Service of the Federal University Hospital in Belo Horizonte, Minas Gerais, between January 2014 and December 2019, were enrolled.

This study was approved by local Ethics Committee, all participants signed an informed consent, and it was conducted according to the Declaration of Helsinki (World Medical Association, 2013).

All patients were in the second trimester of pregnancy and the only exclusion criteria was illiteracy. A questionnaire was administered consisting of standardized questions regarding maternal age, education level, marital status, pregnancy planning, history of abortion, and sociodemographic status, among other factors.

To assess quality of life, we used an abbreviated version of the World Health Organization Quality of Life, WHOQOL-BREF (The WHOQOL Group, 1998). It is a self-report questionnaire, consisting of 26 questions, which assess four different domains of quality of life: physical, psychological, social relationships and environment. It has also two questions about the judgment of the subject concerning their quality of life. For the assessment of prior and current major depression diagnosis we used the structured interview MINI-Plus (5.0 version) following DSM-IV criteria (Amorin, 2000). All women diagnosed with depression were referred for treatment.

Statistical analyses were performed using Stata 13 software (StataCorp LP, College Station, TX, USA). We performed statistical analyses for proportions (MINI-Plus depression diagnosis, yes or not, included) using the chi-squared test or Fisher's exact test when appropriate. To determine differences between the groups concerning interval data, a series of one-way analysis of variance (ANOVA) were performed. We used the standard 0.05 threshold for statistical significance.

4. Results

Sociodemographic data and clinical features were compared between depressed ($n = 52$) and non-depressed women ($n = 200$). No significantly statistical differences were found between the two groups in all variables studied (age, years of education, number of children, marital status, religion, high risk pregnancy, pregnancy planning, history of abortion use of tobacco or alcohol during the pregnancy) but depressed women were more prone to have a previous depressive episode when compared to non-depressive women [($n = 31$, 59,6%) versus ($n = 38$; 19%); $P < 0.0001$] and a previous post-partum depression [($n = 12$; 23.1%) versus ($n = 11$; 5,5%) $p = 0.0004$].

In relation to domains of QOL, depressed women scored significantly lower in all domains, when compared to the group of non-depressed women (Table 1). Women with a previous depressive episode also scored significantly lower in all QoL domains.

Table 1. Comparison between the studied groups concerning quality of life.

	Women with depression		Non-depressed women		P Value
	N = 52; (20.6%)		N = 200; (79.4%)		
	M	SD	M	SD	
Physical Domain	11.8	2.4	14.0*	2.6	0.000
Psychological Domain	12.3	2.6	15.1*	2.5	0.000
Social Domain	12.7	2.8	15.3*	2.9	0.000
Environmental Domain	11.6	2.5	13.3*	2.5	0.000
Health Perception	13.2	2.8	15.0*	2.8	0.000
Overall Quality of life	12.1	2.0	14.2*	2.1	0.000

Note: N, number of individuals; M, mean; SD, standard deviation; * nondepressed women; >, depressed women

5. Discussion

We assessed 252 women in the second trimester of pregnancy, 52 of them (20.6%) were diagnosed with a major depression episode, using a structured interview. We were able to show that depressed women scored significantly lower on all QoL domains, psychological, social, environmental, and physical domains as well as health perception and the overall quality of life, when compared with the group of non-depressed women.

The perinatal mental health is a neglected issue, even more in low- and lower middle-income countries. Recently, a group from South Africa studied 285 women and found a reduction in all dimensions of QoL in depressed women versus non-depressed women, like our results (Soyemi et al. 2022). However, they studied women in the first and second trimester of pregnancy whereas we studied women in the second trimester. We evaluated women in the second trimester because a previous study conducted by us showed that depression prevalence can vary according to the time of evaluation of the gestational period and seems to be higher in the second gestational trimester (Castro e Couto et al. 2016).

Another recent study performed a systematic review of longitudinal studies in general population. Authors showed that QoL was reduced even before depression onset, dropping during the disorder, and improving at recover (Hohls et al. 2021). Longitudinal studies are also necessary in gestation depressed women.

In conclusion, a current major depression episode is associated with worse quality of life in our sample of pregnant second trimester women. The concept of QoL is multidimensional comprising different aspects of well-being instead of only the negative symptoms of a mental disease. We suggest that health personal should address not only depressive symptoms but also quality of life dimensions that includes basic human needs such as life satisfaction.

Acknowledgements

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CROSS-CULTURAL VALIDATION OF THE RESILIENCE SCALE FOR ADULTS IN THE QUEBEC UNIVERSITY POPULATION

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Abstract

In recent years, the concept of resilience has received attention from many researchers, particularly in light of the pandemic (Kontogiannis, 2021; Vindegaard & Benros, 2020). Several studies have sought to map the situation in various countries and compare how nations are coping with this adversity. Resilience is therefore a timely topic and concerns about the methodological aspects associated with cultural comparisons are justified. In this context, the main objective of this dissertation is to contribute to the cross-cultural validation of a widely recognized instrument for measuring resilience; the Resilience Scale for Adults (RSA; Hjemdal et al., 2001) with a sample of 405 Quebec and French speaking students. For comparison purposes, the statistical analyses carried out were based on two measurement models: the classical test theory and the item response theory. Analyses of the factor structure of the instrument show that the six-factor model obtained using exploratory structural equations (ESEM) fits the data collected from the Quebec sample well. The alpha coefficients of the dimensions vary from very good (0.84) to excellent (0.95). These results are comparable to those obtained with other cultural groups by several researchers. The analysis of classic items and that based on Samejima's (1969) graded model show that the majority of the RSA items are effective and useful for evaluating resilience in Quebecers, especially in those with a very low to moderate level of resilience. Five items present less satisfactory indices: three in the Social Competence dimension and two in the Social Resources dimension. All in all, the RSA has satisfactory metric qualities and is an instrument that can be used to assess resilience in the Quebec context. Studies involving direct comparisons between cultures are still needed to support these results.

Keywords: *Resilience, scale, cross-cultural validation, item response theory, factor analysis.*

1. Introduction

The pandemic has fueled the scientific community's interest in the concept of resilience (Kontogiannis, 2021). Resilience can be defined as an individual's ability to adapt or maintain normative functioning despite exposure to adversity (Bonanno, 2008). In a context of common adversity, it is relevant to compare how different populations adapt and to ensure the quality of studies involving cross-cultural comparisons, there is a need to ensure that valid measurement instruments are used in target populations (Davidov et al., 2014). Cross-cultural validation studies are generally conducted in the light of Classical Test Theory (CTT) and involve confirmatory factor analyses, reliability analyses and criterion validity estimates. Few of them imply Item Response Theory analyses (IRT).

The Resilience Scale for Adults (Hjemdal et al., 2001) has been identified as one of the best resilience measures with various populations (Windle et al., 2011). It contains 33 semantic differentiator items with seven anchor points and assesses six dimensions of resilience: Self Perception, Planned Future, Social Competence, Structured Style, Family Cohesion and Social Resources. Cronbach's alphas vary from 0.68 to 0.84 between dimensions (total alpha = 0.89).

Several cross-cultural validation studies show that the factorial structure of RSA is stable with various populations, but none of them report statistical analyses within the framework of IRT and highlight the complementarity of these analyses with CTT analyses.

2. Objectives

This study pursues two objectives: 1) contribute to the cross-cultural validation of the Resilience Scale for Adults (RSA; Hjemdal et al., 2001) by assessing the psychometric qualities of this scale with a French-speaking university sample in Quebec (Canada) and 2) study the complementarity of statistical

analyses conducted in the light of Classical Test Theory (CTT) and Item Response Theory (IRT) regarding psychometric properties of the RSA.

3. Methods

The student community of a university in Quebec (Canada) was contacted by email to participate in a study on young adult resilience and to complete an online survey (Parent, et al., 2012). In this context, 405 participants (81.5% women) between the ages of 18 and 54 ($M = 25.94$, $SD = 6.98$) completed the RSA and other measures to assess adversity, adjustment, and resilience. It should be noted that half of the participants (49.5%) had experienced more than three traumatic events according to the Early Traumatic Experiences (Bremner, 2004).

4. Data analysis

TCT analyses: The factorial structure of the RSA was tested using different models of confirmatory factor analyses (AFC) and exploratory structural equations (ESEM) modelling analyses. The internal consistency of each SAR dimension was also studied.

IRT analyses: The Samejima graduated model (1969) estimated the metric characteristics of items (Bertrand & Blais, 2004). Indices of discrimination (α) indicate the extent to which an item can differentiate individuals according to their level of latent trait. Baker (2001) proposes the following classification to interpret this index: a) very low: 0.34 or less, (b) low: 0.35-0.64, (c) moderate: 0.65-1.34, (d) good: 1.35-1.69, and (e) excellent: 1.70 or more. Difficulty Indexes (β) are location indexes and identify at what level of the measurement scale the item works best (Baker & Kim, 2017). In general, it is expected that the response options have some dispersion (moderate) and that as the response options increase, the index is higher (i.e., implies a higher level of resilience).

5. Results

The six-factor ESEM model is the one that best fits the data in a Quebec context ($TLI = 0,932$; $CFI = 0,956$; $RMSEA = 0,038$; $SRMR = 0,027$). However, item SR23 does not charge on its original factor (Social resources; $\lambda = 0.057$), but under another factor (Family cohesion; $\lambda = 0.652$).

Table 1 reports indices of internal consistency (Chronbach's alpha) and offers a resume of discrimination and difficulty indices for each of the RSA dimensions.

Table 1. Internal consistency and IRT analysis.

Dimensions	Cronbach's alphas	Discrimination parameter (α)	Difficulty parameter (β)	Problematic items
Perception of Self	.914	Moderate (1.028) to excellent (1.994)	All items are satisfactory*	
Planned Future	.933	Good (1.648) to excellent (3.027)	All items are satisfactory*	
Social Competence	.939	Moderate (.714) to excellent (5.010)	Three items are unsatisfactory**	SC3, SC9, SC26
Family Cohesion	.951	Excellent (1.751 to 3.181)	All items are satisfactory*	
Social Resources	.949	Moderate (.860) to excellent (5.816)	Two items are unsatisfactory**	SR17, SR23
Structured style	.837	Moderate (1.118) to excellent (2.070)	All items are satisfactory*	

Note. *Satisfactory: Show a moderate increase in difficulty parameter for higher levels of resilience; **Unsatisfactory: they have some response categories that do not particularly target a certain level of resilience and a predominance of a limited number of response categories.

As shown, Cronbach's alphas range from very good (0.84) to excellent (0.95) for RSA dimensions. Cronbach's alpha for the global scale is also excellent (0.95).

The discriminating power (α) of items ranges from moderate (0.71) to excellent (5.82). No item is problematic regarding discrimination. Ten items of the RSA (30.3%) have moderate indicators of discrimination, four (12.1%) are considered good and nineteen (57.6%) are considered excellent.

Overall, there is a moderate increase in the difficulty index for higher levels of resilience. This is consistent with what the IRR considers appropriate (Pini 2012). Five items show less satisfactory signs of difficulty, that is, they have certain response categories that do not specifically target a certain level of resilience.

6. Discussion

Results of this study highlight the good psychometric properties of RSA among Quebec university students. The six-factor factor structure is confirmed although it is an ESEM model that appears to be the most appropriate and one item is problematic (SR23). The internal consistency indices are excellent.

Most of RSA items are effective and useful in assessing the resilience of Quebecers, especially those with very low to moderate resilience. Five items have less satisfactory indices: three come from the Social Competence dimension and two from Social Resources. Revision of these items would improve the psychometric properties of the RSA. Also, it would be good to reformulate these items to be more effective in distinguishing individuals with high levels of resilience, under-represented in the current RSA format.

However, the sample of participants is a limitation of this study. It only includes university students that are more educated than average population and mostly women. A study involving a more representative sample of participants would be useful. Further IRT analyses would also allow to study the differential functioning of items across cultures.

7. Conclusion

Overall, results support the use of the RSA to assess resilience of Quebecers, mostly with university women showing very low to moderate factors of resilience. This research also highlights the relevance of IRT as a technique for studying item biases and the use of measurement scales. IRT analyses provide additional information to those obtained using CTT analyses. The simultaneous use of CTT and IRT analyses is recommended.

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IS THIS TEXT LIGHT? WHEN WEIGHT OF A TEXT INFLUENCES ITS COMPREHENSION FOR ELEMENTARY PUPILS

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Abstract

Reading comprehension is fundamental for both children and adults. It involves three dimensions (Giasson, 1990): the reader, the text and the context. This last component is notably physical and includes the perceptions coming from our own body. Yet our study is situated in the field of embodied cognition, which investigates the effects of the physical environment and its characteristics, and more specifically the way it affects our representations and cognitive processes. Thus, Jostmann et al. (2009) found that a heavier medium of presentation of a text leads to consider the content as more important than a lighter weight. This offers an interesting perspective in the context of reading comprehension and education. Considering the task as more important could lead to better performances, simply by changing the way to present the task. The aim of our work was therefore to study effects of the weight of the presentation device on reading comprehension. We hypothesised that a congruence between actual weight and its perception could lead to better performances in reading comprehension. French pupils aged between 10 and 11 participated in our experiment. These pupils already had the capacity to decode texts. The measures consisted in a French reading comprehension questionnaire (Potocki et al., 2014) and a measure of weight perception using a visual scale. We manipulated two variables: the text difficulty (easy or difficult); and the weight conditions with pupils either responding on a table, or holding a light or heavy device. Statistical analyses indicate that a significant interaction between the weight and the perceived weight, in function of the text difficulty. More precisely for an easy text, a congruent perception of the device (*e.g.* a light perception of a light device) improves reading comprehension performance. However, when the text is difficult, incongruence between devices and their perception (*e.g.* a heavy perception of a light device) leads to better performance. These results confirm that the weight device perception modifies the setting of cognitive processes involved in reading comprehension. It indicates that the perception of the task plays an important role in the performance. The perspective arisen by these results is that the physical classroom environment could be a simple means to enhance performance in reading comprehension. Extension of this work will be to lighten the potential mediators of the relation above-mentioned, by taking in consideration how the pupils perceive their capacities to manage the presented task.

Keywords: *Text comprehension, presentation device, embodied cognition, education.*

1. Introduction

Reading comprehension is a fundamental life skill. However, it is not mastered by all children. In fact, more than a quarter of the 10-year-old French pupils fail to master the foundational skills (PIRLS survey; Colman & Le Cam, 2016). These difficulties persist later, with 12.5% of the 15-year-olds unable to complete simple reading comprehension tasks (*e.g.* finding important information; PISA survey, Organisation for Economic Cooperation and Development, 2019). Yet, this competence is fundamental not only for children but also for adults. There is a need to find ways to address these difficulties, and more importantly to prevent them in order to ensure optimal development of this skill.

The model of reading comprehension conceptualised by Giasson (1990) proposes three interacting dimensions: the reader, the text and the context. In this last dimension, context is defined as a psychological dimension (*i.e.*, self-perceptions), a social dimension (*i.e.* interactions during reading) and a physical dimension. This latter has been explored for some decades, as this dimension has also been shown to be important for reading comprehension. For example, Golan et al. (2018) have shown differences in terms of enjoyment and comprehension between reading a text on paper and reading it on a computer screen. Taking the notion of 'physical context' a step further, Glenberg and Kasckak (2002) showed that children's

comprehension of a story improved when they had the opportunity to physically manipulate elements of the story. It would therefore seem that accessible and simple interventions are available for the prevention and remediation of reading difficulties.

The theoretical perspective we use to explain how the environment affects cognition is that of grounded cognition. This approach postulates that the characteristics of the physical environment play a role in the creation, implementation and modulation of cognitive processes. It has been the subject of a growing body of research in recent decades (Barsalou, 2020), and applications in education have recently emerged (Agostini & Francesconi, 2021). For example, Jostmann et al. (2009) have shown that a higher weight of the presentation medium leads to the content presented being perceived as being more important. In an educational context, potential applications follow from these results: if pupils believe that a content (or text) is important, they could mobilise their skills more actively, leading to better performance.

2. Objective

The aim of this study was to test whether the weight of the medium influences reading comprehension as a function of the difficulty of the text. Specifically, we hypothesised that a congruence between text and medium (*e.g.*, an easy text presented on a light medium) would lead to better performance in a reading comprehension task. We also hypothesised that this effect would be influenced by the perceived importance of the task.

3. Method

3.1. Participants

156 fourth graders participated in our experiment. 20 pupils with dyslexia, dyspraxia, dysgraphia were excluded after their participation, so that our final sample consists of 136 pupils (70 boys; 66 girls) aged between 9 and 10. All participants came from schools in the Hauts-de-France region of France.

3.2. Material

The material was based on Jostmann et al. (2009). The presentation material was grey cardboard sleeves with red elastic bands. The light condition was created by placing sheets of paper inside the cardboard to achieve a weight of 500 grams. The heavy condition was created by replacing some of the paper sheets with a tile to reach a weight of 1 kg. The external appearance of both conditions was visually identical.

Reading comprehension was assessed using Potocki et al.'s (2014) questionnaire. Either one of two stories (easy or difficult) was presented. Each text was associated with 12 questions, which were scored one point by correct answer.

Pupils also answered demographic questions about their age and gender. For the experimental condition, perceived weight was also assessed using a visual analogue scale from “Very light” to “Very heavy”.

3.3. Procedure

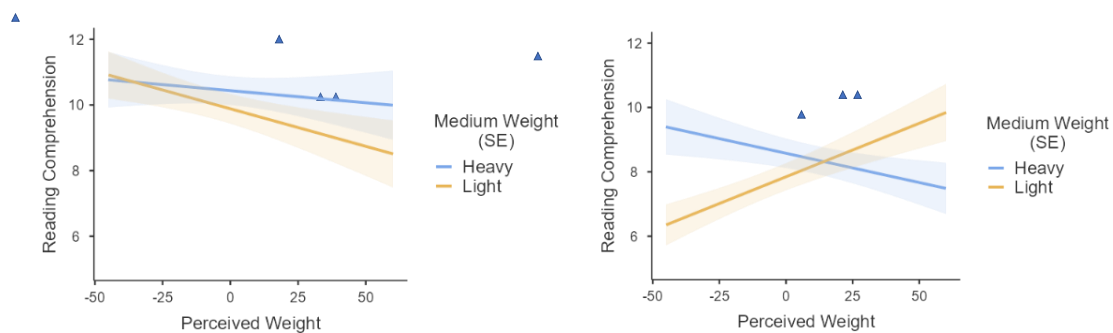
Two groups were formed, according to the two conditions. In the experimental condition, pupils stood and completed the reading comprehension questionnaire presented on cardboard folder. The folders were distributed alternately according to the weight and the difficulty of the text as follows: Easy-Light, Easy-Heavy, Difficult-Light, Difficult-Heavy. In the control condition, pupils sat at a table and completed the questionnaire normally. In this condition, only the difficulty of the text varied from pupil to pupil.

At the end of the experiment, pupils answered demographic questions. In the experimental condition, pupils also had to complete the visual analogue scale.

4. Results

As a main result, the ANOVA reveals a significant interaction between the text difficulty, the medium weight and the perceived weight [$F(1, 85) = 5.73, p < .05$]. Post-hoc comparisons indicate that there is a significant difference of performance in reading comprehension between text difficulties for the light medium [$t(85) = 3.29, p < .01$] and for the heavy medium [$t(85) = 2.95, p < .05$]. There is also a significant difference between easy text presented on a heavy medium and difficult text presented on a light medium [$t(85) = 4.27, p < .001$]. The specific interactions between medium weight and perceived weight for each text difficulty are presented in Figure 1.

Figure 1. Interaction between the medium weight and the perceived weight for easy text on the left and on the difficult text on the right.



5. Discussion and conclusions

Our hypotheses were confirmed as we observe significant differences in performance between text difficulties in function of medium weight. We also observe an interaction between the weight (real and perceived) and the difficulty of the text. There is a ceiling effect when the text is easy (Figure 1). When the text is difficult, the congruence between perceived and real weight (e.g. a heavy perception of a heavy medium) leads to a better performance on reading comprehension questions (Figure 1). Our interpretation is that the perceived weight could be conceptualised as a proxy for self-perception of competence. This self-perception combined with the perceived importance leads to different effects depending of the text difficulty. However, results of this study require further theoretical exploration. In particular, there is a need to investigate the issue of self-perception and how the match between the perceived demands of the task and the perceived competence of the students contributes to the final performance. The latter perception is called self-efficacy, and can be defined as our belief in our aptitude to exploit our capacities in order to accomplish a task (Bandura, 2003). The positive consequences of a good and high self-efficacy have been largely reported in relation to performance (Bouffard, 1992). It would be interesting to investigate their potential mediating effect in the relationships of our study.

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SCHOOL ADJUSTMENT OF TEENAGERS: THE RELATIONSHIP BETWEEN BULLYING, VICTIMIZATION AND RESILIENCE FACTORS

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Abstract

Bullying and victimization are among the most worrying problems that can undermine school climate. Worldwide, studies show that between 6% and 45% of students are involved in those kinds of behaviours, depending on countries and methodologies (Bowen et al., 2018). In addition to reaching a significant proportion of students, studies list a variety of short- and long-term consequences related to school violence such as various psychological difficulties (Hawker & Boulton, 2000), poor grades and school dropout (PISA, 2015). While school violence is widespread and devastating, some adolescents maintain positive adjustment throughout their schooling despite victimization. Resilience can take a variety of meanings, but it's mostly associated with the ability to maintain normal functioning despite adversity (Luthar et al., 2000). In this context, objectives of the study are: 1) to provide a global picture of bullying and victimization in high schools in Quebec (Canada); 2) to study the relationship between bullying, victimization, resilience factors and school adjustment. A total of 165 high school students completed a survey on bullying, victimization, resilience, and related topics. Results show that 23% of teenagers have adopted bullying behaviours in the past two months, while 31% reported being bullied. Furthermore, 44% of adolescents reported bullying behaviours at some point in their schooling and 61% reported being a victim. Hierarchical regression analysis shows that reported victimization and resilience factors account for 44% of the school adjustment variance, with resilience factors contributing more to the predictive model (26%) than reported victimization (18%). This study highlights the extent of violence in the school context and how resilience components can act as protective factors and maintain positive coping.

Keywords: *School-adjustment, teenagers, victimization, resilience, assessment.*

1. Introduction

Bullying and victimization are among the most worrying problems that can undermine school climate. Worldwide, studies show that 6% to 45% of students are involved in those kinds of behaviours, depending on countries and methodologies (Bowen et al., 2018). In addition to reaching a significant proportion of students, studies list a variety of short- and long-term consequences related to school violence such as various psychological difficulties (Hawker & Boulton, 2000), poor grades and school dropout (PISA, 2015). In the long term, youth involved in school violence are also likely to present social problems such as low life satisfaction, addictions, and mental health problems (Moore et al., 2017). In addition, being involved in such violence leads to antisocial behaviours (Astor et al., 2004), and in some cases, suicide (Klomek et al., 2006). In this context, better understanding of school violence is important, to reduce it and moderate its consequences. While school violence is widespread and devastating, some adolescents maintain positive adjustment throughout their schooling despite victimization. Resilience can take a variety of meanings, but it's mostly associated with the ability to maintain normal functioning despite adversity (Luthar et al., 2000). The idea of seeing resilience as a capacity or trait is to say that the individual has characteristics that help him maintain a good adjustment despite exposure to risk factors. Rutter (1987) argues that this concept is connected to characteristics such as self-esteem, positive coping, and stable and secure relationships. Scientific literature on teen resilience suggests that protection processes are at three levels: individual, family and community (Southwick et al. 2014).

2. Objectives

Objectives of the study are: 1) to provide a global picture of bullying and victimization in high schools in Quebec (Canada); 2) to study the relationship between bullying, victimization, resilience factors and school adjustment among adolescents from low-socioeconomic backgrounds.

3. Method

Participants: Target population of this study is high school students who attend public schools (Quebec, Canada). The sample includes 165 students (112 girls and 53 boys), 62 in 10th Grade (37.58%) and 98 in 11th Grade (59.39%). Ages range from 15.6 to 18.7 years (M=16.9 SD=0.63). Teens are Caucasian in 86.06% of cases (n=142). Participants were recruited by phone from a list of potential participants provided by the Ministry of Education (under the right of access to information). The list included contact information of 1000 randomly selected adolescents attending a public high school in low-socioeconomic areas. Teens who agreed to participate received information about the study by e-mail and a link to complete an online survey on bullying, victimization, resilience, and related topics.

Measures: Olweus Bully/Victim Questionnaire-Modified (B/VQM; Strohmeier, Kärnä et Salmivalli, 2011) assesses school bullying et victimization in the last two months and throughout school life. It includes 9 items on various forms of victimization such as verbal victimization, social exclusion, physical victimization, items robbery, spreading rumors, racist or sexual insults. B/VQM includes two parts: one on bullying and the other one, on victimization. Resilience Scale for Adolescents (READ; Hjemdal et al., 2006) includes 28 items answered on five-points Likert scale to assess five factors of resilience: 1) Personal Competence, 2) Social Competence, 3) Structured Style, 4) Family Cohesion and 5) Social Resources. School adjustment is assessed by an index score including measures of global self-esteem, positive attitude toward school, no recent bullying and victimization as measured by B/VQM, and a planned future indicator according to what the student will do after high school. Global self-esteem is assessed by 6 items of the Self-Perception Scale for Children (SPSC; Harter, 2012) and Attitude toward school is assessed by 15 items of the Student Motivational Profile (PME; Parent et al., 2012).

4. Results

Table 1. School victimization and bullying of the participants at different times of school life

	Within the last two months	In the Past	Throughout school life (total)
Victimization	30.91 % (n=51)	58.18 % (n=96)	60.61 % (n=100)
Bullying	23.03 % (n=38)	38.18 % (n=63)	44.22 % (n=73)

Table 2. Percentage of victimization and bullying throughout school life

Bullying throughout school life	Victimization throughout school life		
	No	Yes	Total
No	32.12% (n=53)	23.64% (n=39)	55.76% (n=92)
Yes	7.27% (n=12)	36.97% (n=61)	44.24% (n=73)
Total	39.39% (n=65)	60.61% (n=100)	100% (n=165)

Correlations between school adjustment variables and factors of resilience showed that self-esteem, attitude toward school and adjustment index score share moderate correlations with each factor of resilience while bullying and victimization in the last two months show low correlations with factors of resilience. In addition, a hierarchical regression was performed including victimization experienced by teens and resilience factors to predict school adjustment of students. Previous victimization was entered into the model in a first step and all resilience factors in a second step. Table 3 contains the final solution of the regression model ($F_{(5,158)} = 21.08, p < .001$). It shows that reported victimization and resilience factors account for 44% of the school adjustment variance, with resilience factors contributing more to the predictive model (26%) than reported victimization (18%).

Table 3. Correlations et standardized betas at the final step of hierarchic regression model

Predictive variables	School adjustment index
	β
Adversity factor	
Past Victimization	-.25***
R ²	.18***
Factors of Resilience	
Personal Competence	.41***
Social Competence	.01
Family Cohesion	.18*
Social Resources	.10
Structured Style	-.10
R ²	.26***
R ² total	.44***

*p<.05. ***p<.001

5. Discussion

Almost 70% of the participants were bullies or victims at some point in their schooling. This shows how violence in schools is a widespread phenomenon. Despite popular belief, bullying and victimization are interrelated: most of bullies (83.56%) and more than a half of victims (61%) report having experienced both situations during their schooling. These findings highlight the complex relationship between bullying and victimization and how the cycle of violence continues.

Nearly 45% (44%) of school adjustment variance can be explained by adversity and resilience factors. Moreover, resilience factors account for a significantly larger portion of adaptation (26%) than adversity (18%). These results show the extent and diversity of the consequences regarding bullying on school adjustment. They also highlight the positive and important role played by resilience factors in maintaining good adjustment. Among the resilience factors, Personal Competence and Family Cohesion are the ones that contribute the most to the understanding of school adjustment. This is in line with the findings of Rutter (1987) for whom a person's ability to demonstrate positive adjustment depends particularly on their self-esteem, the ability to use positive strategies to cope with difficulties and the quality of the family relationship that limits the psychological impact of adversity.

The role of the school is not only to promote academic learning. It must also help young people becoming good citizens and live quality life. In this regard, helping teenagers develop key resilience factors such as self-esteem and social skills is just as important as learning to read or write. Although interesting, this study focuses on teens and most participants were girls (68%). Conducting a study to understand victimization and bullying of boys and at all ages should be done.

6. Conclusion

This study highlights the extent of violence in the school context and how resilience components can act as protective factors and maintain positive coping. Promoting development of resilience factors at home and at school is an interesting way to empower teens in face of adversity, lower violence in school and maintain a good adjustment throughout life.

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AN EMPIRICAL STUDY OF INDEPENDENT VARIABLES OF NURSES' FOLLOWERSHIP

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Abstract

The topic of nurses' followership is very important in the context of Covid-19 pandemic. During this pandemic, nurses continue to affect the full extent of their expertise for the benefit of public health. Therefore, it is important for public health to identify the determinants of nurses' followership. Then, the purpose of this study is to clarify independent variables of nurses' followership quantitatively. Firstly, I identified how the existence of key-person is related to nurses' followership. Secondly, I use a hierarchical multiple regression analysis to determine how leadership and key-person influence nurses' followership.

The independent variables used in this study were affective commitment and leadership from previous studies. Next, Misumi's (1984) Performance Maintenance (PM) leadership theory (leader emphasis on subordinate performance and maintenance of good relations) is used because Maintenance behavior influenced one dimension of followership of business person (Nishinobo, 2014).

Survey participants were 306 nurses who work full-time in a medium- to larger- sized hospitals (34 males and 272 females, 73 managerial position nurses and 233 general position nurses, 119 key persons and 187 non-key persons).

Independent variables are affective commitment (an affective orientation toward the organization), and Misumi's (1985) PM leadership theory. Dependent variable is nurses' followership.

As a result of analysis, the following four points were indicated. (1) nurses' followership was three dimensions which are follower's Suggestive behavior, Considerate behavior and Supportive behavior. (2) Key person influenced followership (Considerate behavior) positively. (3) Affective commitment influenced followership (Suggestive behavior and Supportive behavior) positively. (4) Maintenance leader's behavior influenced followership (Considerate behavior and Supportive behavior) positively.

Keywords: *Nurses' followership, key-persons, independent variables.*

1. Introduction

The field of hospital nursing is showing a very complex aspect due to the changing needs of patients, advances in information technology, changes in social demands, and the pandemic caused by the covid-19. Under those increasingly complex and diverse nursing field, nursing staff are not only required to comply with instructions, but are also expected to think and act independently. In other words, the environment has become more demanding of followership behaviors than in the past. Lately, in the field of nursing management, nurses' followership behaviors are paid attention in recent years, but there is little accumulated research on this topic.

Until now, followership research in Japan has mainly focused on business persons working in the company. Unlike companies, however, hospitals are not profit-oriented and have the higher public purpose of keeping human health. Therefore, it has been pointed out that nurses' followership behaviors are different from those of business persons.

In addition, previous research of followership in Japan has been conducted mainly within a leader-follower relationship, in which followers influence their leaders effectively. This type of discussion does not seem to be in the actual situation, because team medical care is conducted in hospitals. Nurses don't influence their leader only, and aren't influenced by their leader only. There are some cases where nurses may be influenced by key-persons who are the specialist in each medical field.

2. Objectives

The purpose of this study was to examine the relationship between key-persons and nurses' followership exploratory and empirically. (1) whether nurses' followership behavior differs or not when nurses perceive the existence of key-persons, and (2) how nurse manager's leadership and key-persons influence nurses' followership.

3. Methods

3.1. Participants and procedure

This survey was conducted between February 24 and February 26 in 2021, through an Internet research firm. The survey population consisted of staff level nurses who work full time in medium to larger sized hospitals with 100 or more beds. The final number of participants in the analysis was 306. Sex of the participants was 34 (11.1%) male and 272 (89.9%) female, with female nurses accounting for about 90% of the total. Next, 73 (23.9%) had positions and 233 (76.1%) had no positions, with the majority being nurses without positions. The number of beds was 194 (63.4%) for 100-499 beds, 112 (36.6%) for 500 or more beds, 187 (61.1%) with a key-person, and 119 (38.9%) without a key-person, indicating that many nurses perceived the existence of a key-person. It is a very important factor in this study. Next, 38 (12.4%) had 0-4 years of nursing experience, 91 (29.7%) had 5-9 years, 53 (17.3%) had 10-14 years, 59 (19.3%) had 15-19 years, 52 (17.0%) had 20-24 years, and 13 (4.2%) had 25-29 years.

3.2. Measures

The questionnaire consisted of basic attributes, affective commitment, leadership (Performance behavior, Maintenance behavior), nurse followership (Suggestive behavior, Considerate behavior, Supportive behavior), and the existence of key-persons. In addition, the basic attributes identified were sex, job title, number of beds, existence of key-persons, and years of nursing experience. Regarding the presence of key-persons, we asked, "Are there any influential key-persons in your workplace?"

PM theory of leadership. We used the 16-item PM theory leadership questionnaire developed by Misumi (1984) to measure leadership. Because many of the leadership measurement scales used in the analysis of existing followership studies are based on PM theory. Nurses were asked to respond using a 5-point Likert-scale with the instruction, "1: I don't agree at all," "2: I don't agree," "3: Neither," "4: I agree," and "5: I agree very much." We used The Cronbach's alpha coefficient. The first factor was $\alpha=.89$ and the second factor was $\alpha=.73$, confirming a certain level of reliability. Therefore, the mean value of each factor was used as the variable value in the subsequent analysis.

Nurses' followership. We used the 30-item Nurses' followership questionnaire developed by Nishinobo (2022) to measure followership, because this is the only measurement of nurses' followership scale in Japan Nishinobo's (2022). Nurses were asked 18 questions related to Suggestive behavior, 6 questions related to Considerate behavior, and 6 questions related to Supportive behavior. We used The Cronbach's alpha coefficient. The first factor was $\alpha=.95$, the second factor was $\alpha=.81$ and the third factor was $\alpha=.82$. Therefore, we confirmed the reliability sufficiently.

Affective commitment. We used the 6-items affective commitment questionnaire developed by Allen & Meyer's (1996) to measure affective commitment, because this measurement is often used in followership research in Japan. Sample items include "I would be very happy to spend the rest of my working life (career) at my current hospital." Nurses were asked to respond using a 5-point Likert-scale with the instruction, "1: I don't agree at all," "2: I don't agree," "3: Neither," "4: I agree," and "5: I agree very much."

4. Results

4.1. Leadership and key-person in relation to followership

Followership (considerate behavior) and followership (supportive behavior) were statistically significantly higher when there was a key-person than no-key person (Table 1).

Table 1. Results of t-test.

		Followership (Suggestive behavior)		Followership (Considerate behavior)		Followership (Supportive behavior)	
		Mean	t value	Mean	t value	Mean	t value
		Key-person	Non-exist	2.39	-1.77	3.01	-4.14***
	Exist	2.52		3.32		2.67	

Note) *** $p < 0.001$

Next, we analyzed a binomial logistic regression analysis and a hierarchical multiple regression analysis to show how leadership and key-person influence nurses' followership (Table 2, 3). Leadership (M behavior) was shown to have a significant positive influence followership (considerate behavior) and followership (supportive behavior). Furthermore, key-persons were shown to have a positive influence followership (considerate behavior) only. And leadership didn't influence the existence of a key-person.

Table 2. Results of binomial logistic.

Variable	Partial Regression Coefficients B	Standard Error	P Value	Odds Ratio Exp(B)	95% Lower Limit	95% Upper Limit
Leadership (M behavior)	0.275	0.162	.090	1.316	0.958	1.809
Leadership (P behavior)	0.108	0.181	.549	1.114	0.782	1.587
Sex	0.275	0.375	.464	1.317	0.631	2.749
Position	0.419	0.289	.146	1.521	0.864	2.677
Years of Nursing Experience	0.035	0.092	.703	1.036	0.865	1.240

Note) Dependent variable: Existence of Key-persons

Table 3. Results of hierarchical multiple regression.

Variable	Followership (Suggestive Behavior)			Followership (Considerate Behavior)			Followership (Supportive Behavior)		
	Step1	Step2	Step3	Step1	Step2	Step3	Step1	Step2	Step3
Sex (1 : Female)	-0.068	-0.067	-0.070	0.076	0.078	0.068	-0.039	-0.034	-0.037
Position (1 : Position)	0.181*	0.172*	0.168*	0.107	0.081	0.066	0.262***	0.222***	0.216***
Years of Nursing Experience (1 : 0-4 years, 2 : 5~9 years, 3 : 10~14 years, 4 : 15~19 years, 5 : 20~24 years, 6 : 25~ years29)	0.105	0.123*	0.122	0.085	0.137*	0.134*	0.007	0.088	0.087
Affective Commitment	0.204***	0.170**	0.164**	0.177*	0.086	0.064	0.292***	0.146**	0.138*
Leadership (M behavior)		0.077	0.074		0.226***	0.214***		0.345***	0.340***
Leadership (P behavior)		0.024	0.023		0.034	0.031		0.091	0.090
Key-person (1 : Exist)			0.055			0.202***			0.073
Adjust R ²	0.112	0.112	0.112	0.048	0.085	0.122	0.167	0.267	0.270
F value	10.656***	7.405***	6.490***	4.817**	5.705***	7.059***	16.317***	19.504***	17.088***

Note) *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; VIF<1.25

5. Conclusions

This study examined the effects of leadership and key-person on nurses' followership. The analysis showed 2 points. Firstly, leadership (M behavior) influenced followership (considerate behavior) and followership (supportive behavior). The practical implication is to have manager level nurses participate in training to improve their leadership (M-behavior). Secondly, existence of key-person influenced followership (considerate behavior). The practical implication is that hospitals identify the trait that nurses recognize as key-person and consider placing them in departments where they do not exist.

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KALEIDOSCOPE CAREER MODEL: IMPACT OF PERSONAL, FAMILY, ORGANIZATIONAL AND SOCIAL VARIABLES

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Abstract

The main purpose of this study is to explore the impact of personal (gender, career stage and educational level), family (marital status and children), organizational (type and size of company and work regime) and social (individualism vs collectivism) variables on the strategic career behaviors of the Kaleidoscope Career Model (authenticity, balance and challenge) in European workers in flexible working arrangements. Survey data was obtained from 739 employees (Male=442, 59.8%), with a mean age of 27.64 years (SD=8.48; Min-Max=18-70), working mostly full-time (n=398, 53.9%) and with 46.35% of their work being done remotely. Results suggest that the personal and family variables of gender, career stage, education, and having children, as well as the organizational and social variables of employment status and individualistic vs. collectivistic culture, have the most significant impact on strategic career behaviors. Knowledge about the impact of these variables can support organizational leaders in reviewing their policies and practices for managing the careers of their employees, particularly those in flexible working arrangements.

Keywords: *Strategic career behaviors, flexible working patterns, career management, European workers.*

1. Introduction

The Kaleidoscope Career Model (KCM; Mainiero & Sullivan, 2006) is a contemporary career model that uses the metaphor of the kaleidoscope to explain how strategic career behaviors (SCB) change throughout the life cycle, creating different career patterns depending on each person's characteristics, needs, and priority goals. The three SCB anticipated in the model are authenticity (seeking congruence between personal and organizational values) (AUT), balance (seeking balance between professional and non-professional activities) (BAL), and challenge (seeking opportunities for stimulation and progression at work) (CHA). Previous studies (*e.g.*, Mainiero & Gibson, 2018; Sullivan, Forret, Carraher, & Mainiero, 2009; Sullivan & Mainiero, 2008) have attempted to analyze differences in these career behaviors and attitudes as a result of a set of individual/personal and family variables, such as gender, age, education, marital status, presence of children, and salary. So far, the research has produced conflicting findings, resulting in a lack of consensus about the impact of these variables on SCB. However, some important variables (namely structural: organizational and social) have been systematically excluded in these studies despite the urging of several authors (*e.g.*, Greenhaus, Callanan, & Godshalk, 2010; Pinto, 2010) on the need for their inclusion to obtain a more realistic and complete understanding of current career management practices. Besides that, most studies have been developed with traditional workers, not considering the flexible working arrangements which have grown in prevalent since the Covid-19 pandemic. This study uses the theoretical framework of the KCM to examine the needs for AUT, BAL, and CHA of European hybrid workers according to personal (gender, career stage, educational level), family (marital status, children), organizational (type of company, company size, working status) and social variables (individualism [IDV] vs collectivism [CLV]).

2. Method

2.1. Participants

Participated in this study 739 European hybrid workers (women=283, 38.3%), with ages ranging from 18 to 70 years old (M=27.64; SD=8.48). Of these participants, 195 (26.4%) were married and 639 (86.5%) had no children. In terms of academic level, 275 (37.2%) had a secondary diploma, 301 (40.7%) had a bachelor degree, and 163 (22.1%) had a master or doctorate degree. Participants worked for European employers (n=739, 100%), predominantly full-time (n=398, 53.9%), in private (n=550, 74.4%) small (n=250, 37.2%) companies, and in the media, culture and graphical (116, 14.7%); mechanical and electrical

engineering (90, 11.4%); commerce (84, 10.6%); and education (79, 10%) sectors. Most participants were residents in individualistic countries ($n=453$, 61.3%) (Hofstede, 2001).

2.2. Variables and instruments

Personal variables included gender (1=male [M]; 2=female [F]); career stage (pre-adulthood [1=18-24], early adulthood [2=25-34], settling down [3=35-44], and middle/late adulthood [4=45-70]); and academic degree (1=undergraduate [UG]; 2=bachelor [BC]; 3=master [MS] and PhD). *Family variables* included marital status (1=single; 2=married); and children (0=no; 1=yes). *Organizational variables* included company type (0=public; 1=private), company size (1=small 1-25; 2=medium <250; 3=large ≥ 250), and employment status (1=full-time [FT]; 2=part-time [PT]). *Social variables* included the individualism dimension (0=low IDV; 1=high IDV) of the National Culture model (Hofstede (2001). An individualistic society privileges the “I” (personal identity) while a collectivistic society privileges the “we” (mutual psychological and practical dependence between the person and the in-group). *Career strategic behaviors* were measured using KCM, comprising 15 items (5 items per subscale: AUT, BAL, and CHA).

2.2. Procedure

This study is part of a wider project funded through FCT - *Fundação para a Ciência e Tecnologia*, I.P. under the EXPL/PSI-GER/0321/2021 project - *EURECA: New career strategies for new European remote careers*. The project was reviewed and approved by the CRC-W (Catholic Research Centre for Psychological, Family and Social Wellbeing) Review Board. Participants were informed of all ethical procedures and data were collected on an online platform in June 2022. To test the hypotheses correlations, t-tests/ANOVAS and hierarchical multiple regressions were performed using *jamovi* (version 2.3). All results were considered statistically significant if $p < .05$.

3. Results

For personal and family variables, gender was significantly correlated with AUT ($r_{AUT}=.076$, $p=.042$); career stage ($r_{AUT}=.159$, $p<.001$; $r_{BAL}=.112$, $p=.002$), marital status ($r_{AUT}=.109$, $p=.004$; $r_{BAL}=.150$, $p<.001$) and children ($r_{AUT}=.095$, $p=.010$; $r_{BAL}=.196$, $p<.001$) were significantly correlated with AUT and BAL; and educational level ($r_{AUT}=.096$, $p=.009$; $r_{CHA}=.127$, $p<.001$) was significantly correlated with AUT and CHA. For organizational and social variables, only employment status was significantly correlated with AUT ($r_{AUT}=.163$, $p<.001$), and CLV vs IDV was significantly correlated with AUT ($r_{AUT}=.116$, $p=.002$) and CHA ($r_{CHA}=.137$, $p<.001$). T-tests and ANOVAS showed statistically significant results for AUT according to personal and family variables, namely, gender ($t(723)=-2.04$, $p=.004$; $M_M=17.7$ (SD=3.80); $M_F=18.3$ (SD=4.40); $Mdiff=-.627$), career stage ($F(3,146)=6.027$, $p<.001$; $M_{18-24yo}=16.6$ (SD=4.29); $M_{25-34}=17.3$ (SD=4.16); $M_{35-44}=18.3$ (SD=4.31); $M_{45-70}=17.5$ (SD=4.22); Post-Hoc_{18-24_35-44}=-1.76, $p<.001$), educational level ($F(2,404)=3.83$, $p=.022$; $M_{UG}=18.3$ (SD=4.03); $M_{BC}=18.1$ (SD=3.81); $M_{MS+phd}=17.2$ (SD=4.42); Post-Hoc_{UG_MS+phd}=1.124, $p<.05$; Post-Hoc_{BC_MS+phd}=-.987, $p<.05$), marital status ($t(700)=2.91$, $p=.004$; $M_{Single}=18.2$ (SD=3.96); $M_{Married}=17.2$ (SD=4.27); $Mdiff=.991$), and children ($t(737)=2.583$, $p=.010$; $M_{No}=18.1$ (SD=3.93); $M_{Yes}=17$ (SD=4.65); $Mdiff=1.121$); for BAL on career stage ($F(3,150)=4.115$, $p=.008$; $M_{18-24yo}=18.4$ (SD=3.82); $M_{25-34}=18$ (SD=4.05); $M_{35-44}=16.8$ (SD=4.39); $M_{45-70}=16.2$ (SD=4.41); Post-Hoc_{18-24_35-44}=1.67, $p<.05$; Post-Hoc₁₈₋₄₅₋₇₀=2.281, $p<.001$; Post-Hoc_{25-34_45-70}=1.877, $p<.05$), educational level ($F(2,425)=3.38$, $p=.035$; $M_{UG}=17.3$ (SD=4.30); $M_{BC}=16.6$ (SD=4.29); $M_{MS+phd}=17.6$ (SD=4.11); Post-Hoc_{BC_MS+phd}=-.987, $p<.05$), marital status ($t(700)=-4.027$, $p<.001$; $M_{Single}=16.7$ (SD=4.19); $M_{Married}=18.1$ (SD=4.17); $Mdiff=-1.42$), and children ($t(737)=-5.420$, $p<.001$; $M_{No}=16.7$ (SD=4.22); $M_{Yes}=19.2$ (SD=3.98); $Mdiff=-.210$); and for CHA on educational level ($F(2,411)=6.48$, $p=.002$; $M_{UG}=14.9$ (SD=4.42); $M_{BC}=16$ (SD=4.08); $M_{MS+phd}=16.2$ (SD=4.47); Post-Hoc_{UG_BC}=-1.369, $p<.001$). For organizational and social variables, results were statistically significant for AUT on employment status ($t(682)=-4.313$, $p<.001$; $M_{FT}=17.4$ (SD=4.27); $M_{PT}=18.8$ (SD=3.67); $Mdiff=-1.35$), and CLV vs IDV ($t(737)=3.17$, $p=.002$; $M_{CLV}=18.6$ (SD=4.06); $M_{IDV}=17.6$ (SD=4.00); $Mdiff=.963$); and for CHA on CLV vs IDV ($t(737)=3.77$, $p<.001$; $M_{CLV}=16.4$ (SD=4.21); $M_{IDV}=15.1$ (SD=4.34); $Mdiff=1.221$). No differences were found in company type or size. Hierarchical multiple regressions were performed with the personal and family variables entered as a first block (model 1) and the organizational and social variables entered as a second block (model 2). Concerning AUT, results indicated that both model 1 ($R^2=.036$; $Adj. R^2=.027$; $F(5,590)=4.34$, $p<.001$) and model 2 ($R^2=.063$; $Adj. R^2=.047$; $F(10,585)=3.92$, $p<.001$) are statistically significant. The difference between models is $\Delta R^2=.027$; $F(5,585)=3.41$, $p=.005$. In the first model, gender ($\beta=.839$; $CI=[.162;1.51]$; $t=2.43$, $p=.015$) and career stage ($\beta=-.50$; $CI=[-.99;-.01]$; $t=-2.00$, $p=.045$) impact the desire for AUT. In the second model, gender ($\beta=-.776$; $CI=[.095;1.46]$; $t=2.24$, $p=.026$), employment status ($\beta=1.04$; $CI=[.280;1.79]$; $t=2.68$, $p=.007$), and IDV vs CLV ($\beta=-1.15$; $CI=[-1.83;-.465]$; $t=-3.30$, $p=.001$) affect the desire for AUT.

Regarding BAL, results indicated that both model 1 ($R^2=.042$; $Adj. R^2=.034$; $F(5,590)=5.20$, $p<.001$) and model 2 ($R^2=.050$; $Adj. R^2=.034$; $F(10,585)=3.10$, $p<.001$) are statistically significant. The difference between models is $\Delta R^2=.008$; $F(5,585)=1.01$, $p=.409$. Both, in the first model ($\beta=.381$; $CI=[.148;.613]$; $t=3.212$, $p=.001$), and in the second model ($\beta=.384$; $CI=[.150;.617]$; $t=3.228$, $p=.001$), only having children had an impact on the desire for BAL. For CHA, results indicated that both model 1 ($R^2=.027$; $Adj. R^2=.0189$; $F(5,590)=3.28$, $p=.006$) and model 2 ($R^2=.048$; $Adj. R^2=.032$; $F(10,585)=2.94$, $p<.001$) are statistically significant. In the first model, gender ($\beta=-.0177$; $CI=[-.318;.035]$; $t=-2.45$, $p=.015$) and educational level ($\beta=.165$; $CI=[.069;.261]$; $t=3.38$, $p<.001$) have an impact on the desire for AUT. In the second model, gender ($\beta=-.0180$; $CI=[-.322;-.037]$; $t=-2.47$, $p=.014$), educational level ($\beta=.154$; $CI=[.055;.253]$; $t=-3.05$, $p=.002$) and IDV vs CLV ($\beta=-.218$; $CI=[-.110;.213]$; $t=-2.99$, $p=.003$) affect the desire for CHA.

4. Discussion and conclusion

The aim of this study was to analyze the impact of personal, family, organizational, and social variables on SCB, and to explore groups differences on these variables. In general, results are consistent across the different analyses. Personal variables of gender and career stage, and organizational and social variables of employment status and IDV vs. CLV predict the desire for AUT. It is women aged 35-44, working part-time, in collectivist cultures, who most value the alignment between their own values and those of the organization they work for. These results are congruent with those obtained in Sullivan et al., (2009), in which women with higher educational levels in the 35-44 age range sought greater AUT. Having children most determines the need for BAL between professional and non-professional activities. Other variables, such as being in the 18-24 age range, being married, and having a master's/doctoral degree also seem to be important factors, although in this study they were not predictors. This result is similar to previous studies (e.g., Sullivan et al., 2009), in which married workers and those with children had higher BAL needs, but are quite distinct from those in Sullivan & Mainiero (2008), in which mid-career women sought BAL regardless of marriage or children. Regarding CHA, gender, education, and culture were predictors, and in general it is men with masters or PhDs and living in collectivist societies who are most in need of career stimulation and progression opportunities. Previous studies also found a strong impact of higher educational levels on CHA-seeking despite gender, but it is important to note the study by Elley-Brown, Pringle, and Harris (2018) which found that women, particularly in their early and mid-career, seek strong involvement in their careers by seizing opportunities to achieve career goals and progress their careers (p. 179). As mentioned, most studies focused on workers in traditional career paths in the U.S., omitting a number of relevant personal, structural, and contextual variables. This study provides insights on how new variables may impact SCB in European workers in flexible arrangements. This knowledge can support leaders in reviewing their policies and practices for managing the careers of their employees.

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ARE HR MANAGERS READY FOR REMOTE WORKERS PROFESSIONAL DEVELOPMENT?

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Abstract

The EURECA project, funded by Fundação para a Ciência e Tecnologia, aims to develop new guidelines for HRM in developing strategies for remote workers. The project uses both qualitative and quantitative data collection to understand both the perception of remote workers after the Covid-19 pandemic, and the way HR managers are tailoring HRD strategies to match the different expectations of a new category of employees. Through a semi-structured interview, the research team collected testimonies of HR managers in Spain, Portugal and Italy to understand how HRD policies moved in new directions after the pandemic confined many to remote-working. Companies were selected in order to assess both the public and private sectors, in both the manufacturing and service sectors. Data collection has been accompanied by classical content analysis and quantitative text analysis. The poster that accompanies the present study will show the principal results obtained through data collection, particularly highlighting the main differences and similarities between countries and company sectors.

Keywords: HRD, remote workers, professional development, cross-cultural analysis, qualitative study.

1. Introduction- EURECA project

EURECA is a scientific project funded by Fundação para a Ciência e Tecnologia (Portugal). The partnership involves two research centers in Portugal, one in Spain and one in Italy. The project aims to understand the interaction between career management strategies and the new remote careers that have emerged in response to the pandemic and to develop new strategies and interventions catered to the cultural diversity of remote workers in Europe, aimed at helping them manage their career goals with the added distractions, stressors and isolation of remote work. It consists of three different sets of data collection and analysis: a systematic review of the literature on remote workers before and during the pandemic; a quantitative data collection from a sample of over 700 remote workers across 17 European countries through a questionnaire conducted in English, Portuguese, Spanish, Italian, French and German; and a qualitative analysis through a semi-structured interview with Human Resource (HR) managers, presented in the poster that accompanies the present study.

2. Aim and objectives

The aim of the qualitative analysis on HR managers consists in understanding what strategies companies have developed to deal with a new type of worker: the remote worker.

In an earlier phase of the EURECA project, “remote worker” was defined as an employee who works both within an organization space and works (fully or partially) from a different location. That could be from home, from a shared office, from an outdoor space (e.g. garden), or from a vacation spot. The time dedicated to remote work can vary from a few hours per day to several days per week, up to full-time work outside the company’s physical location. Although this new way of managing employees exploded during the Covid-19 pandemic period, it was predominantly born from the development of new technologies and is now moving towards a new post-pandemic balance.

Smart working consists in the presence of the three elements: time flexibility, space flexibility, and ICT tools. As stated by Blackwell (2008), “it embraces the entirety of new ways of working

opportunities in an integrated manner – be that spatial and temporal autonomy, the required cultural and trust transitions, technological advances, wider intellectual connections and stimuli, social, ethical and environmental sensitivities – all harmonized to suit the individual working style”. Before the shock of the pandemic, smart working was intended as an innovative way of working, where the flexibility of time and space to work was managed through clear and shared aims between employee and organization. It was meant to improve work-life balance and job satisfaction, not to ensure physical isolation of people. It requires a flexible organization structure, tailored management of internal processes, and a new organizational culture. In this way, this smart-working mode was a choice, both for the company and for the employees.

The Covid-19 pandemic had dramatic consequences for both our lives and our work processes. Within a short time, organizations had to decide how to protect employees from infection, while trying to maintain their business. Most of them considered smart-working as a possible option, even if in many cases what they were able to implement was far from the principle of smart-working. For this reason, the label of “remote working” was suggested to more appropriately define the situation.

In 2022, the pandemic period seemed to be coming an end, social distancing and restrictions were less and less present and there was a will to return to normal. However, remote working did not disappear, thus it is important to know how Human Resources Management (HRM) is facing this new situation.

3. Methodology

To find out how HRM is coping with remote work after the pandemic, we have identified the semi-structured interview as the most effective tool for gathering qualitative data. The reason also lies in the need to contact a very qualified sample – HR managers – who would probably not be available to fill out a questionnaire without being contacted personally and given an effective presentation of the project (Ripamonti et al., 2021). Therefore, given the intention to contact them personally, collecting in-depth qualitative data was the most effective choice, especially in consideration of ethical issues (Taquette & Borges da Matta Souza, 2022). The semi-structured interview schema was developed in English and translated to Portuguese, Italian and Spanish. It contains a brief explanation of the EURECA project, the aim of this phase, and five sections of questions:

1. 12 questions dedicated to the features of the organization, mainly asking for quantitative data about the organization;
2. 7 questions dedicated to the application of remote work;
3. 8 questions exploring career management policies;
4. 7 questions designed to explore HRM policies and practices for regular and remote workers, and
5. 2 open-ended questions about the strategic value of remote working.

The sampling procedure has been designed to cover different types of organizations, considering the sustainability of resources devoted to interviews with HR managers. The variables included to define the sample were: size (big/SME), product (manufacturing/service), mission (public/private) and country (Italy/Spain and Portugal). The researcher from each country contacted the HR manager of a convenience sample, given the strategic importance of directly interviewing the main person responsible for HR strategies and policies. Interviews were conducted online in the interviewee’s native language, were recorded, and lasted 30-50 minutes each. The collected data was processed by country, highlighting the key points of each section, then compared to find similarities and differences.

4. Results

The main results of the qualitative analysis is reported in the poster, underlining the main similarities and differences between each category, and, above all, highlighting the status of the policies and practices towards remote workers. Of all the results, we focus on two main pieces of evidence: first, “*there is no going back*” was one of the most-used expressions to indicate that it is not possible to return to the past, where remote-working was excluded; second, almost all organizations – especially public ones, where remote working has been used due to the pandemic – are not prepared with specific professional development strategies tailored to remote workers. These two pieces of evidence point to the awareness organizations have that they do not feel ready for the future.

Another important result is that “trust” is the main feature required to be developed in managers to make remote work an effective tool. Some organizations are developing this through training and coaching programmes.

Finally, and especially in Italian sample, the definition of a specific professional development strategy for remote workers has been understood with a negative focus. The HR managers interviewed explained that no differential strategies have been considered, as a way to maintain equal prospective for both regular and remote workers. Creating differential paths has been seen as a way to penalize remote workers, which was far from the research aim. A possible interpretation of this reaction lies, in the author's opinion, in a cultural bias where HR managers are worried about being considered unfair and to be privileging a specific category of employee (the regular one, in the present case). This evidently contrasts with diversity management policies, still not widespread in the Italian context (Yang & Konrad, 2011).

5. Discussion and limitation

The greatest strengths of qualitative analysis are in providing the opportunity to collect in-depth data, being flexible and giving both actors the opportunity to reflect on the proposed topic (DiCicco-Bloom, & Crabtree, 2006). All these aspects have allowed the present research to understand aspects otherwise not detectable with traditional quantitative investigation tools. However, it is evident that the number of participants interviewed is limited and cannot be considered representative. In any case, the present authors believe that the role of the HR manager as the respondent was crucial to gaining reliable data.

The cross-cultural dimension is affected by the translation from the mother tongue to English in the data comparison. This is the main reason why the present authors decided to first reflect on national data and to defer the comparison between countries to a second step.

Finally, the results of this part of the research highlights the opportunity for scientific research to provide strategies for companies to consider the specific needs and characteristic of remote workers. All the managers interviewed asked to receive feedback from the research, expressing a strong interest in better understanding the situation.

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STEREOTYPES AGAINST SINGLES: A STUDY OF THE NEED FOR SOCIAL APPROVAL AND SELF-CONSTRUALS

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Abstract

Stereotypes Against Singles: A Study of the Need for Social Approval and Self-Construals. According to studies on single people, the number of singles is increasing in various countries including Turkey. However, negative stereotypes against singles are increasing due to reasons such as the culture's giving importance of marriage and family. Because people think that singles become a threat to the social order. For example, it's believed that these people are unhappy, lonely and insecure. In studies, singles report negative experiences such as stigma, exposure to violence or exclusion because they are single. Therefore, in this study it's been examined why people are exposed to negative stereotypes just because they are single. It's thought that negative stereotypes might be related to people's cultural backgrounds. It is known that in collectivist cultures, negative stereotypes are more dominant against groups that are attributed to features that are not accepted by the society. According to studies, "autonomous self" structure is prominent in individualistic cultures, while "related self-sonctual" in collectivist cultures. Kağıtçıbaşı states that the "autonomous-related self" construal, in which relational characteristics are maintained but independence is supported, is formed depending on socioeconomic developments in relational cultures. So, we thought that individuals' self-construals might be related to stereotypes about single people. In addition, the need for social approval which means giving importance to the expectations and judgments of others is also influenced by culture and may be related to negative stereotypes. It's thought that people with a high need for social approval in Turkey may perceive singles more negatively. So, the aim of the study is to examine the mediator role of the need for social approval in the relationship between self-construal and stereotypes towards willing singles. In the study, it's been used "negative stereotypes scale for willing singles", "self scale in family context" and "Need For Social Approval Scale". 301 people aged between 18-65 participated in the study. Of these, 183 (60.8%) were female and 118 (39.2%) were male. In addition, it was determined that 263 people had autonomous-related, 36 people had related, and 2 people had autonomous self-construal. In model test results of the analysis, need for social approval mediates the relationship between autonomous self-construal and stereotypes towards singles. Accordingly, as the level of autonomy of individuals increases, their need for social approval decreases, and accordingly, their stereotypes towards single people decrease. Findings show that with the increasing socioeconomic level, autonomous-relational self-construal has become widespread in Turkey. In addition, it shows that the increased level of autonomy affects people's stereotype content more positively.

Keywords: *Stereotypes, singles, social approval.*

1. Introduction

According to studies on single people, the number of singles is increasing in various countries, including Turkey (DePaulo & Morris, 2005; TÜİK, 2019). However, negative stereotypes against singles are increasing due to the culture's importance of marriage and family. In other words, people think that singles threaten the social order (Sönmez, 2020). Also, people believe that singles are unhappy, lonely, and insecure (Etaugh & Birdoes, 1991; Etaugh & Malstrom, 1981; Hertel, Schütz, DePaulo, Morris & Stucke, 2007; Morris et al., 2008; Nanik, Tairas & Hendriani, 2018). In studies, singles report negative experiences such as stigma, exposure to violence, or exclusion because they are single (Byrne, 2000; Ntoimo & Isiugo-Abanihe, 2014). Therefore, it is wondered why people are exposed to negative stereotypes just because they are single.

Negative stereotypes might be related to people's cultural backgrounds. It is known that in collectivist cultures, negative stereotypes are more dominant against groups attributed to features not accepted by society (Sen et al., 2003). According to studies, the "autonomous self" structure is prominent in individualistic cultures, while "related self-construal" is in collectivist cultures. Kağıtçıbaşı states that the "autonomous-related self" construal, in which relational characteristics are maintained, but independence is supported, is formed depending on socioeconomic developments in relational cultures. So, it has been thought that individuals' self-construals might be related to stereotypes about single people (Kağıtçıbaşı, 2010).

In addition, the need for social approval, which means giving importance to the expectations and judgments of others, is also influenced by culture and may be related to negative stereotypes. People with a high need for social approval in Turkey may perceive singles more negatively. So, the aim of the study is to examine the mediator role of the need for social approval in the relationship between self-construal and stereotypes towards willing singles.

2. Method

In the study, "stereotypes toward voluntary singlehood scale," "self in the context of the family," and "need for social approval scale" were used. Stereotypes toward voluntary singlehood scale measure how people perceive singles in Turkey. Self in the context of the family aims to measure what kind of self-construals (autonomous, relational, and autonomous relational self) individuals have according to the scores they get from the dimensions of interpersonal distance and competence. The need for social approval scale measures how much social approval individuals need. 301 people aged between 18-65 participated in the study. Of these, 183 (60.8%) were female, and 118 (39.2%) were male. In addition, 263 participants had autonomous-related, 36 had related, and 2 had autonomous self-construal.

3. Findings

According to the correlation analysis, stereotypes towards singles are significantly and positively related to the need for social approval ($r = .16$ $p < .05$) and significantly and negatively related to autonomous self-construal ($r = -.15$ $p < .05$). The need for social approval is also significantly and negatively correlated ($r = -.13$ $p < .05$) with autonomous self ($p = -.40$ $p < .05$) and autonomous relational self-construal. In the model test results of the analysis, the need for social approval mediates the relationship between autonomous self-construal and stereotypes towards voluntary single. Accordingly, as individuals' autonomy level increases, their need for social approval decreases, and their stereotypes towards single people decrease.

Findings show that autonomous-relational self-construal has become widespread in Turkey with the increasing socioeconomic level. In addition, it shows that the increased level of autonomy affects people's stereotype content more positively.

4. Discussion

In Turkey, where rapid socioeconomic changes have been experienced in the last 30 years, the evolution of self-construals of people with high levels of education into "autonomous-relational self" construal in the expected direction is an important finding supports the theoretical framework (Kağıtçıbaşı, 2010). It supports that the past information that the self-construals of people with relational self-living in collectivist cultures will turn into an independent self-construal in the individual culture with socioeconomic developments does not maintain its validity. As the education level of the individuals increases, it is seen that although their autonomy characteristics increase, they continue to protect their relational sides, and a new self-construal consisting of the combination of these two characteristics has emerged. Autonomous-relational self-construal allows individuals to make decisions according to their values and protect their boundaries. At the same time, it provides a more functional basis for psychological health by ensuring that they do not lose positive values such as the social support provided by the relational culture and the decrease in the feeling of loneliness.

According to correlation analysis, the individuals' autonomous self and autonomous relational self-levels increase, and their negative stereotypes towards single people decrease. This finding is consistent with studies suggesting that collectivist cultures and people with relational self-construal have more negative stereotypes toward others (Sen et al., 2003). However, as individuals' autonomy level increases, the need for social approval also decreases. With the increase in autonomy, people begin to give less importance to the opinions of other people with whom they are in a relationship while defining

themselves, decreasing their need for approval from others. The mediation model analysis results showed that the social approval needs of individuals mediate the relationship between autonomous self-construal and stereotypes towards single people. In other words, as people's level of autonomy increases, their need for others to approve of themselves decreases. At the same time, their stereotypes towards single people, who are attributed negative features by society, also decrease.

5. Conclusion

This study has some limitations. First of all, although the study had a sufficient sample, the fact that most of the participants were at a high socioeconomic level caused the majority to have an autonomous-relational self-construal in line with the theoretical framework. The inability to reach enough people with other self-construals did not make it possible to make statistical comparisons. Future studies may give importance to a balanced distribution according to socioeconomic level. However, using a measurement tool with better power seems necessary to distinguish self-construals. It seems essential to use a new scale whose validity and reliability have been proven in different sample groups or to develop the existing scale.

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THE ROLE OF MARKERS OF ADULTHOOD IN THE EXPERIENCE OF ADULTHOOD IN YOUNG ADULTS

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Abstract

The research study presents the partial results of a larger study investigating the specifics of the transition to adulthood from the point of view of achieving goals. The aim of this part of the research - based on nationwide data collection, which was carried out on 897 respondents aged 18-30 ($M=25.09$; $SD=3.42$, 485 women and 412 men) - is to examine the so-called the role of the main markers of adulthood (residence status, parenthood, work status) in subjective perception of the feeling of own adulthood. The results of the ordinal logistic regression analysis indicated that, apart from age, independent living, partnership, full-time work and parenthood were the most important predictors. The results are briefly discussed.

Keywords: *Markers of adulthood, subjective feeling of adulthood, transition to adulthood, young adults.*

1. Introduction

The period between the 20s and 30s is considered in professional literature (e.g. Arnett & Mitra, 2018; Macek et al., 2016) as a period of transition to adulthood. It is one of the most important life transitions (Schulenberg & Schoon, 2012). Many authors hold the opinion that an individual becomes an adult not only by reaching the age limit (18 or up to 20 years), but also by gradually fulfilling certain criteria (Steinberg 2005). Compared to the past, this process has been significantly prolonged and slowed down (Messersmith & Schulenberg, 2010). Overall, the life cycle is becoming longer and less structured, and there are socially induced changes in the achievement of markers, which are seen as facilitators of the transition to adulthood (Brzezińska, 2013). Markers (or criteria) for reaching adulthood reflect the social roles of adulthood, and during the transition assuming these roles often becomes a normative developmental task of the period (becoming independent, finding a partner, starting a family, becoming a parent, getting a stable job...) (e.g. Shulman & Nurmi, 2010; Arnett et al., 2014). Although, according to several authors (e.g. Arnett & Mitra, 2018; Macek et al. 2016), young people do not consider taking on normal adult roles (being a partner, parent) important for defining themselves as an adult, assuming an adult role can strengthen the subjective perception of oneself as an adult, as it is related to psychosocial maturation (Piotrowski, Brzezińska, Luyckx, 2018). This theoretical background led us to formulate the main objective of the study: to investigate the role of selected sociodemographic parameters, understood as markers of adulthood, in the subjective perception of the sense of own adulthood in the Slovak population of twenty-somethings.

2. Method

2.1. Participants

The sample consisted of 897 participants between 18 – 30 years old ($M= 25.09$; $SD = 3.42$; thereof 485 females). Participants were approached through social media and their responses were collected online. The participation was voluntary and anonymous. An overview of the individual characteristics of the research sample is as follows: marital status: single (276), in a relationship (452), married (156), divorced (10), widowed (1), did not state (4). Parenthood: parent (182), non-parent (715). Occupational status: students (100), working students (115), employed (482), unemployed (82), maternity/parental leave (72), not stated (46). Residential status: living alone (59), living with parents (421), living with a partner (380), living with another roommate (37).

2.2. Measures and procedure

Participants were administered a complex questionnaire battery (online version carried out using Qualtrics software). Data collection was conducted by the agency throughout Slovakia. Within the currently presented research, the following were selected questions regarding sociodemographic variables: age, gender, marital status (single, in relationship, married), parenthood (parent and non-parent), occupational status (student, working student, employed, maternity/parental leave), residential status (living alone, with parents, with a partner, with another roommate). The subjective feeling of being adult was investigated by choosing from three options: I feel no-adult; I feel somewhere between (adolescence and adulthood); I feel fully adult. In this case, we were inspired by already conducted research, e.g. Oleszkowic & Misztela (2015).

2.3. Statistical analyses

Results were analyzed in jamovi 2.2.5. Descriptive analyses, hierarchical ordinal logistic regression analysis in three blocks (in the first block the predictors were gender, age and parenthood, in the second block the variables resident status and marital status were added and in the third block occupational status was added) and difference statistics (Anova, T-tests) were used.

3. Results

The results of the multiple ordinal logistic regression for the prediction of the feeling of adulthood indicated the significance of all three regression models. However, the first regression model explained only 6% of the variance of the criterion ($R^2=0.06$, $\chi^2=85.33$ $p<0.001$). The second ($R^2=0.10$, $\chi^2=134.82$, $p<0.001$) and third ($R^2=0.11$, $\chi^2=149.26$, $p<0.001$) models explained 10 to 11%. In the 1st block the variables gender, age and parenthood entered the regression as predictors, while age and parenthood proved to be significant predictors that increase the probability of experiencing a sense of adulthood - with increasing age (OR=1.77, $**p\leq 0,001$, 95% CI [0.11, 0.20]), the sense of adulthood in young people also increased. Those who are parents are more likely to feel adult (OR=2.16, $**p\leq 0,001$, 95% CI [0.36, 1.20]) compared to those who are not parents. Gender did not prove to be a predictor.

In the 2nd block, other predictors entered the regression - marital status and residential status. The results indicate that of the variables from the 1st block, only age remained as a significant predictor (OR=1.12, $**p\leq 0,001$, 95% CI [0.06, 0.16]) and the added predictors were significant. We found that young people who have a partner (OR=2.26, $**p\leq 0,001$, 95% CI [0.45, 1.19]) and those who are married (OR=2.35, $**p\leq 0,001$, 95% CI [0.24, 1.48]) are more likely to feel adult compared to singles. Similarly, for those who live alone (OR=2.42, $**p\leq 0,001$, 95% CI [0.26, 1.53]) or with a partner (OR=1.74, $**p\leq 0,001$, 95% CI [0.14, 0.97]) are more likely to feel more adult compared to those who live with their parents.

Table 1. Factors involved in the probability of experiencing the feeling of adulthood - 3st block – after adding occupational status ($R^2=0.11$, $X^2=149.26$, OR – odds ratio, 95% CI – confidence interval [Lower Limit, Upper Limit], $* p\leq 0,05$; $***p\leq 0,001$).

Predictors		B	S.E.	OR	95% CI
	Age	0.07	0.03	1.08*	0.02 - 0.13
Marital status	In relationship - single	0.79	0.19	2.21**	0.42 - 1.17
	Married - single	0.72	0.32	2.15*	0.15 - 1.39
Residential status	Alone – with parents	0.83	0.32	2.29*	0.21 - 1.47
	With partner – with parents	0.48	0.21	1.62*	0.06 - 0.90
Occupational status	Employee - student	0.74	0.28	2.11**	0.20 - 1.30
	maternity/parental leave – student	1.51	0.49	4.54**	0.57 - 2.49
Residential status					

In the last 3rd block the occupational status as predictor was added. The results showed (detailed results are presented in Table 1) that of the variables from the first and 2nd blocks, age, marital status and residential status were again shown to be significant predictors. The added variable occupational status was also shown to be a significant predictor. We found that those who work (OR 2.11) and those on maternity/parental leave (OR=4.54) are more likely to feel more mature than those who study. With some caution, we can also state that there was no difference in the feeling of adulthood between those who

studied, studied, and worked at the same time. Due to the limited scope of the study, we present only a table with selected results of regression analyses after adding variables to the third block. Further results are presented in the text.

4. Discussion and conclusions

The results of the analyzes carried out on the Slovak population in their twenties indicate that, in addition to age, experiencing a sense of adulthood can be considered parenthood, residential independence, partner relationship and work status could be considered as important in predicting experience of adulthood. Achieving these markers increases the likelihood of young people experiencing a sense of adulthood. The findings are consistent with the results of other research that supports the role of parenthood (e.g. Hutteman et al., 2014), residential independence (e.g. Seiffge-Krenke, 2016), partnership (e.g. Adamczyk 2017), work role (e.g. Inguglia, 2015). We perceive the benefit of the research mainly in the fact that data on young people was missing during this period, and several researches are currently being developed within the framework of implemented research projects, which can expand the repertoire of knowledge about the period of transition to adulthood with data related to the Slovak population.

Acknowledgements

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PERCEIVED EXTERNAL RESOURCES OF RESILIENCE AND THEIR ROLE IN LIFE SATISFACTION

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Abstract

External resources of resilience along with internal assets facilitate the healthy development. Resilience and its external resources are key factors in life satisfaction especially when facing adversity. In early adolescence, this often comes from the home environment. The main aim of this study is to investigate the mediation role of external resources of resilience between individual family adversity factors and life satisfaction. 132 (53% female) early adolescents (mean age = 13.45; SD = 0.52) participated in the research. The external resources of resilience were represented by peer support, home support, home meaningful participation, school support, school meaningful participation, school connectedness, community support and community meaningful participation. The family adversity factors were assessed through conflict, antagonism and punishment scales for mothers and fathers separately. The life satisfaction scale served as the dependent variable. A parallel mediation model with multiple X-variables was used to analyze the data. Regarding life satisfaction, the mediation analysis showed an indirect effect of antagonism with the mother and father on life satisfaction through home meaningful participation and school connectedness. In conclusion, antagonism with mothers and fathers undermined home meaningful participation and school connectedness which led to a lower level of life satisfaction. Thus, home adversity effect broader social environment than expected and not only intervention in the home environment is recommended but also the promotion of other external resilience factors.

Keywords: *Resilience, family adversity, adolescents.*

1. Introduction

Adolescence is a unique developmental period with its own specifics, placing young people in the position of significant personal, social and psychological pressure. For that and many more developmental tasks, a healthy home environment is crucial. Research has shown that a harsh-negative parenting style is associated with lower life satisfaction among adolescents, through self-control and self-esteem (Jeon et al, 2021). However, less is known if this relationship is valid regarding external resources of resilience.

2. Design

A cross-sectional design was used.

3. Objectives

The objective of this study is to examine the mediation role of perceived external resources of resilience between individual home adversity factors and life satisfaction.

4. Methods

4.1. Sample and procedure

132 (53% females) schoolchildren in the 7th grade at primary school (mean age=13.45, SD=0.52) participated in the study.

4.2. Measures

- External resources of resilience were explored using the RYDM (Resilience and Youth Development Module) (Constantine, Benard and Diaz 1999) questionnaire with 4-point Likert-type responses (1= not true at all, 4 = very much true) with subscales: Home support (CA=0.81), Home meaningful participation (CA=0.78), School support (CA=0.87), School meaningful participation (CA=0.72), School connectedness (CA=0.79), Community support (CA=0.95), Community meaningful participation (CA=0.70), Peer support (CA=0.93)
- Family adversity factors were explored using the NRI-SPV (The Network of Relationship Social Provision Version) (Furman & Buhrmester, 1985) questionnaire with 5-point Likert-type responses (1= not at all or little, 5 = most of the time) separately for the mother (M) and father (F) covered by subscales: Conflict (M CA=0.77; F CA=0.76), Antagonism (M CA=0.70; F CA=0.69), Punishment (M CA=0.75; F CA=0.81):
- Life satisfaction was measured by 6 items regarding satisfaction with mother, father, friends, own appearance, financial situation and with yourself. A mean score of the items was calculated to obtain the average life satisfaction in various domains. This approach has previously been used and validated by Ng et al. (2018). A higher overall score indicates higher life satisfaction. The Cronbach’s alpha of the whole scale was: $\alpha=0.71$.

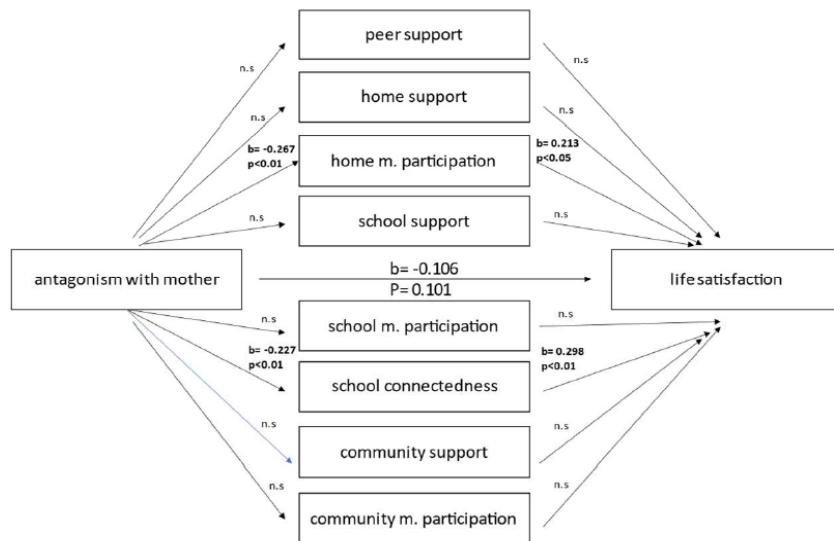
4.3. Statistical analyses

The data were analyzed by IBM SPSS Statistics, version 21 for Windows. The mediation analyses were performed in the Hayes’PROCESS tool as a parallel multiple mediator model with X-variables – Model number 4. Only significant models are presented.

4.4. Results

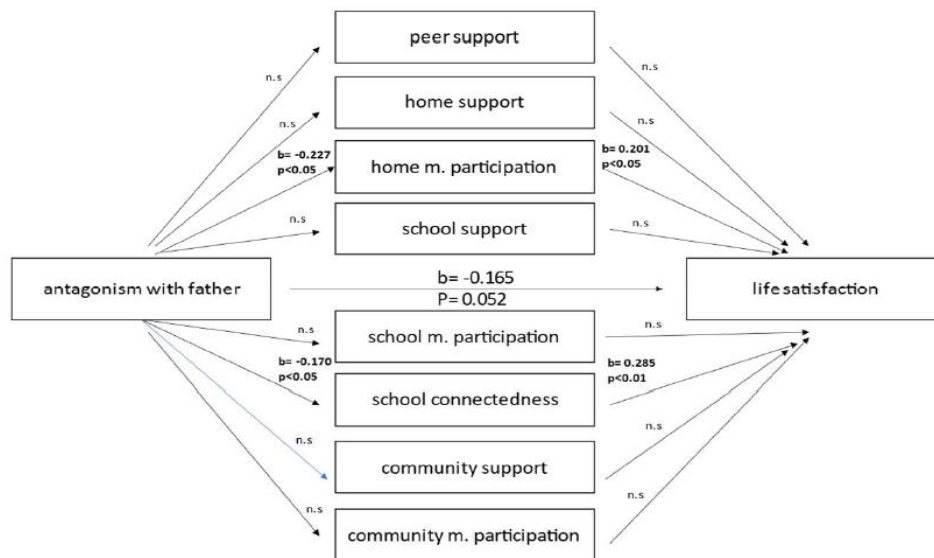
The mediation analysis has shown indirect effect of antagonism with the mother on life satisfaction through perceived school connectedness: $b = -0.067$, BCa CI [-0.125,-0.017] and through perceived home meaningful participation: $b = -0.057$, BCa CI [-0.127, -0.003]. (Figure 1)

Figure 1. Parallel mediation model of perceived external resources of resilience in relationship between antagonism with mother and life satisfaction (*n.s*= non-significant association).



The next mediation model reveals that there was a significant indirect effect of antagonism with the father on life satisfaction through perceived school connectedness: $b = -0.048$, BCa CI [-0.104, -0.005] and perceived home meaningful participation: $b = -0.045$, BCa CI [-0.114, -0.006]. (Figure 2).

Figure 2. Parallel mediation model of perceived external resources of resilience in relationship between antagonism with father and life satisfaction (n.s.= non-significant association).



5. Discussion and conclusion

The findings of this study show that the relationship between antagonism with parents (separately for mother and father) and life satisfaction is mediated by home meaningful participation and school connectedness. Our results suggest that early adolescents need to be engaged, to be a part of the decision-making process in the family and have a voice in a family to feel satisfied, moreover through meaningful participation they form and express their views and influence matters that concern them (Cappa et al., 2018). However, when schoolchildren are affected by antagonistic relationship with parents it may lead them to lower level of life satisfaction due to the low level of engagement in the family. The mediation effect of school connectedness imply that antagonistic parenting establish patterns of relationship, which are then played out, maybe copied in other more proximal interpersonal contexts such as school. Thus, school is losing its importance of important resource for adolescents. It seems that antagonism with parents predisposes individuals to difficulties in attaching to schools, which in turn affects life satisfaction. The attachment theory would predict such a mediation model though the internal working models of attachment.

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VALIDITY AND RELIABILITY OF THE HUMAN CAPITAL SUSTAINABILITY LEADERSHIP SCALE - JAPANESE VERSION

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Abstract

Background: As the industry becomes more competitive in an era of rapid change, human resource management that aims to promote employee well-being calls for a new style of leadership. Di Fabio and Peiro (2018) have recently developed a new instrument for the Human Capital Sustainability Leadership Scale (HCSLS). **Purpose:** This study is to develop the HCSLS-Japanese version in Japanese workplace settings and analyze the psychometric properties of the new scale for assessing human capital sustainability leadership for Japanese workers. **Method:** A cross-sectional questionnaire survey was conducted online between September 13-27, 2019 from 33,480 members of a private survey enterprise. The original HCSLS was translated into Japanese followed by a back-translation procedure. The provisional HCSLS - Japanese version is composed of 16 items on a Likert scale. Validity was performed using concurrent validity to demonstrate the extent to which the HCSLS - Japanese version correlated with the trust scale, mentoring behavior scale, 5 items- subjective happiness scale, stress mindset, and K6-depression scale. **Results:** The compatibility of the factor model to the data was analyzed on a confirmatory factor analysis under maximum likelihood robust estimation to test three goodness-fit indices. As a result, the three-factor model of the HCSLS - Japanese version showed an acceptable fit to the data with 3 first-order factors: ethical (Cronbach's alpha coefficients of 4 items=.805), sustainable (alpha coefficients of 4 items=.824), and mindful/servant leadership (alpha coefficients of 5 items=.775): GFI=.942, AGFI=.915, and RMSEA=.067. The results of Pearson's *r* correlations between the HCSLS - Japanese version and concurrent other scales were found to exist with its referent measures, ranging from -.109 to .585, $p < .05$, with exception of the stress-is-enhancing mindset. Multiple group structural equation modeling showed no homogeneity of leadership constructs between gender due to inequivalent sample numbers. **Discussion:** This study hypothesized that each of the dimensions is ethical (e.g., I ethically make decisions.), sustainable (e.g., I support my collaborators in their personal/career growth.), mindful (e.g., I am aware of the strengths and the limitations of my collaborators.), and servant leadership (e.g., I encourage my collaborators when I realize that they encounter difficulties.), according to the original scale. The HCSLS - Japanese version proved to be a reliable and valid measure for assessing this new kind of leadership, except for the servant leadership factor which was not extracted as a sub-scale construct and combined with the mindful leadership factor. This finding suggests that the construct of human capital sustainability leadership in the Western context would need to adjust according to the Eastern work setting.

Keywords: Human Capital Sustainability Leadership Scale (HCSLS) - Japanese version, Cronbach's alpha reliability, concurrent validity, multiple group structural equation modeling, industrial and organizational psychology.

1. Introduction

Amid the response to the COVID-19 infection, many Japanese companies face a variety of management issues to improve sustainable corporate value. As the industry becomes more competitive in an era of rapid change, human resource management that aims to promote employee well-being calls for a new style of leadership. An important fact is that leaders must have the ability to flexibly respond to changes and enhance their resilience to unexpected shocks, regardless of their past successes. Leaders pay attention implicitly to organizations' success through collective work with employees. Many previous reports that implementing sustainable human resources practices depended on leadership style matters (e.g., Yang and Lew, 2020). Leadership is important because, through a leader's guidance, they are responsible to identify

problems and overcome them for stakeholders' interests including organizations, employees, clients, and investors.

Implicit in the decision processes of corporate leaders is a central question: what and who is this business here for? In this perspective, Di Fabio and Peiro (2018) have recently developed a new instrument for the Human Capital Sustainability Leadership Scale (HCSLS). Specifically, they propose HCSLS as a higher-order construct composed of sustainable, ethical, mindful, and servant leadership. They propose all of these constructs are needed to support the suitability of human capital leadership and healthy organizations. To facilitate sustaining work outcomes through human capital sustainability leadership, the importance of focusing on a new integrated construct of human capital sustainability leadership, and a scale to assess it is emphasized. There is, thus far, a lack of reliable and valid HCSLS in Japan. It is advantageous to develop the Japanese language version of the HCSLS. This study is to develop the HCSLS-Japanese version in Japanese workplace settings and analyze the psychometric properties of the new scale for assessing human capital sustainability leadership for Japanese workers.

2. Methods

Participants. This study was reviewed by an ethics committee at Kurume University which belonged to the first author (AT) before. To investigate the replicability of a four-factor structure of the HCSLS-Japanese version, we conducted a cross-sectional questionnaire survey through the internet between September 13-27, 2019 from 33,480 members of a private survey enterprise in Tokyo. To be included, respondents had to be over 18 years old and employed as leaders from various public and private organizations in Japan. A final eligible sample of 553 (female 30, male 523, mean age: 53.56±8.9 years old) (response rate: 79.6%).

Measures. We translated the original HCSLS into Japanese followed by a back-translation procedure after obtaining permission from the original authors. The measure consists of four factors, ethical leadership (e.g., I ethically make decisions.), sustainable leadership (e.g., I support my collaborators in their personal/career growth.), mindful leadership (e.g., I am aware of the strengths and the limitations of my collaborators.), and servant leadership (e.g., I encourage my collaborators when I realize that they encounter difficulties.), with four items for each. Each item was rated on a five-point Likert scale ranging from 1=none to 5=very much. Validity was performed using concurrent validity to demonstrate the extent to which the HCSLS-Japanese version correlated with the trust scale (10 items), mentoring behavior scale (6 items), 5-item subjective happiness scale, stress mindset (8 items), and K6-depression scale (6 items).

Data Analyses. Data were analyzed using the SPSS AMOS (ver.22) and HAD (ver.16) statistical packages for Windows. A statistical level of significance of .05 was used. We used established procedures to test the psychometric properties of the provisional HCSLS-Japanese version. Scale means and standard deviation (SD) were computed, and item-total (I-T) correlation and Cronbach's alpha coefficients were calculated to assess the internal consistency as a central aspect of the reliability of the scale. Alpha equal to or greater than 0.65 was considered satisfactory. For concurrent validity assessment, the associations between the scale scores of the HCSLS and the trust scale, mentoring behavior scale, subjective happiness scale, stress mindset, and K6-depression scale. A structural equation modeling method was applied to test structural validity.

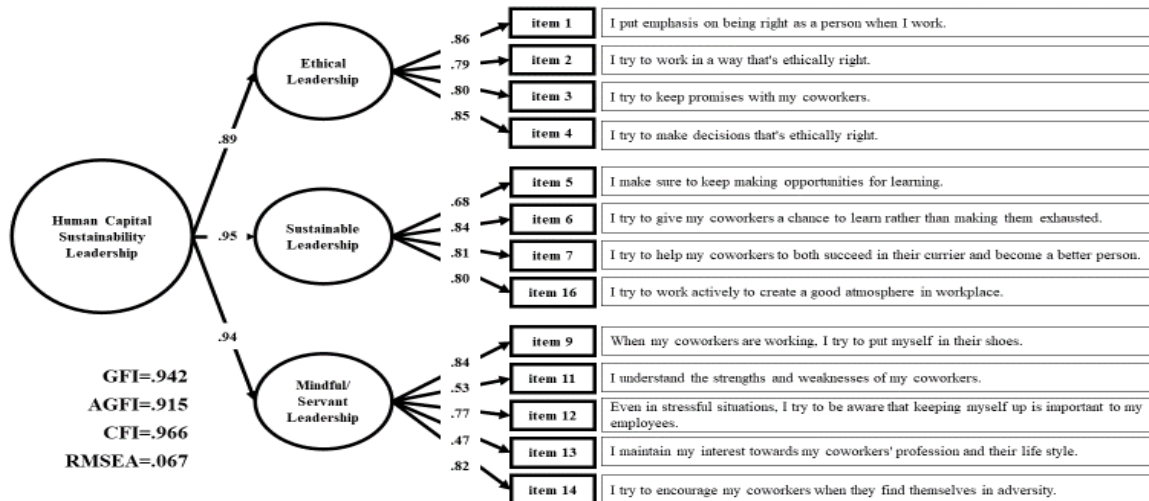
3. Results

Item Analysis of the HCSLS-Japanese version: Firstly, we examined item completeness and the distributions of the item scores as indicated by the mean, SD, skewness, and kurtosis. There was no item to be deleted from the psychometric analysis. In the next step, each of the item's scores was divided into the upper 25% (high group) and lower (25% (low group). The discriminative power was analyzed on a good-poor (G-P) analysis. A two-tailed t-test of GP analysis showed a significant difference ($p < .001$, $d = .595-.880$). On item-total (I-T) correlation analysis for each item score, a significant correlation coefficient was obtained in all items.

Factorial Validity of the HCSLS-Japanese version: To confirm factorial validity, the compatibility of the factor model to the data was analyzed on a confirmatory factor analysis under maximum likelihood robust estimation to test several goodness-fit indices. As a result, the three-factor model of the HCSLS-Japanese version showed an acceptable fit to the data with 3 first-order factors: ethical (Cronbach's alpha coefficients of 3 items=.805), sustainable (alpha coefficients of 4 items=.824), and mindful/servant leadership (alpha coefficients of 5 items=.775): GFI=.942, AGFI=.915, CFI=.966, and RMSEA=.067. Three items from the original HCSLS were deleted because of higher than .70 inter-item correlation coefficients and less than .40 factor loading. All three factors of the HCSLS-Japanese version were found to be strongly intercorrelated ($r = .696-.747$).

Concurrent Validity of the HCSLS-Japanese version: It was expected that each factor of the HCSLS-Japanese version would correlate positively with the trust scale, mentoring behavior scale, subjective happiness scale, and stress mindset, and correlate negatively with the K6-depression scale. This was assessed by the Pearson product-moment statistic where an r value above .40 was considered satisfactory. Moderate to strong r correlations were found between each score of the HCSLS-Japanese version and concurrent other scales with its referent measures, ranging from $-.251$ to $.590$, $p < .05$, with the exception of the stress-is-enhancing mindset sub-scale factor.

Figure 1. Confirmatory factor analysis testing the theoretical construct underlying the HCSLS - Japanese version: The 3-factor model consisted of 13 items.



Reliability of the HCSLS-Japanese version: To determine the homogeneity of the HCSLS-Japanese version, internal consistency reliabilities of each subscale score were calculated. Cronbach's alpha coefficients for the three subscales were high: ethical leadership, .892; sustainable leadership, .866; and mindful/servant leadership, .820. Multiple group structural equation modeling showed no homogeneity of leadership constructs between gender due to inequivalent sample numbers.

4. Discussion

This study hypothesized that each of these dimensions is ethical, sustainable, mindful, and servant leadership according to the original scale. The developed HCSLS-Japanese version proved to be a reliable and valid measure for assessing this new kind of leadership from the leader's point of view, except for the servant leadership which was not extracted as a subscale construct. The HCSLS-Japanese version differs from the original version (Di Fabio & Peiro, 2018) in the number and concept of human capital sustainability leadership due to a combined subscale of mindful leadership and servant leadership subscales. This discrepancy might be possible to interpret the differences in the growing awareness of the importance of organizational human resources management contributions to HCSL. Japanese corporate culture seems to create a community of employment practice with high stability and homogeneity and has achieved growth by taking advantage of coordination and teamwork abilities derived from such a community. This finding suggests that the construct of the Western context would need to adjust according to the Eastern work setting. Western culture is characterized by low collectivism (i.e., higher individualism), contrary to Japanese culture, and developing a high level of a social climate for knowledge and information of sustainability. Nevertheless, the HCSLS-Japanese version may be practical and usable for Japanese workers. Future studies are necessary to investigate whether leaders who perceive higher HCSL feel flourishing in terms of social and psychological prosperity and well-being.

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VISUOSPATIAL PROCESSING IN THE RESOLUTION OF THE CORSI TEST IN BILINGUALS AND MONOLINGUALS CHILDREN

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Abstract

Several studies have shown that bilingual children perform are better than monolingual children, particularly in terms of mental flexibility and code switching. The aim of this study is to investigate whether the context of language learning modifies the strategies of information retrieval in visuo-spatial working memory illustrated by the nature of the errors made on one hand by bilinguals and on the other hand by monolinguals. To achieve this, we used the Corsi block tapping task (Corsi, 1972), a visuospatial working memory assessment tests. This study was conducted with 66 children aged 6 to 8 years (33 bilingual children and 33 Francophone children) and 58 bilingual subjects aged 8 to 10 years (29 bilingual children and 29 Francophone children). The results obtained from this study show a distinct visuo-spatial behavioral treatment patterns between the bilingual children and the monolingual children.

Keywords: *Bilingualism, working memory, Corsi Block.*

1. Introduction

Many researchers have investigated how the cognitive abilities of bilingual subjects emerge and develop compared to monolinguals. Among these studies, it has been shown that the simultaneous learning of several languages is beneficial for the development of executive functions in young children (Bialystok & al., 2014). This benefit is illustrated, in bilingual children, by their better abilities in terms of cognitive processing speed and cognitive flexibility when compared to monolinguals. Other studies conducted in children and adults have shown that learning simultaneously two languages could further develop resistance to interference (Bialystok et al., 2004, 2006, 2011). This benefit would be linked to the alternation of the two systems of mental representations of languages. Building upon this research, the present study aims to investigate whether the context of language learning modifies the strategies of information retrieval in visuo-spatial working memory. The general hypothesis predicts a difference in cognitive profiles which is illustrated by the nature of the errors made on one hand by bilinguals and on the other hand by monolinguals.

2. Method

This study was carried out with 66 children Group 1: 6 years to 7 years, 11 months old (M= 7.5; SD = 0.86) including 33 bilingual subjects and 33 monolingual subjects and 58 children Group 2: 8 years to 10 year, 11 months old (M = 10.02; SD=0.59); 29 bilingual subjects and 29 monolingual subjects. The experimental protocol consists of the Corsi block-tapping task (Corsi, 1972), which is specifically used to measure visuospatial working memory. Following a demonstration, the participant must reproduce a sequence of tapping block. Success in the Corsi block tapping task is defined according to: (i) The correct direction of the progress of the tapping sequence, (ii) the correct location of the tapping block and (iii) the exact number of tapping blocks. These criteria will make it possible to identify whether there are differences in terms of cognitive treatment between bilinguals and monolinguals.

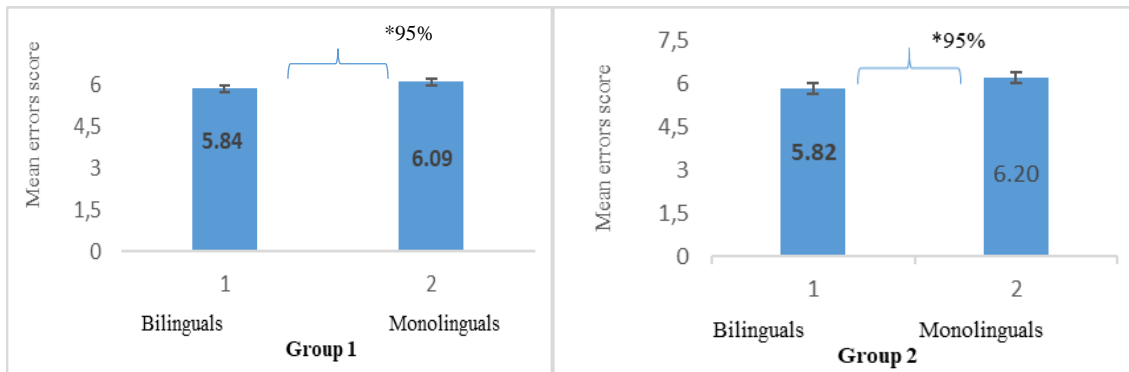
3. Results

The results of analysis of errors committed in visuo-spatial memory, show a significant difference in favor of Bilingual subjects: in subjects aged 6-8 years old, the mean errors score (M=5.84; SD=1.60) compared to Monolingual subjects (M=6.09; SD=1.42) and in bilingual subjects aged

8-10 years old, the mean errors score (M=5.82; SD=1.66) compared to Monolingual subjects (M=6.20; SD=1.32) (Cf. figure 1).

The quantitative results of this study were differentiated according to the three success criteria: direction errors, location errors and number errors of tapping blocks in memory visuospatial sequences for the two groups.

Figure 1. Mean Errors Score in Spatial Memory (Bilinguals Vs. Monolinguals aged 6-8 years old (Group 1) and 8-10 years old (Group 2)).

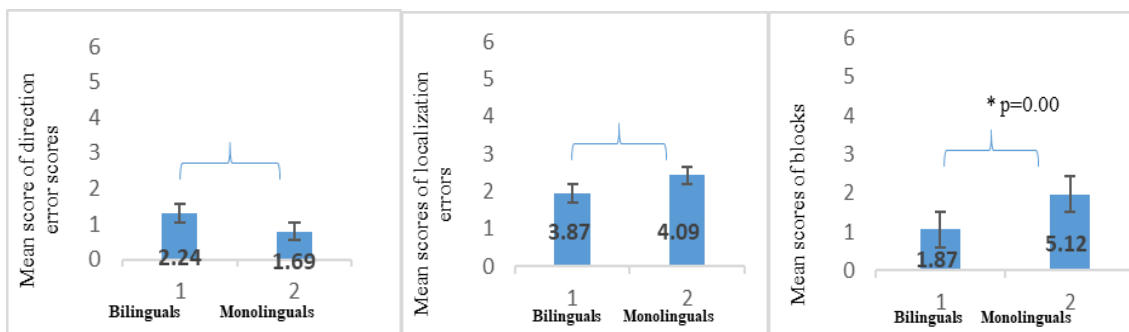


3.1. Group 1: 6-8 years old

The results of mean directional errors for Bilingual subjects (M=2.24; SD=1.47) show a higher mean errors score than Monolingual subjects (M=1.69; SD = 1.44). The analysis of localization errors shows higher mean errors score in Monolingual subjects (Avg= 4.09; SD= 1.28) than Bilingual subjects (Avg=3.87; SD= 0.99). Furthermore, the analysis of the number errors shows low mean errors score in Bilingual subjects (M=1.87; SD=1.38) compared to Monolingual subjects, (M=5.12; SD=1.65) These results show that monolingual subjects make more localization and number errors than bilingual subjects (Cf. figure 2). And the bilinguals make more directional errors than monolinguals.

The results show a significant effect of number error scores between bilinguals and monolingual children in group 1 (6-8 years old) $p < 0.001$

Figure 2. Mean Directional, localization and number error Scores in Spatial Memory for the Group 1 (Bilinguals Vs. Monolinguals aged 6- 8 years old).

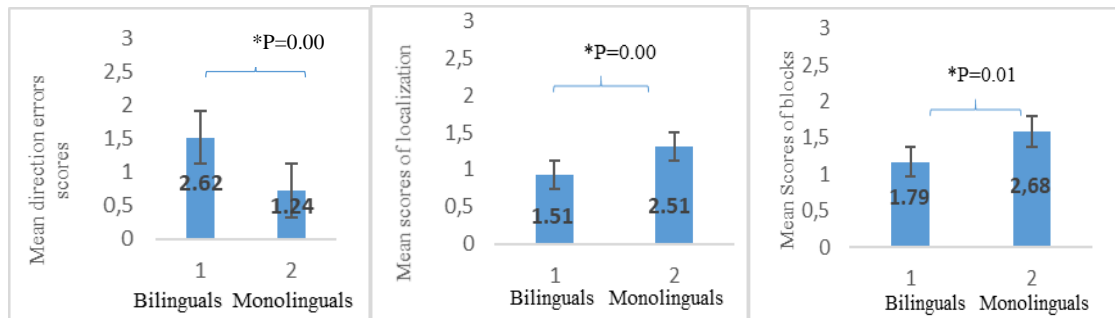


3.2. Group 2: 8-10 years old

The results of mean directional error score for Bilingual subjects (M=2.62; SD=0.99) show a higher mean errors score than Monolingual subjects (M=1.24; SD = 1.13). The analysis of localization errors shows a higher mean errors score in Monolingual subjects (Avg= 2.51; SD= 0.89) compared to Bilingual subjects (Avg=1.51; SD= 0.77). The analysis of the number errors shows a low mean errors score in bilingual subjects (Mean=1.79; SD=1.15), compared to Monolingual subjects (M=2.68; SD=1.36). These results show that monolingual subjects make more localization and number errors than bilingual subjects. (Cf. figure 3). And the bilinguals make more directional errors than monolinguals.

The result shown a significant effect of directional errors ($p < 0.001$), localization error ($p < 0.001$) and number errors ($p < 0.001$) on group 2 aged 8-10 years old.

Figure 3. Mean Directional, localization and number error Scores in Spatial Memory for the Group 2 (Bilinguals Vs. Monolinguals aged 8-10 years old).



4. Discussion

In this study, we were to highlight a behavioral profile of visuo-spatial cognitive treatments specific to bilingual subjects. Statistical analyses show that all bilingual subjects commit on average more directional errors which demonstrates that they have greater difficulty in retrieving visuo-spatial information than monolingual subjects. In addition, the analyses show a large difference in errors in the number of blocks tapping in favour of bilingual subjects. These results indicate that bilingual subjects have well retained the number of blocks to be rendered in the path and, depending on the complexity of the visuo-spatial sequence, bilingual subjects use more cognitively challenging visuo-spatial techniques. The two groups of subjects implement distinct treatments.

5. Conclusion

These results support our hypothesis and show that language learning changes strategies used in a visuospatial working memory task. Visuospatial information retrieval strategies differ between bilingual and monolingual subjects, demonstrating distinct visuo-spatial behavioral treatment patterns between the two populations. This effect could be explained by the diversity of linguistic systems which promotes the development of executive functions.

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USING COGNITIVE TASKS FOR NON-RESPONSIVE ASSESSMENT OF LONELINESS

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Abstract

Loneliness is the perceived feeling of lack of significant social relationships and has a significant impact on the wellbeing and physical health throughout lifespan. It has been suggested that the feeling of loneliness occupies the cognitive system by inducing hypervigilance to social-cues, as positive or negative facial expressions, thus impairing functions as attention and memory. However, to date, levels of loneliness are assessed solely using self-report questionnaires, which are sensitive to response bias and thus may yield biased assessments. The aim of this presentation is to review and discuss the efficacy of employing commonly used, non-responsive, cognitive tasks in order to assess loneliness. Specifically, this notion will be explored through the presentation of initial findings from a pilot study in which tasks of memory and attention were employed. Overall, the findings indicate that loneliness may be assessed to some extent using cognitive tasks. However, these tasks may be sensitive to some technological constraints, as type of computerized platform or the environment in which the test is taking place, as well as to some personal factors as technological literacy.

Keywords: Loneliness, attention, memory, perception.

1. Introduction and objectives

The socio-cognitive model of loneliness (Cacioppo and Hawkley, 2009) argues that perceived social isolation induces hypervigilance for social threats and diverges cognitive resources from memory and attention processes, thus resulting with increased attention to negative social cues and increased tendency to remember negative social events. Over the years, it was found that individuals with high levels of loneliness had more difficulty to control their attention in a dichotic listening task compared to not-lonely participants (Cacioppo et al., 2000); were more attuned to smiling faces—which signal social acceptance—than other facial expressions (DeWall et al., 2009); and showed poor memory performance in older age (Ayalon et al., 2016). The present study was designed to investigate whether levels of loneliness may be predicted using cognitive tasks. If loneliness may indeed be assessed using such tasks, non-responsive assessment methods may be developed in order to remotely monitor loneliness among populations at risk.

2. Method

2.1. Participants

As a part of a longitudinal study that was conducted during a COVID-19 lockdown in 2020, 110 participants aged 18-74 volunteered to participate in the study ($M_{age}=35.04$, $SD_{age}=13.75$; 78.1% women), by completing online Qualtrics™ surveys in seven assessment waves.

2.2. Assessments and procedure

Loneliness was assessed using the short form of the Social and Emotional Loneliness Scale for Adults (SELSA-S; DiTommaso et al., 2004), addressing familial, social, and romantic loneliness, on a 6-point Likert scale. At Waves 1 and 7, participants were presented with the full 15 items questionnaire, whereas at Waves 2-6 a shorter version was presented consisting of two items from each type of loneliness. The 15- and the 6-item versions showed good reliabilities throughout the assessment waves, with a minimum Cronbach's alpha of .82.

Visual search task. The task consisted of a set of 30 schematic faces (smileys) with a colored geometric shape for a nose, presented in a rectangular array of 300 X 350 pixels. Participants were instructed to "find and click on 3 red diamonds" among distractors faces with red and blue triangles and blue diamonds. Each participant completed two search conditions: The Negative-distractor condition comprised of 60% sad distractors, 20% happy distractors, and 10% neutral distractors, whereas the Positive-distractor condition comprised of 60% happy distractors, 20% sad distractors, and 10% neutral distractors. Reaction times (RTs) in the Negative- and Positive-distractor conditions were assessed.

Recognition memory task. The memory task consisted of 12 negative and 12 neutral Hebrew nouns. At study, 12 words (six of each valence) were randomly presented one at a time for 2 seconds each. At test, all 24 words were randomly presented in a table form. Half of the words were old (studied) and half were new (unstudied), and participants were to determine whether each word was or was not presented at study. Memory performance for each valence was calculated as $P(\text{hit}) - P(\text{FA})$.

3. Results

3.1. Visual search task

Multiple regression analyses of 488 daily reports revealed that, controlling for age and gender, romantic loneliness predicted longer RTs in both search conditions, whereas social loneliness solely predicted shorter RTs in the positive search condition. Familial loneliness did not predict search RTs.

3.2. Memory task

Multiple regression analyses of 64 participants completed the memory task, revealed that controlling for age and gender, overall levels of loneliness did not predict memory performance. However, loneliness interacted with Worry of COVID-19 to affect the memory for negative, but not neutral, words. Specifically, loneliness was associated with poor memory performance for negative words among those with high levels of worrying, but their memory was intact for neutral words.

4. Discussion and conclusions

The findings obtained in this study demonstrate that levels of loneliness were associated with visual search task and memory performances, probably due to the engagement of the attentional system. As predicted, loneliness was associated with increased search time and with poor memory performance. However, the association between loneliness and search performance differed as a function of type of loneliness, with romantic loneliness associated with overall slow search rate, whereas social loneliness associated with faster search rate but only among smiling distractors. As for memory, loneliness by itself was not associated with performance, and other emotional factors needed to be addressed for this association to emerged. Therefore, it seems that loneliness may be assessed to some extent using common cognitive tasks, but these tasks should be refined and tested in various conditions in order to produce estimations of loneliness.

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OVERCONFIDENCE BIAS ON INVESTMENT DECISION MAKING: A STUDY OF THE BANGLADESH SECURITY MARKET

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¹Prof. Dr

Abstract

The psychology of investors plays an important role in decision-making in the investment process. The motivation of the study is concerned with overconfidence bias, a tendency where a person overestimates their abilities. This bias can lead to risky investments. But this study indicates that overconfidence bias can be in a positive relation with investment decision-making. Being overconfident can lead to excess risk but the bias brings higher returns. Additionally, it is revealed that risk-taking ability influences the correlation with overconfidence. Bias is usually associated with negative aspects, which led the authors to investigate potentially positive effects. The quantitative analysis was conducted at the Dhaka stock exchange (DSE), Bangladesh, and explores how investors' risk tolerance influences investment decisions.

Keywords: *Bias effect, overconfidence, investment, cognitive bias.*

1. Introduction

This study investigates investors' overconfidence bias in investment decisions and how age, gender, risk tolerance, loss aversion, self-confirmation, and loss probability relate to the Dhaka stock exchange. According to this study, overconfidence bias has some positive effects on investment outcomes.

Overconfidence has significant daily consequences and sometimes motivates individuals to reach their goals (Shepperd, Waters, Weinstein, & Klein, 2015). The expected return of overconfident investors with neutral risk may be higher than that of reasonable investors (Benos, 1998). An investor's tendency to be overconfident in their abilities to choose stocks and determine when to enter or exit a position is a frequent one (Subash, 2012).

Bangladesh is an emerging nation, and stock market investment has increased over the last decade. The Dhaka stock exchange (DSE) has a market capitalization of 42.891 USD (CEIC, 2022) and 350 listed companies in 2022 (CEIC, 2022). This study was conducted to identify some factors that impact the investment decisions, performance, and satisfaction of investors.

2. Literatures review

Investor psychology is important in the decision-making process when making investments, and the overconfidence bias is one of the most pervasive biases that can affect investors (Trejos, Adrian, Yeny E., & Juan M., 2019). **Overconfidence** will encourage investors to use extreme and excessive investment strategies (Sembel & Trinugroho, 2011). The most common psychological habit is overconfidence, which is characterized by a tendency to overestimate one's own abilities, chances for success, probability of gaining positive outcomes, and expertise (Cheng, 2007). Kahneman and Riepe (1998) found the significance of overconfidence in making financial decisions leads to an overestimation of personal knowledge, an overestimation of one's ability to influence events, and an underestimate of risk.

Financial risk tolerance usually lowers in **old age**, although age and risk tolerance did not correlate highly (Samanez-Larkin, Mottola, Heflin, Yu, & Boyle, 2020). Over-60-year-old respondents showed less loss aversion bias (Sujesh & Dhanya, 2021).

They also found that during investment decisions, respondents under the age of 30 displayed less overconfidence bias than their elders; in contrast, respondents with more than 15 years of experience exhibited a higher level of overconfidence bias than respondents with less experience (Sujesh & Dhanya, 2021).

According to psychological studies, **men** are more likely than **women** to be overconfident, particularly in fields like finance where men predominate (Barber & Odean, 2001). When it comes to money concerns, men tend to feel more competent than women (Prince, 1993). In terms of investment performance, women frequently lack confidence (Zaiane, 2013).

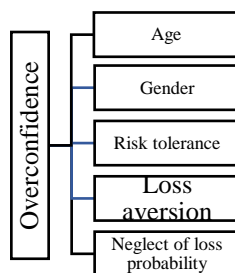
The most important factor influencing investment decisions, according to behavioral finance research, is one's **tolerance for risk** (Chavali & Mohanraj, 2016). As per Ainia and Lutfi (2018), a decision to invest is significantly and favorably impacted by risk tolerance.

Loss aversion influences one's level of risk (Thaler, Tversky, Kahneman, & Schwartz, 1997) and is strongly correlated with higher income and wealth among the investors (Gaechter, Johnson, & Herrmann, 2007).

The theory of Moore & J. Healy (2007) describes that when people have more accurate information about their **own risky behavior** and its consequences than that of others, they may still choose to engage in it. In sectors where individuals claim expertise, people were found to be more confident in their judgments (Heath & Tversky, 1991).

This can be particularly difficult when investing in the stock market. Kahneman & Tversky (1979) describe that people frequently make their decisions on the potential value of profits rather than losses, which can result in overconfidence and neglect of the **probability of loss**.

Figure 1. Conceptual framework



Based on the above discussion of theory, the following hypotheses were derived.

H₁: In investment decisions, Bangladeshis often rely on heuristics.

H_{2a}: Investment decisions are influenced by risk tolerance.

H_{2b}: Investment decisions are influenced by loss aversion.

H_{2c}: Investment decisions are influenced by self-confirmation.

H_{2d}: Investment decisions are influenced by the neglect of loss probability.

H_{3a}: In investments, men are more overconfident than women.

H_{3b}: In investments, young people are more overconfident than older ones.

H₄: Overconfidence has a significant positive financial outcome on investment decision-making.

3. Research methodology

This quantitative study aims to research investors' overconfidence bias in their investment decisions through primary data collection via a survey questionnaire distributed online between 12 to 26 February 2023.

The study's population consists of investors in Bangladesh stock exchanges (Dhaka Stock Exchange, or DSE). A convenience sample from the personal network of one of the authors was used, contacting individuals at the DSE.

The SoSciSurvey platform was used to collect data online. All 27 survey questions included closed-ended questions to gather information about participants' in-depth exploration of their decision-making process regarding stock investments. The study followed the moral guidelines set by the American Psychological Association. Participants (n=58) were informed that their participation is voluntary and completely confidential.

4. Data analysis and interpretation

Considering the research question and hypotheses, data were evaluated using Statistical Package for the Social Sciences (SPSS). Evaluating different age groups, it turns out that people over 46 years of age have highly significant t-values ($p=0.0013$) whereas the younger population is not relying on heuristics. This might be explained due to the experience of the older age group; younger people cannot rely on their intuition due to a lack of experience. Therefore, H₁ can be partially accepted for the older population who relies on heuristics.

When evaluating data for H_{2a}, it can also be partially accepted since risk tolerance ($t=1.856$; $p=0.036$) is significant for the age group 26 to 35 years, which is the only age group able to take risks in investment decisions. This can be explained by the older age groups getting close to retirement age (in BD, where the life expectancy is not so high) and having to fulfill many responsibilities, i.e., family and education of children period.

H_{2b} needs to be rejected since none of the values became significant for loss aversion, whereas H_{2c} can be partially accepted, in particular for the younger generation. For the age groups 18 to 25 ($t=3.674$; $p=0.011$) and 26 to 35 ($t=3.699$; $p=0.000418$), the focus on information and self-confirmation bias is (highly) significant.

H_{2d} is temporarily accepted as all age groups reflect (highly) significant t and p values, indicating that investment decisions are influenced by the neglect of loss probability.

H_{3a} needs to be rejected since t and p values do not significantly differ in values based on overconfidence between gender.

H_{3b} is highly significant for the age groups up to age 45 with $p=0.001$ to 0.00029 , indicating that young people are far more overconfident than older ones.

H₄ is (highly) significant for the age group 26 to 45 offering the highest p values (p=0.0000142) and for age 46 to 55 (p=0.041); therefore, overconfidence has a significant positive outcome on investment decision making.

This research study has some **limitations**. The sample size for this study was quite small and focusses on Bangladesh. Also, the results are not indicative of the whole population because they are based on a sample and research from a particular demographic area in Bangladesh. In addition, this research is limited by time constraints. Furthermore, age distribution throughout the sample is not representative; in particular, the age group 55 and older as well as the group 18 to 25 underrepresent.

5. Implication and discussion

It appears imperative that education is necessary for investors to inform themselves better about their investment decisions, especially in light of their overconfidence coupled with self-confirmation bias. Nonetheless, at least based on their self-report, their overconfidence caused participants to make money during their investment period. However, it must be taken with a grain of caution because of self-confirmation bias and self-report.

Future research can be expanded into thoroughly investigating age groups that were underrepresented in this study. Also, it might be worth eliminating potential self-confirmation bias. Additionally, it might be interesting to evaluate historical data on participant gains and losses and their effect on future investment. If overconfidence leads to positive investment results, self-esteem, and future investment tendencies will build up. On the other hand, if the overconfidence fails, then the person will not go for future further investment.

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PRO-RESILIENT EFFECTS OF ENVIRONMENTAL ENRICHMENT ON GABAergic AND GR ACTIVITY IN DORSAL HIPPOCAMPUS: AN ANALYSIS IN WISTAR ADULT RATS

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Abstract

Our work aims to evaluate the impact that environmental enrichment has on male Wistar rats in an animal model for depression. For this purpose, before applying an unpredictable chronic stress model, one group was exposed to environmental enrichment for four weeks in order to test if this procedure has protective effects against chronic stress. The selected groups were three: control group (n=8), unpredictable chronic stress group (n=8) (UCM) and environmental enrichment+chronic stress group (n=8) (EE+UCM). In all of them, the following behavioral tests were evaluated: sucrose preference (anhedonia test), zero maze (anxiety test) and forced swimming (passive coping test). This was followed by the evaluation of GR receptors activation and GABAergic activity in dorsal and ventral hippocampus. These receptors have been related to the inhibitory control of the hypothalamic-pituitary-adrenal axis after chronic stress. Moreover, GABAergic activity has been reduced in hippocampus in a chronic model stress. For data analysis, a mixed factorial ANOVA was used in the anhedonia test and a one-way ANOVA in the other tests. Results showed that environmental enrichment reduced the effects of the chronic stress, promoting a greater resilience. There were statistically significant differences between UCM group and the others. UCM group showed an anhedonia response and more anxiety than either the control group or the EE+UCM group. Results of the GR receptors activity and GABAergic neurons in hippocampal regions showed again statistically significant differences in the UCM group. There was a reduction in GABAergic activity in dorsal hippocampus coupled with an increased activation of GR in this group; for ventral hippocampus there were not differences between groups. These results suggest environmental enrichment could enhance greater resilience, reducing the vulnerability of the subjects to develop disorders such as depression and anxiety.

Keywords: *Resilience, environmental enrichment, GABAergic neurons, glucocorticoids receptors, rat.*

1. Introduction

Chronic stress is a key factor in the development of disorders such as anxiety and depression. But not every subject who experiences adverse situations develops depressive symptoms: those subjects are presented as resilient. Resilience is defined as a dynamic process that allows the subject to face adverse situations with less impact on their overall health. The neurobiological studies are currently focused on understanding the mechanisms that favor this resilience (Pascual-Leone & Bartres-Faz, 2021; Yao & Hsieh, 2019).

The Hypothalamic-Pituitary-Adrenal (HPA) axis plays a central role pathophysiology of depression (Gold, 2015). The hippocampus exert negative feedback control over the HPA axis, reducing cortisol release. Neuroimaging studies in humans confirm that there is a reduction in the hippocampal volume in chronically depressed patients, mainly in the dentate gyrus of the hippocampus (Malhi & Mann, 2018).

At the brain level, cortisol acts through mineralocorticoid (MR) and glucocorticoid receptors (GR) (Groeneweg et al., 2012; Meijer et al., 2019). MR act in the presence of cortisol basal levels, while the GR play a role when the cortisol level is high, and its elevated levels are maintained continuously. Therefore, this receptor could be related to greater vulnerability or resilience to affective disorders.

The GABAergic system is also involved in the regulation of the HPA axis activation under conditions of chronic stress. Studies using proton magnetic resonance spectroscopy reveal significant reduction in the GABAergic activity of the prefrontal cortex of MDD patients, showing deficit concentration in brain, alteration of the GABAergic interneurons and dysfunction of GABAA receptors (Luscher & Fuchs, 2015). Interventions such as environmental enrichment (EE) and physical exercise could act on GABAergic activity favoring greater resilience.

2. Objectives

We hypothesize that UCMS-exposed subjects would show changes in the GR and lower hippocampal GABAergic activity compared to those UCMS-exposed subjects previously submitted to EE. So that, EE application could induce a resilient process.

For this, we evaluated the impact of UCMS alone and the UCMS preceded by EE exposure on anhedonia, anxiety and despair, as well as on GABAergic activity and GR density in the dorsal hippocampus. In this way, we assessed whether EE favors greater resilience not only at a behavioral level, but also by affecting the GR and GABAergic activity of relevant brain regions involved in MDD.

3. Design

For evaluate that, twenty-six adult male rats supplied by the vivarium of the University of Seville (Spain) were used. All the procedures were carried out during the day and followed the Directive 2010/63/EU of the European Parliament and the Spanish regulation for the protection of animals used in experimentation.

The animals were randomly assigned to Control group (CONT, n:8), housed under normal conditions without any intervention and submitted to behavioral tests; Unpredictable Chronic Mild Stress group (UCMS, n:8), submitted to a UCMS protocol and the behavioral tasks; Environmental Enrichment in Unpredictable Chronic Mild Stress group (EE+UCMS, n:10), exposed to EE 4 weeks before experiencing chronic stress.

The UCMS model consisted of exposing the rats for 4 consecutive weeks to different stressors such as abnormal cage inclination (45° for 6 h), wet sawdust (6 h), food deprivation (for 24 h) among others. This protocol has proven to be a powerful model of animal depression (Atrooz et al., 2021). For the EE model, it consisted of applying for 4 weeks the presence of novel cues and different types of objects every week in their house cage, favoring interaction with each other and with the environment.

The anhedonia protocol involves analyzing the microstructure of licking behavior during voluntary consumption (Dwyer et al., 2012). A contact sensitive lickometer registered the licks made by rats, and MED-PC software controlled the equipment and recorded total consumption (mL) and total number of licks. This procedure allows to stablish the hedonic evaluation of the sucrose consumed before UCMS is applied and the effects after.

Elevated zero maze is a variant of the elevated plus maze (Czech et al., 2016). The session was carried out one week after the anhedonia test. Each session was recorded with a video camera connected to a computer equipped with a Ethovision Pro, video tracking program. The following variables were recorded: number of entries into the open area, time spent in each area and latency of entry into the open arm, all of them considered anxiety rates.

A single session of 5 min duration of forced swim task was carried out. The recorded variables were: duration and frequency of immobile behavior versus high and normal mobility.

For immunohistochemistry analyses and its quantification, we studied dorsal hippocampus subregions (dentate gyrus (DG), CA3 and CA1). For GABA, quantification was realized with Leica LAS X Software using magnification 10x and measuring manually the number of positive cells. For GR quantification of density was measured using ImageJ software.

4. Discussion

Results showed that environmental enrichment reduced the effects of chronic stress: in licking test the UCM group showed a clear anhedonia response whereas EE+UCMS not since it does not differ significantly with the control group.

In the zero-maze test, the EE+UCMS group spent longer time in the open zone compared to the rest of the groups. Furthermore, EE+UCMS group showed shorter latency to enter this area than the rest of groups ($F(2,24) = 5,519$; $p:0.011$; $\eta^2 : 0.31$) proving less anxiety and more exploration behavior than the UCMS group.

Quantification of GABA PV+ neurons and GR in dorsal hippocampus showed that UCMS group presented higher density of GR in all dorsal hippocampal regions compared to control and EE+UCMS group. Moreover, GABAergic PV+ neurons quantification revealed statistically significant differences between the groups in all dorsal hippocampal subregions (dDG ($F_{2,21}=12.01$; $p=0,001$); dCA1 ($F_{2,21}=16.58$; $p: 0,001$) and dCA3 ($F_{2,21}= 31.56$; $p: 0.001$). In this case, UCMS groups showed lower PV+ density than the rest of groups.

5. Conclusions

In general, our results show a previous EE experience buffers the effects on anhedonia and anxiety behaviors associated with stress. These effects are accompanied of the lower density of GR and greater PV activity, especially in the dorsal hippocampus in the EE+UCMS group. Therefore, probably EE would act increasing resilience and inducing high GABAergic activity.

In conclusion an enriched environment could buffer the effects of chronic stress, reducing the possibility of the onset of depressive disorder. In humans, activities such as meditation, mildness and cognitive reappraisal and aerobic exercise exert their adaptive effects on emotion regulation by acting on limbic and brainstem systems. Both preclinical and clinical studies support the idea that these interventions could complement pharmacological treatments.

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COGNITIVE DEMAND IN THE DEM TEST FROM THE PERSPECTIVE OF FIXATION DURATION ANALYSIS

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Abstract

Introduction: The Developmental eye movement (DEM) test is a widely applied method for assessing eye movements under reading-like conditions. Eye-tracking studies have demonstrated a correlation between the performance of the DEM C test and the average fixation duration (Moiroud et al., 2018) and children with better reading abilities have significantly shorter average fixation duration in the DEM test compared to children with poorer reading abilities (Hindmarsh et al., 2021). Webber et al. (2011) demonstrated that the horizontal task performance time correlates with the average fixation duration in reading, however, the correlation between average fixation duration in the DEM test and reading task performance were not analyzed. Since the performance of the horizontal DEM test requires similar visual processing and cognitive demands as in reading (Ayton et al., 2009), and one of the factors that characterizes cognitive demand is fixation duration (Reney et al., 2014), the aim of the current study is to explore the relation between DEM test performance and eye movement parameters in reading text in children with and without reading difficulties.

Methods: The DEM test and age-appropriate reading text were demonstrated on a computer screen at 65 cm distance and eye movement recording was performed with Tobii Pro Fusion (250 Hz) eye tracker. The average fixation duration from 57 school-aged children in fourth grade (9-11 years old; average age 10) was analyzed. Children's reading skills were assessed using the Acadience Reading test.

Results: The average fixation duration in the DEM test was significantly shorter compared to the average fixation duration in the reading task ($p < .001$). A high correlation was observed between the participants' average fixation duration in the DEM test and the average fixation duration in reading task ($r = .349$, $p = .008$). A high correlation was also observed between the average fixation during reading and the Acadience Reading test composite score ($r = .698$, $p < .001$).

Conclusions: The results demonstrate that the average fixation duration in the DEM test is shorter than during reading, leading to the conclusion that the cognitive demand in the DEM test may be lower than during reading. However, the average fixation duration during reading correlates more strongly with reading ability than the average fixation duration in the DEM test.

Keywords: *Children, cognitive demand, DEM test, fixation duration, reading.*

1. Introduction

Reading is a complex learned skill that requires coordination of many cognitive processes, including visual perception and oculomotor skills. During reading, saccades of varying amplitude are made, separated by fixations during which visual information is perceived (Rayner, 1986). Eye-tracking studies have shown that as children's reading skills develop, the amplitude of reading-directed saccades increases, and the average fixation duration decreases (Stranberg, 2019), but children with reading difficulties have more fixations, and their fixation durations are longer (Lefton et al., 1979). Fixation duration is one of the factors that characterizes cognitive demand in reading-related tasks (Reney et al., 2014) and in natural scenes (Walter & Bex, 2021).

The Developmental eye movement (DEM) test is a widely applied method for assessing eye movements under reading. The results of this test have been correlated with reading skills in school-aged children (Serdjukova et al., 2017). The DEM test contains A and B tests for vertical reading, and C test for

horizontal reading. The horizontal DEM test requires similar visual processing and cognitive demands as reading (Ayton et al., 2009). Eye-tracking studies have shown that there is a correlation between the performance of the DEM C test and the average fixation duration (Moiroud et al., 2018), as well as a correlation between the horizontal task performance time and mean fixation duration during reading (Webber et al., 2011).

The aim of the current study is to explore the relation between DEM test performance and eye movement parameters during reading in children with and without reading difficulties.

2. Methods

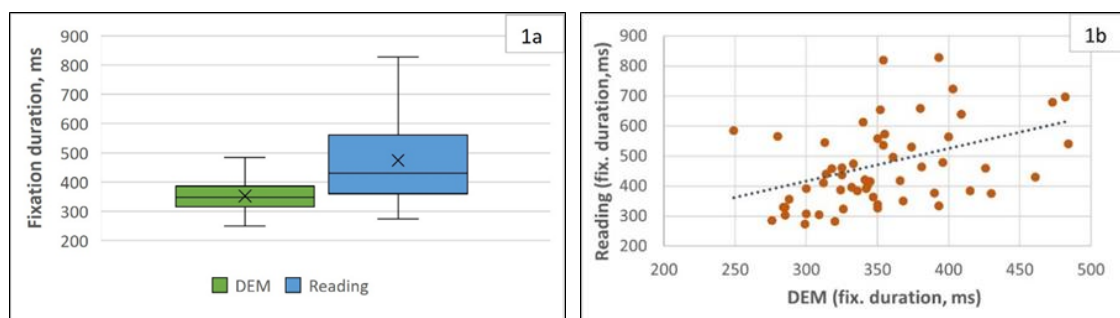
Participants in this study were 57 school-aged children from fourth grade, aged 9-11 years with an average age of 10. All participants had normal vision. The DEM test and age-appropriate reading text were demonstrated on a computer screen at 65 cm. A modified version of the DEM C test containing 40 digits was used. The experiment started with the DEM C test, followed by a reading task in which participants read aloud a short age-appropriate text consisting of 24 words. Eye movements were recorded using Tobii Pro Fusion (250 Hz) eye tracker and Titta Master toolbox (Niehorster et al., 2020) during the DEM test and reading task. The I2MC algorithm (Hessels et al., 2017) was used to detect fixation duration, which was the eye movements parameter analyzed in this study. Participants' reading skills were assessed using Acadience Reading test, and the composite score was used for analysis, where higher composite score indicated better reading ability. Data analysis was using SPSS 22.0 (SPSS Inc., Chicago, IL, USA).

3. Results

The average fixation duration during the DEM test ($M = 353$ ms, $SD = 53$) was compared to that during the reading task ($M = 472$ ms, $SD = 163$), and a significant difference was found, $t(56) = -6.01$, $p < .001$ (Figure 1a). Specially, the average fixation duration during the DEM test was significantly shorter than that during the reading task.

The results of the correlation analysis demonstrate a relationship between the participants' average fixation duration in the DEM test and the average fixation duration in the reading task ($r = .349$, $n = 57$, $p = .008$) (Figure 1b). A high correlation was observed between the average fixation duration during reading and the Acadience Reading test composite score ($r = .698$, $n = 57$, $p < .001$), but the correlation between the composite score and the average fixation duration in the DEM test was weak ($r = .141$, $n = 57$, $p < .295$).

Figure 1a.- Fixation duration in the DEM test and during reading;
1b - a correlation between the fixation duration in the DEM test and during reading.



4. Discussion

One of the most significant findings of this study is that the average fixation duration in the DEM test is significantly shorter than during reading. This is a novel result, as previous studies have not directly compared fixation duration between these two tasks. The correlation between fixation durations in the two tasks suggests that longer fixations in the DEM test may also indicate longer fixations during reading, which is a characteristic of poorer reading skills in children (Lefton et al., 1979; Spichtig et al., 2017). The results of this study are consistent with previous findings, as the average fixation duration during reading strongly correlates with the Acadience Reading test composite score, which is a measure of reading skills.

Zegermann et al. (2016) have suggested that cognitive demand influences the duration of fixation, with higher demand leading to longer fixations. Fixation duration is also a factor that characterizes cognitive demand in reading-related tasks (Reney et al., 2014). As the DEM test is performed under reading-like

conditions, fixation duration could be a factor for comparing cognitive demand between the DEM test and reading. The shorter fixation duration in the DEM test than during reading suggests that cognitive demand in the DEM test may be lower than during reading.

Since children's reading eye movements evolve with development of their reading skills, it would be valuable to conduct further research analyzing the relationship between fixation duration in the DEM test and during reading in other age groups of children.

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DECISION-MAKING AND PROBLEMATIC GOAL ATTAINMENT

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Abstract

The decision-making and the goal attainment are widely researched and undoubtedly intertwined areas. However, research into the connection between aspects of the decision-making process and the problems occurring during specific stages of the goal attainment process is somewhat lacking. Based on previous work, our study focuses on exploring the existence of a connection between the action crisis, the decision-making styles, and the newly specified aspects of the decision-making process. This paper presents results of a longitudinal study consisting of four phases. Ninety-seven people aged 25 to 65 ($M = 38,8$; $SD = 9$) participated in this study. The Action Crisis Scale (ACRISS; Brandstätter & Schüler, 2013) was used to measure manifestations of the action crisis, and the General Decision-Making Style scale (GDMS; Scott & Bruce, 1995) was used to measure five decision-making styles: rational, intuitive, dependent, avoidant, and spontaneous. Moreover, to explore selected aspects of the decision-making process occurring during the goal attainment process, 16 newly formed items were used. Significant relationships were found between the action crisis and the rational, avoidant and spontaneous decision-making style. Several other significant relationships were found between the action crisis and the aspects of the decision-making process, such as the momentary decision to end the goal attainment process, to give up the goal or to make changes in the means of the goal attainment. The momentary decision-making certainty, the thoughts reflecting on the costs of ending the goal attainment process or ruminating on previously made decisions were also connected to the action crisis. These results point out to the changes in the decision-making and a preference of certain decision-making styles when obstacles and failures to attain the goal pile up. Knowledge of these relationships may help in preventing as well as resolving goal attainment problems. While keeping in mind limits of this study, these findings may inspire much needed future research and practical applications.

Keywords: *Action crisis, decision-making process, decision-making styles, goal attainment.*

1. Introduction

Achieving different kinds of goals is part of our everyday lives. Once the goal is set, a person applies different strategies to attain it. However, this process is rarely without any obstacles. When there are too many seemingly unconquerable obstacles and piled up failures after putting a certain amount of effort into achieving the goal, an action crisis may arise (Brandstätter & Schüler, 2013). The action crisis can lead to active questioning of the desirability and attainability of the goal, and the benefits and the costs of the next steps can come into question (Brandstätter & Schüler, 2013; Herrmann et al., 2019) – deliberations not usually typical for the active stage of the goal attainment process (Achtziger & Gollwitzer, 2018). Whether the action crisis will have a positive or negative effect on the outcomes of this process depends on various factors. Every stage of the goal attainment process is accompanied with a certain mindset (Achtziger & Gollwitzer, 2018) and it is clear the decision-making process plays an important part in this. The decision-making has been widely researched, mainly in terms of decision-making styles. However, when it comes to specific aspects of the decision-making that may be of importance during the different stages of the goal attainment, the research is somewhat lacking.

Our objective was to provide some insight into the relationship between the action crisis and the decision-making – specifically five decision-making styles (Scott & Bruce, 1995) and chosen aspects of the decision-making process based on our previous works (Bavolar, Lovas & Durbisova, 2021; Durbisova & Bavolar, 2021).

2. Methods

A larger longitudinal study was carried out for a period of nine months, consisting of four phases (the fourth phase was focused only on the evaluation of previous phases and possible future changes). The study examined the processes of the decision-making and goal achievement.

Ninety-seven employees – most of them employed at Slovak Universities or EURES (European Employment Services) – aged 25 to 65 (M = 38,8; SD = 9) participated in this study (75,3% women).

The Action Crisis Scale (ACRISS; Brandstätter & Schöler, 2013) consisting of six items was used in the first three phases of the study to measure aspects of the action crisis – conflict, setbacks, implemental disorientation, ruminating, procrastinating and disengagement impulses.

The General Decision-Making Style scale (GDMS; Scott & Bruce, 1995) was used to measure five decision-making styles: rational, intuitive, dependent, avoidant, and spontaneous. The scale consists of 25 statements, each decision-making style measured by five items.

Considering the lack of methods exploring the decision-making process, new items were formed. Based on theoretical background (Ballard et al., 2018; Brandstätter & Schöler, 2013; Herrmann et al., 2019; Lebeau et al., 2018) and our previous research (Bavolar, Lovas & Durbisova, 2021; Durbisova & Bavolar, 2021), sixteen items focusing on the aspects of this process were used in the second and third phase of the study – in the middle stages of the goal attainment process. These items explore momentary (“at-the-moment”) micro-decisions and aspects of the decision-making process accompanying the process of goal achievement (e.g., momentary decisions to make changes in the effort, tempo, time, demands or the means when trying to achieve a goal, decisions to continue or end the goal achievement process, thoughts about benefits and costs of continuing or ending the goal achievement process, etc.).

3. Results

Presented are the most significant results of correlational analyses.

As can be seen from Table 1, the action crisis was found to be in a significant positive relationship with the avoidant decision-making style in the first and second phase of the study. The spontaneous decision-making style was in a positive relationship with the action crisis mainly in the first phase of the study, while the rational decision-making style was in a significant negative relationship with the action crisis in the second phase of the study.

These results suggest that the more the action crisis is present, the more used is the avoidant decision-making style. The spontaneous style might be more preferred if the action crisis is present in the early stages of the goal attainment process. The less is the action crisis present, the more is the rational style preferred in the middle stages of the goal attainment.

Table 1. Relationship between the action crisis and the decision-making styles.

Decision-making style	Action crisis		
	1 st phase	2 nd phase	3 rd phase
Rational	-,14	-,38**	-,11
Avoidant	,46**	,46**	-,27
Spontaneous	,38**	,25	-,05

** p < 0,01

Table 2 presents found connections between the action crisis and some aspects of the decision-making process. The momentary decision to end the goal achievement process or to give up the goal was found in a significant positive relationship with the action crisis in both the second and third phase of the study. The action crisis was found to be in a positive relationship with the momentary decision to make changes in the goals demands and means of the goal attainment, as well as with the demandingness of momentary decisions, feeling of time pressure when making these decisions, thoughts on previously made decisions and costs of ending the goal attainment process. The certainty in momentary decisions was found to be in a significant negative relationship with the action crisis in the second phase of the study.

Table 2. Relationship between the action crisis and the aspects of the decision-making process.

Aspects of the decision-making process	Action crisis	
	2 nd phase	3 rd phase
2. decision to end the goal achievement process	,53**	,59**
3. decision to give up the goal	,41**	,47**
6. decision to make changes in the goal demands	,00	,35*
8. decisional certainty	-,48**	-,26
9. decisional demandingness	,20	,39*
10. time pressure	,22	,42*
11. decision to make changes in the means of the goal attainment	,49**	,19
15. thoughts on costs of ending the goal attainment process	,29*	,20
16. thoughts on previously made decisions	,33*	-,04

* p < 0,05; ** p < 0,01

These results might imply that the more the action crisis is present, the larger is inclination towards making the immediate decision to end the goal achievement process or to give up the goal

entirely, as well as deciding on making some changes in previously set goal demands. Moreover, the higher is the level of the action crisis, the more uncertain an individual might feel when making momentary decisions, especially in the early stages of the goal achievement process. Higher levels of action crisis can also be connected to saturated feelings of decisional demandingness or time pressure when making these micro-decisions, and to intensified deliberations on the costs related to ending the whole process or previously made decisions that led the individual to the situation they are in.

4. Discussion

The success of the goal achievement process can be largely affected by accumulated failed attempts to overcome obstacles and reach the goal. This can result in giving up or making some changes to resolve the situation. These changes are usually conscientiously made since the individual is deliberating the characteristics of the goal and the goal-achievement process. Our study's aim was to explore the connection between the action crisis and the decision-making process.

The results suggest there is a connection between action crisis and some decision-making styles, specifically the rational, avoidant, and spontaneous decision-making style. These results are in line with the reasoning of some authors (Riaz et al., 2012; Gambetti & Giusberti, 2019), such as the connection between the avoidant style and neuroticism which can be reflected in higher intensity of action crisis, or connection between the rational style and conscientiousness in which case the meticulous approach to analyze potential alternatives might be in relation to lower intensity of the action crisis.

The action crisis was also found to be in a relationship with some of the aspects of the decision-making process, such as momentary decision to end the goal attainment process, to give up the goal or to make changes in the means of achieving this goal, and the decisional certainty, thoughts on the costs of ending the goal attainment process or previously made decisions that have affected it. Some of these results are in line with reflections of other authors (Brandstätter & Schüler, 2013; Herrmann et al., 2019; Lebeau et al., 2018) about the action crisis and its connection to thoughts on costs and benefits of the next steps, rumination, efforts to find alternative goals, threatened self-worth etc.

While keeping in mind the limits of the study – such as the disadvantages of a longitudinal study, characteristics of the participants and used methods – these results provide new information about some specifics of the connection between the goal attainment and the decision-making processes. This can provide a stepping stone for future studies and practical application of the gained knowledge that would focus on helping to prevent as well as resolve problems related to the goal attainment.

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The background features a vibrant, abstract design with wavy, organic shapes in shades of red, blue, and white. The top portion is dominated by a bright red area, which transitions into a light blue section. A dark blue, almost black, wavy band separates the red from the light blue. The bottom half of the image is a solid, light blue color. The overall effect is modern and dynamic.

VIRTUAL PRESENTATIONS

PSYCHOSOCIAL PRESSURES OF HAVING BETA-THALASSEMIA

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Abstract

Having a chronic disease presents a series of lifelong problems for the patient and the family. In regards to beta-thalassemia major (BTM), the patient has to worry about the effects of medical care on their body from such a young age. However, after interviewing Patient S, it has been stated that maintaining his mental health was the most difficult part of having BTM. Although some patients can adjust to their lives, not everyone has the same story in regards to the way they view themselves and the way they interact with others. The goal of this literature review is to address the psychosocial pressures that Patient S discussed with a focus on engaging in romantic relationships. This requires exploration of the psychological and physical development of the patient with the disease which will give a better picture of the sociological development that Patient S explained. There are several studies of BTM that took place in western countries where beta-thalassemia is not as prevalent and with medicine that is of a different standard. However, due to Patient S being from a country that has a higher prevalence of BTM with less of these resources, it was only appropriate to include studies representing this population.

Keywords: *Psychology, Sociology, chronic conditions.*

1. Introduction

Having a chronic disease presents a series of lifelong problems for the patient and the family. In regards to beta-thalassemia major (BTM), the patient has to worry about the effects of the medical care on their body from such a young age. However, receiving medical care seems to be the easiest part of the process. After interviewing Patient S, it has been stated that maintaining his mental health was the most difficult part of having BTM. Although some patients can adjust to their lives, not everyone has the same story in regards to the way they view themselves and the way they interact with others.

Beta-thalassemia was first identified in 1925 by Dr. Thomas Cooley when he discovered the similarities in the changes of certain patient's bones, as well as their clinical histories (Rich, 1956). Due to the lack of knowledge of the different types of anemia and the fact that this anemia presented differently than the previously discovered ones, this new disease was called Cooley's anemia. The discovery of this disease led to various genetic studies that highlight the inheritance pattern of this disease, as well as the populations that are more prone to it.

Discovering a chronic disease such as BTM can lead to medical advancements that could help patients with the disease live a better life, or could help eradicate the disease in certain instances. Eradication of BTM would be through pre-marital screening programs that are put in place in highly endemic areas to hinder higher-risk marriages (Hashamizadeh and Noori, 2013; Zeinalian et. al., 2013). These programs have become more prevalent amongst societies as time has progressed but were not as popular about 50 years ago when Patient S was born. These programs have helped reduce the number of BTM births among endemic populations, but the couple has to be willing to get tested before marriage (Waheed et. al., 2016). In some cases, couples did not get tested for BTM and ended up having a child diagnosed with this disease which led to debilitating consequences for the family. In Patient S's case, his parents were not tested before marriage. In instances when patients are born with BTM, there are medical advances that can provide the patients with a better life. Currently, patients with BTM are required to get blood transfusions ever so often to attempt to correct the anemia (Galanello and Origa, 2010). The repeated blood transfusions require iron overload therapy to avoid various complications that come with their lifelong therapy. Although patients can reduce certain complications that are prevalent in iron-overload, other complications come with the treatment such as delayed or arrested development which puts the patients behind their peers physically and mentally.

The discovery of a chronic disease can also lead to stigmatization which is due to the ignorance of the community about a patient's condition. Awareness of BTM and what it indicates is strongly correlated with those of a higher socioeconomic status than those who live in more remote areas (Wong et. al., 2011). Public awareness has increased in recent years, but there are still populations who are unaware of the disease which leads to problems in addressing those affected by it. Due to Patient S being born over 40 years ago when the disease was considered a death sentence in the Mediterranean, he was a victim of stigmatization that followed him when he applied for work or even tried to find a life partner.

The goal of this literature review is to address the psychosocial pressures that Patient S discussed with a focus on engaging in romantic relationships. This requires exploration of the psychological and physical development of the patient with the disease which will give a better picture of the sociological development that Patient S explained.

2. Literature review

BTM is a chronic disease that is debilitating to the patient and the family. Due to life-long treatment, patients with BTM develop differently in regards to their physical appearance and their psychological processes. Due to the differences that BTM patients feel in comparison to their peers in regards to their physical and mental health, this leads to sociological problems when interacting with others. Patient S spent a lot of time discussing the difficulties he and his friends with the disease had in regards to finding a partner due to the stigmatization around the disease, the developmental delays the disease causes and what it could mean for their future offspring. In this literature review, I will discuss the psychological and physiological development of patients with BTM which can lead to sociological dysfunction focusing on issues in relationship development through various relevant papers based on the information received from Patient S during our interview.

2.1. Psychological

The current literature on the topic of the psychological pressures of having a chronic disease such as BTM has been heavily explored. Having a chronic disease is a mind and body game. The patient must be able to handle the treatments involved for their entire lives and the patient must also be able to mentally deal with the psychological burden a chronic disease brings.

Many BTM patients feel the effects of the disease on their bodies which could be the result of their developmental delay and not being able to participate in certain activities like their peers. Inability to participate in these activities could reduce the patient's self-esteem and self-efficacy since they do not feel like they are the same as others around them. Patient S discussed how he enjoyed playing soccer when he was younger, but he had restrictions that other children did not have due to his disease. That dream of becoming a famous soccer player that many young children have was not even a dream since he knew his condition would not allow that to happen. However, he was satisfied with the way he grew up because many people he knew with the disease had more restricted lifestyles so they did not have the chance to experience certain pleasures that come with being a kid.

Not being able to participate in various activities or not having a similar appearance to your friends can lead to social isolation. Due to the societal rejection that certain patients feel depending on their region and how old they are, depression is prevalent amongst patients with BTM (Koutelekos and Haliasos, 2013). Patient S spoke about how his life is a roller coaster of emotions. Sometimes he feels a lot better due to his treatment, but other times when he feels down, he wants to just stop his treatment. He followed this by saying that he knew if he stopped his treatment, then he is signing his death warrant so that was not an option. But he has been around many people with BTM who do not want to live anymore so their treatment compliance plummets and they end up passing away. Patient S did not disclose having a psychological disorder, but he did acknowledge bouts with depression which is common amongst patients with BTM as mentioned earlier. Although diagnosable mental illness was not the case for Patient S, but feeling the effects of social isolation and could lead to other psychological disorders "to name a few [they] can be referred to [as] somatization disorders (SOM), depression especially major depression disorder (MDD), obsessive-compulsive disorder (OCT), tic disorders, oppositional defiant disorders (ODD), psychosis, nocturnal enuresis nocturnal. In addition, somatic complaints, and interpersonal sensitivity" (Naderi et. al., 2012). Patients with BTM are more vulnerable to psychological disorders, especially if they lack primary and secondary social support (Naderi et. al., 2012). Due to the complexity of some of these psychological disorders, medical compliance will decline. A more popular phenomenon for BTM patients is psychiatric help due to them being at high risk (Hakeem et. al., 2018). Lifelong therapy is suggested due to BTM being a lifelong disease.

2.2. Physical

Due to the treatment involved with this chronic condition, patients do not develop at the same speed as their classmates. It is quite common in the literature for patients with BTM to have delayed or even arrested puberty (Kyriakou and Skordis, 2009).

Although Patient S is male, some women experience issues due to BTM in regards to consonance during puberty (Al-Rimawi et. al., 2005). Female patients tend to be of smaller stature and appear less developed than their classmates without the disease. When the patients were finally going through puberty, they had to later worry about their fertility if they wanted to give birth (Roussou et. al., 2013). Women who wanted to have children were able to have children through fertility treatments. However, having children naturally with a partner is difficult. Alternative reproductive techniques are usually utilized in patients BTM (Miri-Aliabad et. al., 2015). This finding is confirmed in two additional literature pieces that discuss how the oxidative stress of BTM treatment leads to overproduced circulating free radicals leading to increased infertility (Roussou et. al., 2013; Moayeri and Oloomi et. al., 2006).

In males, there are similarities to females in regards to their physical developmental delays. Males have a shorter stature and their features may not appear as mature as their friends due to the hypogonadism that is a common side effect of BTM treatment (Galati, 2003). Patient S revealed that he was shorter than many of his classmates, but he was not sure why. Upon research, it is evident that hypogonadism is most likely the cause. Due to treatment, boys can commence puberty like their friends, but then they have other issues to think about later in life. Erectile dysfunction and azoospermia are common side effects of the recurrent treatment (Giammusso et. al., 2000). These conditions were confirmed in another study which shows that free radicals and iron deposition in the pituitary glands and the testes lead to problems with fertility (De Sanctis et. al., 2012). There are some advances in male infertility such as providing the patients with antioxidants, but the studies are in their infancy (Elsedfy et. al., 2018).

2.3. Sociological

Based on the side effects and complications BTM described above, these patients tend to have difficulty in social functioning. As discussed before, many patients with BTM have difficulties participating in certain activities as their unaffected friends which could lead to social depression and reduced medical compliance (Koutelekos and Haliasos, 2013). Feeling as though a person is different from everyone else can mold them the rest of their lives. Due to the advances in BTM treatment, patients can live much longer than before which allows them to get to reproductive age. Patient S knew he was different from a lot of the people around him, but when he got to his adolescent and young adult years when he was looking for a partnership was when it became more evident.

As mentioned before, patients with BTM have developmental delays due to their treatment which results in delayed or even arrested puberty. One of the most visible side effects of having BTM is being much shorter than your classmates (Galati, 2003). Upon meeting Patient S, he had a small stature which he later explained that he was a lot smaller than his classmates due to his treatment. Height is not a problem in most relationships, but Patient S had to worry about other issues that his counterparts did not. Patient S wanted the closeness and intimacy that came with having a partner and being married, but he also had to think about whether he would be rejected and then whether he would be able to bear offspring. A finding suggests this is a common thought amongst patients with BTM since “one serious difficulty of social integration, deriving mainly from the lack of a normal sexual function: often prevents to construct[ion of] a family” (Messina et. al., 2018). Patient S did not go into detail about his gonadal functioning, but as previously mentioned, males with BTM were found to have erectile dysfunction and infertility. These factors lead to patients having to approach relationships differently than their counterparts. Although Patient S was able to get married and have two children with his wife, he is an outlier in the data. The few studies focusing on the patients in regards to social relationships found that patients do not usually seek marriage and even fewer want to have children (Haghpanah et. al., 2013; Messina et. al., 2008).

3. Discussion

While preparing for this literature review, I became more informed about Patient S’s condition regarding how this chronic disease can cause psychological and physical differences which can adjust the way a patient interacts with others around him. Although there was a lot of research in certain areas of BTM, there are some areas that are lacking investigation which leaves a few unanswered questions. In this discussion, I will pose some of the downfalls present in this literature review.

3.1. Psychological

While researching the mental health of patients with BTM, there was a lot of mention of psychological disorders that patients with BTM are susceptible to especially if they have co-morbidities (Hakeem et. al., 2018; Messina et. al., 2008; Naderi et.al., 2012). Although patients with BTM are more likely to get mental illnesses, not all of them do. There was not a lot of research about patients without mental illnesses. In regards to Patient S, he did not disclose having a mental illness, but he did reveal that he has a rollercoaster of emotions sometimes due to his illness. He also revealed how his family was very supportive of him so he had more social support than others. Lack of social support is a predictor of developing a mental disorder that puts a strain on the patient which can change the course of their life (Naderi et. al., 2012). This is important in regards to my paper because if patients with BTM who do not have mental disorders can make a smoother adjustment into society and have better sociological integration than others, that might change the tone of this paper when it comes to patients seeking companionship.

3.2. Physical

Having BTM will change the way a body develops due to different underlying mechanisms. The deposition of iron into the pituitary gland and the gonads lead to issues during puberty and later infertility. Due to these depositions, patients tend to develop hypogonadism (Lombardo et. al., 2000; Kyriakou and Skordis, 2009; Al-Rimawi et. al., 2005). Due to the tone of this literature review, I believe that some of the internal and external physiological differences a patient with BTM has in regards to others their age was discussed to the depth needed for this paper. However, there were not as many papers as I thought that would deal with other physical manifestation of the effects of the BTM and the effects of the treatment. There was a lot of discussion about shorter stature and infertility, but other physical manifestations were not present in publications.

3.3. Sociology

Although there were numerous papers about the developmental problems that patients with BTM go through, there is a lack of papers on patients in their reproductive years discussing their struggles finding a partner. Patient S discussed how he did not want to disclose his disease status with girlfriends because they would reject him when they found out. However, Patient S was able to get married. Patient S said that this is not the way it usually works out for patients with BTM since many do not get married or have the desire to get married due to their disease status. Part of Patient S's statement was confirmed because one study found that in their sample, only six percent of the adults had been married due to the complications that came with the disease such as cardiological disorders, diabetes mellitus, hepatitis and infertility (Haghpanah et. al., 2013). Although Patient S had a positive outlook on marriage amidst his divorce, a study online discussed that patients with BTM tended to get married if this was viewed as correct in their culture (Wong et. al., 2011). However, this was the only study that approached couples before they were married.

4. Conclusion

This literature review discussed how the differences in psychological and physical development can lead to altered sociological development of a BTM patient with a focus on romantic relationships. After reviewing the literature, many factors contribute to the seemed sociological dysfunction that beta-thalassemia patients exhibit. Patient S's experience was similar in certain aspects, but also different from what was found in the literature in others. However, he mentioned several times in the interview that his experience was unique and not everyone was as lucky. Further research can be done in this field to explore the sociological functioning of BTM patients in regards to seeking out mates which could bring more knowledge to this subject and provide awareness to communities.

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A MODEL FOR PREDICTING SCHOOL READINESS USING DATA MINING TECHNIQUES

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Abstract

Study the school readiness is an interesting domain that has attracted the attention of the public and private sectors in education. Researchers have developed some techniques for assessing the readiness of preschool kids to start school. Here we benefit from an integrated approach which combines data mining and social network analysis towards a robust solution. The main objective of this study is to explore the socio-demographic variables (age, gender, parents' education, parents' work status, and class and neighborhood peers influence, Supportive Family, Health Status, Family Problems, Motivation, Family Problems, Gaming Devices, Sleeping quality, School Support, Extended Family Support) and Average Marks, data that may impact the school readiness. This paper proposes to apply three models of Data Mining Techniques using R and Python Script Languages to predict school readiness. Real data on 148 Primary School children was used from Life school for Creativity and Excellence a private school located in Ramah village, and white-box classification, clustering and association methods, such as induction rules were employed. Experiments attempt to improve their accuracy for predicting which children might fail or dropout by first, using all the available attributes; next, selecting the best attributes; and finally, rebalancing data and using cost sensitive classification. The outcomes have been compared and the models with the best results are shown.

Keywords: *Machine learning, school readiness, socio-economic data, data mining, socio-demographic data, script languages, Python, R Language.*

1. Problem definition

The transition from kindergarten to school is considered one of the critical periods in the life of a child, during which he/she acquires fundamental skills and ways of learning and thinking. For the child, this is a profound change and a transition from a small, intimate setting to a larger setting with more expectations and various demands made upon him/her, Fogel, (2000); Hair et al (2006). The transition also requires the child to adjust to and develop emotional and social relationships in a new environment, Duncan et al. (2007). Generally, the coordination is done by the kindergarten teacher, usually in cooperation with the parents, and is a critical component in the children's development.

Today, it is possible to diagnose various forms of dyslexia, language and attention deficits, motor deficits and cognitive mathematical deficits. It is possible to begin an early intervention at a young age, as needed and acceptable, David, (1999); Donald and Stenner (2005). Thus, school readiness is more than just about children. School readiness, in the broader sense, involves children, families, early environments, schools, and communities. Children are not innately ready or not ready for school. Their skills and development are strongly influenced by their families and through their interactions with other people and environments before coming to school. Assessing school readiness is important to the education of young children. Assessment helps in measuring the current state of children's development and knowledge and can be used to guide classroom and individual education programming, Chambers (2000); David (1999); Feinstein (2003); Hair et al. (2006).

Most of the employed systems and computerized tools concentrate on the child individually and in isolation from his/her community and this leads to incomplete or misleading outcome which may reflect negatively on the personality and behaviour of the child. Some social factors have a great impact on the readiness of a child for school and must be taken into account. These social factors are mostly inspired from the environment where the child belongs; these include friends of a child, siblings and relatives of a child, parents' education level, and parents' employment status.

The evaluation of a child's readiness to transit from kindergarten to school is a major challenge to schools and families and a critical life event of the child him/herself due to the need of new skills and ways of learning and thinking, Suleiman et al. (2010); Condrón (2008). This transition requires the child to adapt to the new environment and to start developing new social relationships with school mates, these factors could be friends of the child, siblings and relatives of the child, parents' education level, and parents' employment status. In addition, this stage is also critical to parents and teachers to help the child to be ready for the new transition, Miller and Emihovich (1986).

2. Proposed solution

A prediction model was proposed to predict if a child is ready for school or not, the model is based on several data mining techniques features that were extracted from the children's social information which is expected to be maintained by schools. Data mining techniques were applied to school data to examine the readiness of children for school. The proposed model was evaluated and the results are encouraging by demonstrating the applicability and effectiveness of the approach.

3. Predicting school readiness

There are at least three arguments that could be invoked to understand the importance and the impact of evaluating school readiness.

First and the strongest argument by far, is the predominant formative character of competence assessment at this age. A correct identification of the most salient aspects of each competence opens the door for efficient interventions, to be remedial or enriching. Relying on a valid assessment, one may precisely circumscribe the target of the intervention and its operational goals. Any individualized instruction requires careful assessment of the existing competences.

Second, a correct assessment of the salient competences may offer critical information for the decision to enter schooling or to delay the integration into the school system, both for parents and children. It is necessary to underline that this information is just one part of the equation but by relying on research data and adequate measurements it is hard to ignore, Raver and Knize (2002). It may also predict later academic achievements and adaptation to primary school-life relying on early education of the relevant competences, Wayne, Fantuzzo, and McDermott, (2004).

Last but not least, the measurement of the efficacy and effectiveness of any program (or curriculum) implemented in early education requires reliable assessment of children competences, able to offer precise information about the baseline and the outcomes of the program (curriculum). Without longitudinal assessment of relevant competences, the superiority of a particular early education program over any other has no empirical support.

To summarize, the assessment of school readiness has a critical practical and theoretical importance. Some of these assessments may be implemented by computer testing, but most of them are not, due to the age of the children and their low computer skills, so they will be administered in a classical format. However, it is extremely important to create a computerized platform capable to offer the management of all the assessment data for each child, collected by using different methods and various informants.

3.1. Critical competences for school readiness

Several extensive and authoritative searches of the literature, Denham (2006); Ionescu and Benga (2007); Blair (2002) allow us to consider that the most relevant competences for school readiness refer to cognitive development, socio affective development and characteristics related to temperament/personality.

3.2. Cognitive competences

Cognitive competences are the abilities to process information, and may differentiate between general cognitive abilities and curriculum-based (specific) cognitive skills. General cognitive abilities are those involved in almost any kind of problem solving and refer to the processes of attention, memory, language, reasoning and executive functions. Curriculum-based cognitive skills are those knowledge and problem-solving abilities that are the outcomes of a specific curriculum or intervention program in early childhood as for example early literacy skills. They refer, for example, to the ability to recognize several capital letters, perform simple arithmetical operations, and understand the connection between sound and letter. They are relying on general cognitive abilities but they are not direct emergencies from these abilities, requiring domain-specific learning.

3.3. Socio-emotional competences

Socio-emotional competence is a complex construct that has two components: one rather social, focused on social information processing and performance in social contexts (e.g., interpersonal interactions, social problem-solving), and another rather emotional, concerned with understanding, sending/receiving emotional messages and emotion regulation, Lemerise and Arsenio (2000); Crick and Dodge (1994). Although some of the tasks a preschool age child is facing are primarily social (e.g., working cooperatively), whereas others are more emotional (e.g., self-regulation of fear), much of the time they are strongly intermingled, Dodge et al. (2002). Consequently, any assessment of social skills should include the assessment of emotional competences. The evaluation of socio-affective abilities at preschool children predicts: (a) Academic success in the first and then later elementary years, even controlling former academic success or cognitive skills, Carlton (1999); Izard et al. (2001); (b) Participation in the classroom and acceptance of peers and teachers, Carlton and Winsler (1999); (c) Task persistence and drop-out rate in primary school, Robins and Ruther (1990); Raver and Knitze (2002); (d) Delinquency and antisocial behaviour later in life. Kochenderfer and Ladd (2006).

3.4. Temperament/personality characteristics

The temperament is referring to those individual differences in reactivity and self-regulation and is assumed to have an important constitutional basis. However, during the early years it strongly interacts with the environment and the regulatory dimensions become more important due to anterior cortical brain development. Beginning with the age of three the temperament begins to be differentiated into personality and later on personality characteristics themselves become more differentiated, approaching the big five model of personality (extraversion, agreeableness, conscientiousness, neuroticism and openness to experience). The assessment of temperament and emerging personality characteristics in early childhood may offer salient data for adaptation to school environment and constitute a prerequisite for many remedial interventions. Denham (2005).

4. Aims

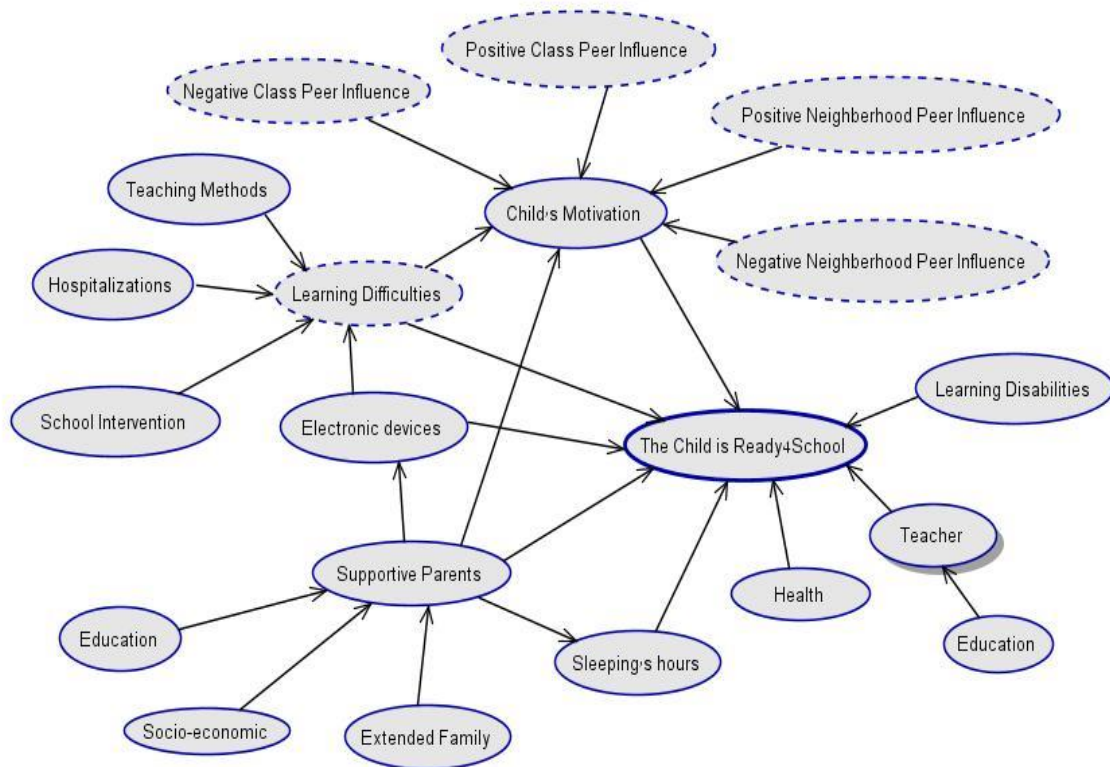
This research focuses on predicting school readiness using data mining techniques, while trying to shed light on the ways social-economic data might influence this readiness.

5. Method

School failure of students is also known as the "one thousand factors problem", Márquez-Vera (2013), due to the large amount of risk factors or characteristics of the students that can influence school failure, such as demographics, cultural, social, family, or educational background, socioeconomic status, psychological profile, and study progress.

In this section, information has been used from pre-school children enrolled in *Life school for Creativity and Excellence* for three consecutive academic years, Sep 2017- June 2020. The information used was only about pre-school children, where most children are between the ages of 5 and 6, as this is the year for moving from pre-school to 1st grade. All the information used in this study has been gathered from a general survey was designed and administered to all children during the aforementioned period, its purpose was to obtain personal and family information and socio-economic data to identify some important factors that could affect school performance.

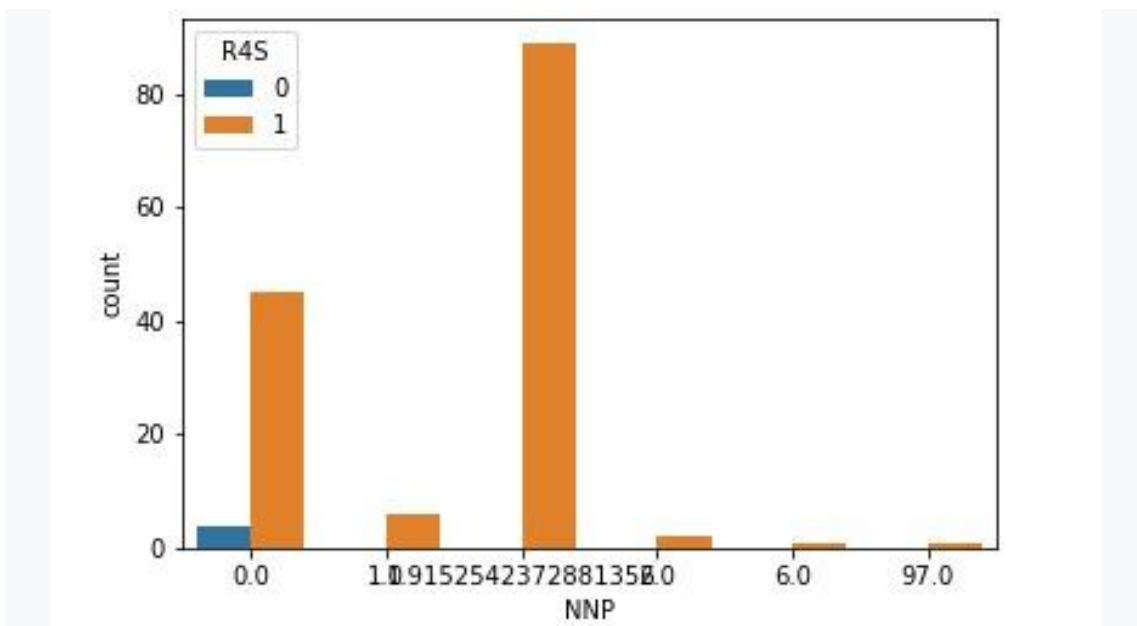
Figure 1. The below diagram shows the connections between the above parameters.



6. Results

In the results section, we create a graph for each parameter in the above table. for example.

Graph 1. The graph for Number of friends who influence him/her in a negative way in the neighborhood shows that 5 peers in school of the children can influence him/her in a negative way.



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MINDFULNESS AND EATING DISORDERS: THE MEDIATION ROLE OF DYSMORPHIC CONCERNS

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Abstract

Background: Research has shown that mindfulness may foster body satisfaction (Lavender et al., 2012), and may reduce problematic behaviors such as body comparison, which seems to be pivotal in dysmorphic concerns (Dijkstra & Barelds, 2011) and eating disorders (Hamel et al., 2012). However, there is a paucity of studies observing the direct relation between mindfulness and dysmorphic concerns, with the latter potentially being a risk factor for eating disorders (Kollei et al., 2013). Even if several studies suggest that mindfulness may play an important role in the prevention and reduction of risk factors in eating disorders, a deeper knowledge is still needed (Beccia et al., 2018; Sala et al., 2020).

Objective: The goal of this study was to assess whether the relationship between mindfulness and eating disorders would be mediated by dysmorphic concerns.

Method: 288 individuals aged between 18 and 35 years old ($M = 26.36$; $SD = 4.49$) were recruited on social media platforms and filled an online survey comprising: the Five Facet Mindfulness Questionnaire (FFMQ), the Italian Body Image Concern Inventory (I-BICI), and the Eating Attitude Test (EAT-26). A structural equation modelling (SEM) with latent variables was used to test a model with mindfulness as predictor variable, dysmorphic concerns as mediator, and eating disorders as outcome.

Results: The hypothesized model showed good fit indices: $\chi^2(24) = 49.45$, $p = .002$; $CFI = .99$, $RMSEA = .06$ (90% $CI = .04 - .09$), $SRMR = .03$. Significant paths were found from mindfulness to dysmorphic concerns ($\beta = -.37$) and from dysmorphic concerns to eating disorders ($\beta = .51$), but a non-significant path was found from mindfulness to eating disorders ($\beta = -.04$). However, the indirect relation of mindfulness with eating disorders through dysmorphic concerns was statistically significant ($\beta = -.19$).

Conclusions: The results suggest that individuals low in mindfulness may be more prone to develop dysmorphic concerns. Indeed, the promotion of behaviors characterized by intentional, judgment-free attention towards one's current sensations may protect against behaviors characterized by maladaptive body-related sensations and thus preoccupations towards one's body (Bahreini et al., 2022; Lavell et al., 2018), which have been shown to contribute to the development and maintenance of eating disorders (Peat et al., 2008; Striegel-More et al., 2004). Implementation of mindfulness-based programs to reduce dysmorphic concerns is needed to improve clinical management of eating-related psychopathologies.

Keywords: *Mindfulness, dysmorphic concerns, eating disorders.*

1. Introduction

Dysmorphic concerns are a concept that includes both the presence of maladaptive behaviors aimed at changing one's appearance as well as behavioral, emotional, and cognitive components connected with a negative body image. (Luca et al., 2011). Such concerns of perceived flaws in appearance may cause individuals to severely alter their food intake and employ compensatory techniques to manage their body size and form (Tang et al., 2020), and may contribute to a greater probability of developing disordered eating issues (Gori et al., 2021). Eating disorders are a group of pathologies characterized by inappropriate food intake and weight obsession that can impair a person's functionality (American Psychiatric Association, 2013). According to research, mindfulness may increase body satisfaction (Lavender et al., 2012) and lessen harmful behaviors like body comparison, which has been linked to dysmorphic concerns (Dijkstra & Barelds, 2011) and eating disorders (Hamel et al., 2012). Mindfulness does not focus on any thought, feeling, or happening above others, since it entails being open to all experiences as they arise, and fosters intentional, nonjudgmental attention to one's current feelings (Kiken & Shook, 2012). Based on the above considerations, it is reasonable to think that the reduction of

negative, distorted cognitions and beliefs related to dysmorphic concerns may be one potential mechanism driving the beneficial effects of mindfulness for managing eating disorder symptomatology (Tsai et al., 2017). Nonetheless, there are not many studies examining the connection between mindfulness and dysmorphic concerns and, even though some studies have found that mindfulness can help in preventing eating disorders and in lowering their symptomatology, further research is still required (Beccia et al., 2018; Sala et al., 2020).

2. Objectives

Considering the above reasons, this study sought to determine if dysmorphic concerns might act as a mediator in the association between mindfulness and eating disorders. Specifically, this research tested a model in which lower mindfulness would predict higher dysmorphic concerns and higher eating disorders, while higher dysmorphic concerns would predict higher eating disorders.

3. Methods

3.1. Participants

This study was comprised of 288 participants ranging in age between 18 and 35 years ($M = 26.36$; $SD = 4.49$). Regarding the educational level, 1% of the participants had an elementary school certification, 7% obtained a middle school certification, 52% achieved a high school diploma, and 40% had a master's degree. Concerning occupational status, 45% of the participants were students, 8% were unemployed, 5% were homemakers, 33% were employed, 8% were self-employed, while 1% were pensioners. With regard to marital status, 40% of the participants were single, 35% were engaged, 12% were living with a partner, 11% were married, 1% were divorced, and 1% were widowed.

3.2. Measures

3.2.1. Mindfulness

The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is a self-report questionnaire consisting of 39 items which analyze aspects regarding mindfulness, and is composed of five subscales: observing, describing, acting with awareness, nonjudging of inner experience, nonreactivity to inner experience. Participants are required to rate, on a 5-point Likert scale, their level of agreement with each item (e.g.: "When I'm walking, I deliberately notice the sensations of my body moving"). Higher scores represent higher mindfulness. In the present study, Cronbach's alpha was .83.

3.2.2. Dysmorphic concerns

The Italian Body Image Concern Inventory (I-BICI; Luca et al., 2011) is a self-report questionnaire which assesses dysmorphic concerns. The test comprises 19 items and 2 subscales: dysmorphic symptoms and symptom interference. Participants are required to rate, on a 5-point Likert scale, their level of agreement with each item (e.g.: "I spend a significant amount of time checking my appearance in the mirror"). Higher scores represent higher dysmorphic concerns. In the present study, Cronbach's alpha was .95.

3.2.3. Eating disorders

The Eating Attitudes Test (EAT-26; Garner et al., 1982) is a self-report questionnaire consisting of 26 items which analyze features concerning eating disorders symptoms, and 3 subscales: dieting, bulimia and food preoccupation, and oral control. Participants are required to rate, on a 6-point Likert scale, their level of agreement with each item (e.g.: "I am terrified about being overweight"). Higher scores represent higher abnormal eating behaviors. In the present study, Cronbach's alpha was .89.

3.3. Procedure

This study acquired a convenience sample through online social networks. The protocol was administered online. The inclusion criteria consisted of being between 18 and 35 years old and speaking Italian with ease. The researchers received approval, in accordance with the international standards of the Helsinki Declaration and the Italian Association of Psychology (AIP), from the regional ethics committee for psychological research of CERIP (Centre for Research and Psychological Intervention - University of Messina, Italy). Participants could only be able to participate in the research by signing the informed consent form. It took about 10 minutes to complete the protocol. There were no missing answers because all questions were set as required. The data were then analyzed using IBM SPSS and RStudio.

3.4. Statistical analysis

Correlations and descriptive analyses were performed for all the observed variables. Using structural equation modeling (SEM) with latent variables, a model with mindfulness as a predictor variable, dysmorphic concerns as a mediator, and eating disorders as an outcome, was examined. We parceled the data to identify the latent variables' indicators. The parceling approach groups randomly chosen items from a questionnaire in three indicators of each latent variable (Little et al., 2002). Parcels are less prone to method effects and more likely to adhere to presumptions of normality (Little et al., 2002; Marsh et al., 1998). RStudio with the integration of the lavaan Package for R was used to analyze the covariance matrices, and solutions were generated using maximum-likelihood estimation. The significance of the indirect effects, which consist of a drop from the overall effect to the direct effect, was investigated using a bootstrap-generated bias-corrected confidence interval approach (Preacher & Hayes, 2004; Shrout & Bolger, 2002).

4. Results

4.1. Descriptive statistics and correlations

The descriptive statistics and correlational analyses for all the research variables are presented in Table 1. To investigate the distribution of the data, the values of skewness and kurtosis were measured, and no issues concerning the violation of the normal distribution were found (Kline et al., 2005). Analyses revealed that mindfulness was negatively correlated with dysmorphic concerns and positively associated with eating disorders. Furthermore, dysmorphic concerns were positively related to eating disorders.

Table 1. Descriptive analysis and correlations.

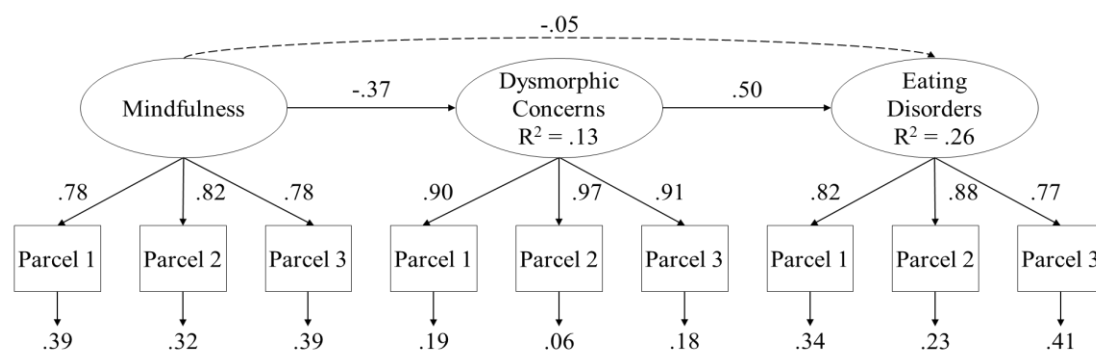
	Min	Max	M	SD	Skew	Kurt	α	1	2
1. Mindfulness	1.72	4.49	3.21	.43	.01	.09	.83	-	-
2. Dysmorphic Concerns	1.00	5.00	2.87	.99	.15	-.74	.95	-.33*	-
3. Eating Disorders	.00	2.27	.48	.45	1.41	1.90	.89	-.20*	.49*

Note: $N = 288$; * $p < .01$.

4.2. Mediation model

The model solution (Figure 1) highlighted a good fit: $\chi^2(24) = 69.46$; $p < .001$, CFI = 0.97, RMSEA = 0.08, 90% CI (0.06, 0.10), SRMR = 0.04.

Figure 1. Structural model of associations between mindfulness, dysmorphic concerns, and eating disorders.



Note: Coefficients shown are standardized path coefficients. Black dashed lines represent non-significant relationships between variables.

The results of direct effects (Table 2) showed that mindfulness was negatively correlated with dysmorphic concerns ($\beta = -.37$; $p < .001$), though there was not a statistically significant association with eating disorders ($\beta = -.05$; $p < .50$). Furthermore, dysmorphic concerns were positively related with eating disorders ($\beta = .50$; $p < .001$). Examination of the indirect effects (Table 2) underlined an indirect effect of mindfulness to eating disorders through dysmorphic concerns ($\beta = -.18$; $p < .001$).

Table 2. Path estimates, SEs and 95% CIs.

	β	p	SE	Lower Bound (BC)	Upper Bound (BC)
				95% CI	95% CI
Direct Effect					
Mindfulness → Dysmorphic Concerns	-.37	<.001	.15	-1.11	-.52
Mindfulness → Eating Disorders	-.05	<.50	.09	-.22	.11
Dysmorphic Concerns → Eating Disorders	.50	<.001	.04	.20	.36
Indirect Effect via Dysmorphic Concerns					
Mindfulness → Eating Disorders	-.18	<.001	.05	-.33	-.13

Note: p = level of significance; SE = Standards Errors; BC 95% CI = Bias Corrected-Confidence Interval.

5. Discussion

The findings suggest that individuals with lower levels of mindfulness may be more likely to experience dysmorphic concerns, which may act as risk factors for eating disorders. Dysmorphic concerns include both the presence of maladaptive habits intended to change one's physique, as well as behavioral, emotional, and cognitive aspects associated with a poor body image (Luca et al., 2011). Indeed, the inclusion of potentially dangerous activities whose purpose is to transform the body, such as fasting, is one of the key elements of dysmorphic concerns (Monks et al., 2021). Individuals who struggle with dysmorphic concerns may identify themselves with a body type they consider undesirable, which might encourage unhealthy dietary habits and create the basis for the development of eating disorders (Pedersen et al., 2018). Dysmorphic concerns, characterized by unhelpful body-related sensations and consequent preoccupations with one's body (Bahreini et al., 2022; Lavell et al., 2018), might also be prevented by mindfulness-related behaviors, characterized by an intentional and nonjudgmental attention to one's current feelings. Indeed, mindfulness does not focus on any thought, feeling, or happening above others, since it entails being open to all experiences as they arise (Kiken & Shook, 2012). Based on the above considerations, it would be reasonable to think that an empowerment of mindfulness capabilities, focused on a minimization of distorted cognitions related to body image issues and a promotion of non-reactivity to thoughts and emotions (Baer et al., 2005), might help in the management of concerns related to one's appearance, and in turn reduce the need to engage in disordered eating habits, behaviors which might have been implemented to combat thoughts and feelings concerning one's appearance (Tsai et al., 2017).

6. Conclusion

The present study has some limitations. First, it only uses self-reported instruments. Furthermore, the study is cross-sectional in nature. Finally, given that the research was only open to those with Internet access, there might be issues with generalization. Nonetheless, the results of our research may have important clinical and scientific implications. This study advances existing knowledge by highlighting the relationship between mindfulness, dysmorphic concerns, and eating disorders. Future research should further evaluate the relationships between the analyzed constructs, possibly considering different populations, instruments, and study design. From a clinical perspective, the results suggest that mindfulness might be a useful tool for dealing with dysmorphic concerns and could also be implemented in preventative and therapeutic programs treating eating disorders, specifically when such disorders are interlinked with unhealthy preoccupations intended to change one's appearance.

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THE ROLE OF SOCIAL SUPPORT IN SEEKING MENTAL HEALTH CONSULTATIONS IN PEOPLE WITH MOOD DISORDERS

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Abstract

The purpose of this study was to examine the role of social support in seeking mental health consultations in people with mood disorders. Several researchers have suggested that social support increases help-seeking behaviours and mental health service use among individuals with depression and other related mood disorders. Other researchers suggest that social support increases one's use of general medical services but not for those with psychiatric illnesses requiring mental health consultations. Research in this area has examined the influence of social support in general; however, many of these studies have failed to examine the specific role of family support and friend support in seeking out mental health services in individuals with mood disorders. Moreover, researchers have mostly examined the influence of social support in seeking mental health services among young adults (i.e., college students) with mood disorders. Due to the discrepancies and gaps in the literature, the current study explored the relation between mood disorder and mental health consultation and whether this relation was moderated by friend and family support. Using data from the 2017/2018 Canadian Community Health Survey, we examined family satisfaction (i.e., family support), friend satisfaction (i.e., friend support), presence of a mood disorder (i.e., depression, bipolar disorder, mania, dysthymia), and mental healthcare access within the past 12 months (i.e., mental health consultations) in a large sample ($N = 26,448$) of individuals aged 12 to 80+ years. Data analysis was performed with Stata 15 and we used binary logistic regression. Having a mood disorder was found to significantly increase the likelihood of mental health consultations. In turn, family and friend satisfaction were found to be significant negative predictors of mental health consultation. Interaction terms between mood disorder and family satisfaction and mood disorder and friend satisfaction were examined. The linear effect of family satisfaction and friend satisfaction on mental health consultations for individuals with a mood disorder was positive, albeit non-significant. In contrast, the linear effect of family satisfaction and friend satisfaction on mental health consultations for individuals without a mood disorder was negative. These findings support that mood disorder works in conjunction with family and friend satisfaction to predict mental health consultations; in the absence of a mood disorder, higher satisfaction with family and with friends is associated with lower mental health consultations. Overall, further research should continue to investigate the influence of friend and family support on seeking mental health consultation in people with mood disorders.

Keywords: *Mood disorders, friend, family, support, mental health consultations.*

1. Introduction and background

Mental health and wellness are worldwide concerns. Mental health conditions exist in all countries, and it is estimated that nearly 1 billion people worldwide experience some form of mental health disorder (World Health Organization [WHO], 2022). In Canada, mental illness is one of the leading public health problems (Canadian Mental Health Association [CMHA], 2022). The Mental Health Commission of Canada (MHCC, 2013) reported that 1 in 5 Canadians will personally experience a mental health problem or illness in any given year.

Throughout the world and in Canada, mood and anxiety disorders are the most common types of mental illnesses (Government of Canada, 2016). Mood disorders include disorders that elevate or lower a person's mood while anxiety disorders are characterized by having excessive and persistent feelings of worry, apprehension, and fear. In 2013, an estimated 3 million Canadian adults (aged 18 years or older) reported having a mood and/or anxiety disorder (Government of Canada, 2014). Despite the prevalence of mental illness, some Canadians report that their mental health needs are not being met (Government of

Canada, 2019). Due to the prevalence of mental illness and mood and anxiety disorders, it is of upmost importance to identify predictors of mental illness and mental health service use in Canada.

1.1. Stress and mental illness

Researchers have found that stress levels are related to the prevalence of mood disorders, including both anxiety and depression (Nguyen et al., 2005). Nguyen and colleagues found a higher prevalence of anxiety and depressive disorders in Canadian youth under extreme stress compared to youth who experienced average stress. Population-based longitudinal studies show that work stress is associated with an increased risk of psychiatric symptoms (Griffin et al., 2002; Paterniti et al., 2002), major depressive episodes (Wang, 2005; Wang, 2006), and anxiety (Wang, 2006). Overall, stress appears to be an important predictor of mental illness and should be further investigated in relation to mood disorders.

1.2. Social support and mental health service use

Social support has been identified to be an important predictor of seeking mental health services among individuals with mental illness (Marko et al., 2015). Marko and colleagues found that individuals with serious psychological distress had a reduced likelihood of using mental health services if they reported lacking emotional support. However, other researchers have suggested that social support increases seeking general medical services but not for those with psychiatric conditions (Maulik et al., 2009). Overall, the literature regarding social support has been mixed, limited to younger adults, and lacks investigation into the specific roles of friend support and family support. Researchers should continue to investigate the influence of friend and family support on mental illness and seeking mental health consultations.

2. Objective

The objective of the current study was to investigate mental health service use (i.e., consultation) in individuals with and without a mood disorder, and to examine whether this relation was moderated by family and friend support.

3. Method

3.1. Data source and participants

The current study used data from the 2017/2018 Canadian Community Health Survey (CCHS) conducted by Statistics Canada (the national statistical and census office) that was accessed through our university. The CCHS is a cross-sectional survey that utilizes core content (questions asked of all participants) and optional content (select questions that provinces or territories can choose to include) to collect data on the health of Canadians, their determinants of health, and their healthcare utilization.

The current study used several questions from optional modules and as such, only the provinces of Nova Scotia and Quebec were represented in all findings. To be included in the current study, participants had to respond to all covariates and predictors of interest, and at least one outcome variable.

Based on these parameters, the total sample size was 26,448; 14,138 were women (53.5%) and 12,310 were men (46.5%). Ages ranged from 12 – 80+ years.

3.2. Measures

3.2.1. Covariates. We controlled for sex (female = base; male), age (12-14 years = base; in blocks of 5-years), education (< high school = base; high school graduate, post-secondary graduate), marital status (married = base; common-law, widowed/separated/divorced, single), province (Nova Scotia = base, Quebec), subjective physical health (1 = *Poor*, 2 = *Fair*, 3 = *Good*, 4 = *Very good*, 5 = *Excellent*), and subjective mental health (1 = *Poor*, 2 = *Fair*, 3 = *Good*, 4 = *Very good*, 5 = *Excellent*).

3.2.2. Predictors. Stress was measured using the question, “Thinking about the amount of stress in your life, would you say that most of your days are...” with responses ranging from 1 (*Not at all stressful*) to 5 (*Extremely stressful*). The question, “How satisfied are you with your relationships with family members?” was used to measure family satisfaction with responses ranging from 1 (*Very dissatisfied*) to 5 (*Very satisfied*). Friend satisfaction was assessed using the question, “How satisfied are you with your relationships with friends?” with available responses ranging from 1 (*Very dissatisfied*) to 5 (*Very satisfied*).

3.2.3. Outcomes. The CCHS asked respondents using a single item to indicate whether they had a mood disorder (i.e., depression, bipolar disorder, mania, or dysthymia), to which respondents could answer either “No” (0 = No) or “Yes” (1 = Yes). We also used mood disorder as a predictor for mental health consultations. We were interested in the comparison between people with and without mood disorders.

Finally, we assessed mental health service use with the question, “In the past 12 months, have you seen or talked to a health professional about your emotional or mental health?” Respondents could either respond in the negative (0 = No) or in the affirmative (1 = Yes).

3.3. Procedure

Telephone interviews and personal interviews were conducted by trained interviewers who obtained consent. The CCHS questionnaire can be completed in approximately 45 minutes.

4. Results

4.1. Data Analysis

All data analysis was performed with Stata 15. Because of correlated error terms in all models (Statistics Canada used complex random sampling and not simple random sampling), we used HC1 error corrections to estimate standard error.

4.1.1. Stress and Mood Disorder. We examined the relation between stress and mood disorder and whether this relation was moderated by either Family Satisfaction or Friend Satisfaction. We regressed Mood Disorder onto covariates in Block 1, $F(27, 38432) = 69.51, p < .001$, which improved the overall model. Stress was added in Block 2, $F(1, 38432) = 11.99, p < .001$, and it positively predicted the presence of a Mood Disorder, OR = 1.14, 95% CI [1.06, 1.23]. Family Satisfaction and Friend Satisfaction were added in Block 3, $F(2, 38432) = 4.00, p = .018$, which significantly improved the prediction of Mood Disorder. However, neither Family Satisfaction, OR = 0.92, 95% CI [0.84, 1.02], nor Friend Satisfaction, OR = 0.93, 95% CI [0.84, 1.04], significantly predicted Mood Disorder in themselves.

We explored the interaction term between Stress * Family Satisfaction in Block 4, $F(1, 38432) = 1.33, p = .249$, but the overall model was not significant. We removed the interaction term from Block 4, and replaced it with the interaction term between Stress * Friend Satisfaction, $F(1, 38432) = 0.02, p = .886$, which was also not significant. These two non-significant interaction terms suggest that neither Family Satisfaction nor Friend Satisfaction buffered the relation between Stress and Mood Disorder.

4.1.2. The Role of Family and Friend Satisfaction in Mood Disorder. We explored the *relative* importance of Family Satisfaction and Friend Satisfaction in the prediction of Mood Disorder across the lifespan. We were specifically interested in whether all age categories (12-17, 18-34, 35-49, 50-64, and 65-80+) would report equivalent estimates for Family Satisfaction and Friend Satisfaction. Family Satisfaction and Friend Satisfaction did *not* predict Mood Disorder across the lifespan.

4.1.3. Mood Disorder, Family and Friend Satisfaction, and Mental Health Consultations.

We examined the relation between Mood Disorder and Mental Health Consultation, and whether this relation was moderated by either Family Satisfaction or Friend Satisfaction. We regressed Mental Health Consultations onto the covariates in Block 1, $F(25, 26447) = 35.39, p < .001$, which significantly improved the overall model. Mood Disorder was added in Block 2, $F(1, 26447) = 857.89, p < .001$, and we found that having a Mood Disorder significantly increased the likelihood of Mental Health Consultation, OR = 15.18, 95% CI [12.66, 18.22]. Both Family Satisfaction, OR = 0.76, 95% CI [0.70, 0.83], and Friend Satisfaction, OR = 0.90, 95% CI [0.81, 1.00], were added in Block 3, $F(2, 26444) = 33.03, p < .001$, and both were significant negative predictors of Mental Health Consultation.

We then explored the interaction term between Mood Disorder and Family Satisfaction in Block 4, $F(1, 26447) = 29.48, p < .001$, which further reduced the deviance of the model. The linear effect of Family Satisfaction on Mental Health Consultation for the ‘Mood Disorder’ group was positive, albeit non-significant, OR = 1.12, 95% CI [0.96, 1.31]. In contrast, the linear effect of Family Satisfaction on Mental Health Consultation for the ‘No Mood Disorder’ group was negative and significant, OR = 0.70, 95% CI [0.64, 0.76]. In other words, Mood Disorder worked in conjunction with Family Satisfaction to predict Mental Health Consultation.

We removed variables from Block 4 and added the interaction term between Mood Disorder and Friend Satisfaction, $F(1, 26447) = 8.87, p = .003$, which improved the overall model. Friend Satisfaction was associated with a significant *decreasing* likelihood of Mental Health Consultation in the ‘No Mood Disorder’ group, OR = 0.85, 95% CI [0.76, 0.95], and was associated with a positive, albeit non-significant trend in seeking Mental Health Consultation in the ‘Mood Disorder’ group, OR = 1.13, 95% CI [0.96, 1.34].

5. Discussion

The current study investigated predictors of mood disorders and mental health service use (i.e., mental health consultations). The influence of stress and social support (i.e., friend and family support) were examined in relation to the presence of a mood disorder. We also explored interaction effects to determine whether the relation between mood disorder and mental health consultations was moderated by family support and friend support.

A significant positive correlation was found between stress and the presence of a mood disorder, which is consistent with previous studies. For example, Nguyen and colleagues (2005) found a higher prevalence of anxiety and depressive disorders in youth under extreme stress compared to youth who experienced average stress. These results suggest that interventions targeting stress management may be beneficial to minimize the risk of developing a mood disorder.

Having a mood disorder was significantly positively correlated with mental health consultations. Wang and colleagues (2005) found that clinical factors are more strongly associated with conventional mental health service use than demographic and socioeconomic factors. Researchers have also found that the likelihood of seeking help for mental health related concerns increases with problem severity (Chen et al., 2013). Therefore, it seems that individuals with mood disorders would be more likely to seek mental health consultation compared to those who do not have mood disorders.

Researchers have found that social support is a positive predictor of seeking mental health services in individuals with mood disorders (Marko et al., 2015). However, the current study found that friend and family satisfaction (i.e., support) were significant negative predictors of mental health consultation. Similar to other contrasting findings in the literature (LeCloux et al., 2016; Maulik et al., 2009), this negative relation may be explained by social networks acting as another means of support and care for the individual with a mood disorder. Due to the contradiction in the literature, future research should continue to investigate the role of family and friend support in seeking mental health consultations.

The current study also investigated interaction effects between friend and family satisfaction on mental health consultations in people with and without a mood disorder. Results showed a positive, albeit non-significant relation between friend and family satisfaction on mental health consultations for individuals with a mood disorder. On the contrary, a significant negative relation was found between family and friend satisfaction and mental health consultations for individuals without a mood disorder. Thus, in this group, family and friend satisfaction was associated with a decreasing likelihood of mental health consultation. These findings support that mood disorder works in conjunction with friend and family satisfaction to predict mental health consultations; in the absence of a mood disorder, higher satisfaction with family and friends predicted lower mental health consultations.

6. Limitations and future research directions

The current study was limited by using cross-sectional population data; our ability to design the study was limited to the data and variables already collected. Although Statistics Canada notes that 98% of the desired population is contained within the sampling frame, individuals living on Indigenous lands and Crown Lands, those who are institutionalized, those living on Canadian Forces bases, those living in foster homes, and those living in certain remote areas are excluded from the sample. Moreover, the current study explored items from the optional modules in the CCHS and further limited the data to respondents residing in Nova Scotia and Quebec. Future studies could use a longitudinal design to explore the potential risk factors of mood disorders and the predictors of mental health service use.

7. Conclusion

In conclusion, mental health conditions remain a worldwide concern (WHO, 2022). The present study examined predictors of mood disorder and mental health consultations using a Canadian sample. Results of the current study found that stress positively predicted the presence of a mood disorder, which

is in conjunction with the literature (Griffin et al., 2002; Nguyen et al., 2005; Paterniti et al., 2002). Moreover, individuals with a mood disorder were more likely to seek mental health consultations than individuals without a mood disorder corroborating previous research findings (Chen et al., 2013; Wang, 2005; Wang et al., 2005). The present study also examined the influence of friend support and family support in relation to seeking mental health consultations. Independently, friend support and family support were found to be significant negative predictors of mental health consultations. However, when examined using interaction effects, non-significant positive correlations were found between friend support and family support on mental health consultations for individuals with a mood disorder. In turn, a negative relation was found between friend and family support on mental health consultations for individuals without a mood disorder. Overall, future research should continue to investigate the importance of friend and family support in individuals with mood disorders.

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SOCIAL SUPPORT AND ANXIETY IN PARENTAL BURNOUT OF BULGARIAN MOTHERS

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Abstract

Introduction of the concept of parental Burnout (PB) in 2014 by Bianchi and colleagues has started with the comment on definition of burnout as a consequence of enduring chronic stress. The present research assesses parenting burnout in Bulgarian mothers post Covid-19 pandemic. The links between level of social support, general anxiety and demographic factors are explored. Parental burnout is a multifaceted construct with 4 subscales: 1) Exhaustion in parental role, 2) Contrast in parental self, 3) Feelings of being fed up and 4) Emotional distancing. Bulgarian version of Parental Burnout Assessment (PBA) instrument (Roskam, Brianda, & Mikolajczak, 2018), Generalized Anxiety Disorder (GAD-7) (Spitzer, Kroenke, Williams, et al., 2006) scale, and perceived social support (COPE-CF) were applied. The sample consists of 384 parents (Mage = 40.2, SD=6.89) with at least one child under 18 years of age. T-tests were conducted to find that only one subscale Exhaustion in Parental role was significantly higher in parents living in the capital, in parents of more than one child, and in parents of children under 6 years of age. Regression analysis demonstrated that GAD-7 predicts 28% of PB (Adj. R² = .28, F(2, 382) = 150.27, $p < .01$) and perceived change in social support before and after pandemic was not found to be a significant predictor. Demographic factors (age of parent, type of family, place of living, age and number of children and child with or without neurodevelopmental problems) were not found significant predictors of total parental burnout. The results were discussed in the light of socio-cultural specifics of child raising in Bulgaria and the impact of family life cycle stage.

Keywords: *Parental burnout, perceived social support, generalized anxiety, parenting, mothers.*

1. Introduction

A natural extension of an intimate partnership, parenting today is considered one of the adults' most challenging tasks. Socially and psychologically, parenting has many advantages, such as the opportunity to develop and maintain a social network and development of psychological characteristics, such as self-esteem and self-efficacy (Nomaguchi & Milkie, 2003). Along with the benefits, it is also a complex life task with high levels of stress (Deater-Deckard, 2014; Nomaguchi & Milkie, 2003). According to theories of stress in the professional context, exposure to high stress levels over extended periods, combined with a lack of coping resources, can lead to professional exhaustion or burnout (Bakker & Demerouti, 2007).

Parental burnout is distinct from parental stress or depression and professional burnout (Roskam, Brianda, & Mikolajczak, 2018). When the balance between stress and coping resources in family life is disturbed, and risk outweighs resources, parents may also be affected by burnout (Roskam, Raes & Mikolajczak, 2017). Occupational burnout and the difficulties adults experience in their role as parents are similar. (Freudenberger, 1974; Maslach & Jackson, 1981). Stressors specific to parenting are shopping, cooking, taking the children to and from school, coordinating the schedules of all family members, and more. These stressors (risk factors) are usually tolerable. They can be balanced, for example, by the sense of joy and satisfaction in the parental role (protective factors) that parents receive as a result of immediate activities such as playing with children or celebrating a significant family event (Roskam et al., 2021).

Parental burnout encompasses four dimensions. The first is emotional and physical exhaustion from the parental role, a feeling of exhaustion. The second is emotional distancing from one's children - exhausted parents are less involved in emotional relationships with their children, and interactions are limited to purely functional aspects. The third dimension is perceived ineffectiveness and failure as parents, accompanied by a sense of intolerance of the burden of the parental role, characterised

by a loss of desire to spend time with their children. The perceived difference in the parental role is the fourth one - the parent considers the change that has occurred negatively and cannot "recognise" himself in his current role. (Mikolajczak, Brianda, Avalosse, & Roskam, 2018).

Parental burnout syndrome is associated with depressive symptoms, higher levels of anxiety, and perceived sources of stress (Lebert-Charon, Dorard, Boujut & Wendland, 2018), as well as couple conflict and alienation, suicidal ideation, violence and neglect of the child(ren) in the family (Mikolajczak et al., 2018). Parents striving to be perfect parents are at greater risk of parental. Emotional or practical support from the other parent was found as another important factor (Lindström, Åman & Norberg, 2011). Other factors include lack of emotional or practical support from the wider social environment, as well as poor child-rearing practices (Mikolajczak et al., 2018), families with children with special needs (Lindström, Åman & Norberg, 2010); parents who work part-time or stay at home while the other parent in the family works (Lebert-Charon, Dorard, Boujut & Wendland, 2018).

In 2022, many studies were published on parental burnout in the context of the COVID-19 pandemic, which showed a significant increase in the prevalence of parental burnout during the pandemic, resulting in more incidents of child abuse (Griffith 2022). Parents had to balance attention to their children with busy working schedules at home, navigating through a health crisis flow of information.

Theories of stress suggest that a person will actively seek coping strategies or activities to respond to a stressful event. One such form of coping activity is seeking or receiving social support. Frequently considered a multidimensional construct, defined by House (1981) as "social support is an interpersonal transaction involving one or more of the following: (1) emotional concern (liking, love, empathy), (2) instrumental aid (goods or services), (3) information (about the environment), and (4) appraisal (information relevant to self-evaluation)" (p. 39). Empirical data indicates that objective (or received) and perceived support impact health and general well-being. Received support is the social support one receives when in a stressful situation. On the other hand, the perceived social support is based on the person's thought that support is available.

2. Objectives

Based on the abovementioned theories and the data, we hypothesise that:

Hypothesis 1. *The mothers' overall emotional stability and anxiety will predict the level of parental burnout.*

Hypothesis 2. *Perceived social support will impact parental burnout.*

Hypothesis 3. *The preferred source of social support will discriminate levels of parental burnout.*

Hypothesis 4. *Certain demographic factors will impact the levels of parental burnout: 1) the mother's age, 2) a child(ren)'s age, 3) the number of children, 4) marital status, 5) living area, 6) having a child(ren) with special needs in the family.*

3. Method

3.1. Participants

The sample consists of 384 mothers (Mage = 40.2, SD=6.89), ages 21 to 56, with at least one child under 18. All participants were mothers living in Bulgaria.

The socio-demographic information of the participants is given in Table 1.

3.2. Procedure

The links between the level of social support, general anxiety and demographic factors are explored.

Data collection took place from August 2022 to October 2022, after the last lockdown was over and most restrictions due to the Covid-19 health crisis were withheld. The presumed after-effects of lockdown measures (homeschooling, lack of child care, irregular patterns of workload etc.) on parents were aimed to be revealed. Respondents were invited to complete an online survey on Google Forms after signing an online informed consent form. Participants were recruited through social networks and e-mails.

3.3. Measures

Parental burnout is a multifaceted construct measured by the Parental Burnout Assessment (PBA) instrument (Roskam, Brianda, & Mikolajczak, 2018), the Bulgarian version of PBA (Aravena, 2023). It is a 23-item self-report questionnaire assessing the four aspects of parental burnout:

1) Exhaustion in parental role (9 items) in Contrast with previous parental self (6 items), 3) Feelings of being fed up and loss of pleasure in one's parental role (5 items) 4) Emotional distancing from one's children (3 items). The items of the PBA use a Likert scale from 0 to 6 (from 0=never to 6=every day). Internal consistency of the total scale was excellent (Cronbach's $\alpha=0.91$), and the consistency of subscales from $\alpha=0.81$ for Emotional distancing to $\alpha=0.96$ for Contrast with previous parental self.

Generalised Anxiety Disorder (GAD-7) (Spitzer, Kroenke, Williams, et al., 2006) scale is a widely used screening instrument for anxiety. It is a unidimensional, seven-item scale, assessing the frequency of anxiety symptoms for the last two weeks in a four-point Likert scale from 0=never to 3=almost every day.

Perceived social support (COPE-CF, Motrico et al., 2021) characteristics are measured by several items, assessing perceived change in social support before and after pandemics, experienced level of stress provoked by changes in social support, sources of social support (grouped in five categories: social media, communication via electronic devices, in-person meetings, both – in-person and social media, none), and circle of support (one single source of support, supported by closer circle-family, friends, and supported by closer circle plus wider community or professional help – health incl. mental health specialists).

Table 1. Participants characteristics.

Characteristics	N	%
Mother's age		
< 35 y.	50	20.8
35-40 y.	102	26.6
41-45 y.	117	30.5
> 46 y.	83	12.6
Number of children		
One (boy/girl)	167 (81/73)	43.5
Two (boy&girl/boys/girls)	190 (96/43/35)	49.5
Three and more(boy&girl/boys/girls)	27 (20/4/2)	7
Age of Children		
Under 6 (<1 / 1-3 / 3-6 y.)	167 (22/72/73)	(5.7/18.8/19)
6-12 y.	133	34.6
12-15 y.	125	32.6
15-18 y.	50	13
Living area	Capital /Other	229 /155
		59.6 /40.4
Family structure	Co-parenting/Single parent	344/ 40
		89.6 /10.4
Child with disabilities	Yes /No	32/352
		8.3 /91.7

3.4. Data analysis

All analyses were performed using SPSS Version 19 (IBM Corp., 2020). To test hypotheses on the influence of sociodemographic factors, emotional functioning and experienced social support on the severity of parental burnout T-tests, one way ANOVAs and a linear regression model were conducted.

3.5. Results

T-test did not prove that mothers parenting alone or being a parent of a child with neurodevelopmental problems (or other disabilities) are experiencing higher anxiety levels or parental burnout.

The ANOVAs we ran in order to compare sociodemographic influences on parental burnout. The area of living: capital (M =0.57, SD =0.52), big town (M = 0.47, SD = 0.50), or small town (M =0.49, SD =0.65) did not account for any difference in parental burnout total scores, $F(2,381) = 3.57$, $p = 0.059$.

There was a statistically significant difference in one of the four subscales of parental burnout - Exhaustion in the parental role – between mothers living in Sofia (the capital) (M =0.87, SD =0.77), and other living areas (big or small towns) (M =0.63, SD =0.61), the latter displaying less parental burnout exhaustion symptoms $F(2,382) = 10.74$, $p < 0.01$. No difference appeared between big or small town living parents. The same subscale – Exhaustion – discriminates between mothers of children under

six years of age ($M = 0.97$, $SD = 0.86$), and having children in other age groups ($M = 0.71$, $SD = 0.72$), the first group displaying higher levels of exhaustion $F(5,378) = 4.05$, $p < 0.01$.

Sociodemographic factors did not prove any significant influence on generalised anxiety in mothers in the present study.

One-way ANOVAs were performed to compare the effect of sources of searched and received social support on levels of parental burnout generalised anxiety.

Results revealed that there was a statistically significant difference in both parental burnout ($F(4,379) = 4.30$, $p = 0.002$) and generalised anxiety ($F(4,379) = 7.06$, $p = 0.000$) between at least two groups. Tukey's HSD Test for multiple comparisons found that the mean value of parental burnout was significantly different between groups using predominantly social media and other online means of receiving social support ($M = 0.71$, $SD = 0.58$), and groups receiving social support via in-person, face-to-face communication ($M = 0.47$, $SD = 0.48$). The same two groups demonstrated significantly different results in generalised anxiety scores: social media support ($M = 16.02$, $SD = 5.81$) and in-person support ($M = 12.65$, $SD = 4.50$).

There was no statistically significant difference between the range of involved social agents (close circle- family, relatives, neighbours; wider community – peer support, religious community etc.; and professional helpers – health and mental health professionals) and experienced parental burnout ($F(2,381) = 2.56$, $p = 0.079$) and anxiety levels ($F(2,381) = 1.14$, $p = 0.319$).

Regression analysis demonstrated that GAD-7 predicts 28% of parental burnout ($\text{Adj. } R^2 = .28$, $F(2, 382) = 150.27$, $p < .01$). Perceived change in social support before and after the pandemic was not found to be a significant predictor. Demographic factors (age of parent, type of family, place of living, age and number of children and children with or without neurodevelopmental problems) were not found significant predictors of total parental burnout.

4. Discussion

This study examined the impact of the socio-demographic, individual and psychological factors in the post-COVID-19 period in predicting parental burnout. The results of the present study support conclusions from previous studies in different sociocultural contexts in which sociodemographic characteristics have a limited effect on the explained variance in parental burnout (Woine et al., 2022).

The results were discussed in light of the socio-cultural specifics of child-raising in Bulgaria and the impact of the family life cycle stage. Even though it was surprising, factors like raising a child with disabilities or single parenting have no significant impact on parental burnout. One possible explanation might be that chronic conditions and family structure are presumably long-term processes and future studies should control for the onset of chronic conditions in children, the time of the onset and the time and cause of single parenting. The expected and supported in other studies (Woine et al., 2022), the age of children has an impact on parental burnout and is possibly moderated by national social system regulations like duration of maternity leave, childcare support from the system (daycare, kindergarten, etc.) are resource that is limited in the capital city of Bulgaria.

It is often stressed the importance of preventing maternal depression, especially during the first two years of life. However, in this study, another important factor of maternal emotional functioning has been assessed – generalised anxiety non-situational for the last two weeks. Bearing in mind that August and September are traditionally vacation months for most working adults, the general anxiety experienced by mothers is a powerful predictor of the level of parental burnout suggesting a possible commutative effect of life stressors over previous long periods. We could not infer the causality of the COVID pandemic using only this cross-sectional data. However, based on other research (Swit & Breen, 2022), a prolonged time of homeschooling, home office and lack of broader family support may result in elevated anxiety levels and parental burnout.

Most mothers (over 70%) did not perceive any change in social support before and after the pandemic. As some other studies suggest, more studies are needed to assess if there were significant social support changes during lockdown.

An interesting finding on sources of social support is that face-to-face in person support, when preferred, significantly differentiated a group with lower levels of parental burnout and generalised anxiety compared to mothers receiving social support mainly through social media or online communication. Bearing that the study was done online, there might be a sample bias based on the accessibility of the internet and the ability to use devices and social media. This sample bias makes these findings and the face-to-face preference even more salient.

5. Conclusions

Parental burnout is a promising construct, assessing parental capacity and experience. The importance of discovering different models of influence and predictions based on parental burnout is yet

to be proved for different socio-cultural contexts and during global crises. Bulgarian mothers prefer in-person social support interactions, which is significantly related to a lower level of parental burnout.

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THE PSYCHOLOGICAL IMPACT OF LIVING IN A CONTAMINATED SITE: TRAJECTORY OF INTERVENTIONS

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Abstract

Occupational and environmental asbestos exposure can lead to significant diseases, including malignant mesothelioma (MM), a rare and fatal tumor with an estimated median survival time of 9 months.

Recent studies have estimate 255.000 deaths per year from asbestos-related disease. In Italy, 31.572 diagnoses of MM were reported from 1993 to 2018 and considering that MM latency period varies between 20 and 45 years from exposure, the maximum diagnostic peak is expected between 2020 and 2030. Several national and international guidelines acknowledged the importance of evaluating psychological and socio-relational features in MM patients and their caregiver, and to develop psychological interventions specifically designed for Contaminated Sites.

Living in an environment where the risk of exposure to a toxic agent is omnipresent, together with the awareness of the large number of victims and outcome of MM, can cause individuals to enter a state of social and emotional detachment. The community can experience personality dysfunction, anxiety, depression, and posttraumatic symptoms as well as helplessness, hopelessness. Defense mechanisms such as denial, splitting, repression, and reduced emotional expression can be used by individuals to contain their overwhelming anxieties.

Such evidence strongly suggests the need to adopt an integrated approach toward patients and caregivers, improving the development of active strategies considering the particular features of the subject and his/her living environment. However, literature shows that the need for psychological care of patients with MM and their family is not sufficiently addressed.

The Research-Intervention Group of the Department of Psychology of the University of Turin, coordinated by Antonella Granieri developed a psychological intervention, the Brief Psychoanalytic Group (BPG), that consists of 12 one-hour 1 h weekly therapeutic sessions for MM patients and their caregivers in the first months following diagnosis.

A psychoanalytic group intervention for patients and their caregivers may constitute a valid contribution to the integration and elaboration of unconscious somatopsychic processes. Thinking together within the group help participants to give meaning to the transformations in their lives brought about by the experience of the disease and the related feelings, to weaken its pathogenic effects, and to identify more adaptive ways of handling the diagnosis.

Keywords: *Cancer, asbestos, malignant mesothelioma, caregivers, brief therapy.*

1. Introduction

The World Health Organization (WHO) defines Contaminated Sites (CS) those "areas hosting (or having hosted) human activities that have produced or might produce environmental contamination of soil, surface water or groundwater, air, and the food-chain, resulting (or being able to result) in human health impacts." (WHO Regional Office Europe, 2013).

Occupational and environmental asbestos exposure can lead to significant diseases, including malignant mesothelioma (MM), a rare and fatal tumor with an estimated median survival time of 9 months. Recent studies have estimated 255.000 deaths per year from asbestos-related diseases (Furuya, et al., 2018). In Italy, 31.572 diagnoses of MM were reported from 1993 to 2018 and considering that MM latency period varies between 20 and 45 years from exposure, the maximum diagnostic peak is expected between 2020 and 2030 (Italian National Institute for Insurance against Accidents at Work - INAIL, 2021). Several national and international guidelines acknowledged the importance of evaluating psychological and socio-relational features in MM patients and their caregivers, and to develop

psychological interventions specifically designed for Contaminated Sites (CSs), a big concern for public health officials and clinicians (Italian Institute for Environmental Protection and Research – ISPRA, 2021).

The most extensive Contaminated Site in Italy is Casale Monferrato, where the asbestos-cement production activities of the Eternit factory led to continuing environmental contamination. In this Site, the use of asbestos in everyday life has contributed to pervasive pollution for the entire community. The population of Casale Monferrato has been severely traumatized not only by the high number of deaths that has affected many families as a consequence of asbestos exposure, but also by a pathogenic conflict situation related to the fact that for years the economic subsistence of the majority of the citizens was based on the Eternit factory, whose production activities led to contamination, pollution, and death. Living in an environment where the risk of exposure to a toxic agent is omnipresent, together with the awareness of the large number of victims, can cause individuals to enter a state of social and emotional detachment. Individuals can experience anxiety, depression, guilt and posttraumatic symptoms as well as helplessness and hopelessness. Defense mechanisms such as denial, splitting, repression, and reduced emotional expression can be used by individuals to contain their overwhelming anxieties (Granieri, 2008, 2013a; Granieri et al., 2013).

The long latency period between exposure and the emergence of the disease, together with not always adequate information about the actual risk associated with asbestos exposure, represent additional sources of distress for the entire community (Granieri, 2016, 2017). Beliefs that proliferate from such uncertainty can amplify the traumatic magnitude of the encounter with the asbestos-stimulus, creating on a collective level a mental functioning that is particularly struggling to include affects in the intrapsychic and interpersonal discourse (Schmitt et al., 2021). This can lead to a psychic functioning characterized by a combination of depressive aspects and denial, which risks compromising the possibility of generating thoughts based on the internal and the external reality, and thus able to set in motion effective actions in dealing with continuing to live in a Contaminated Site. Daily contact with illness and death brings a contradictory reality to the stage. It is no longer possible, under such circumstances, to rely on the world being a safe and just place, and intense shared aggressive fantasies directed at the source of trauma emerge. The community identity has thus been consolidated around the experience of being people gradually betrayed and violated in their most intimate aspects, as they were robbed of the possibility of having confidence in a world, their own world, that is stable and predictable (Granieri et al., 2018). The diagnosis of malignant mesothelioma bursts into the existence of patients and caregivers, destroying ties with the past and appropriating the future, which ends up connoting itself as an immutable and eternal time in which the moment is awaited when the disease will carry out its sentence. In family members who survive the death of a loved one, the inability to make sense and symbolize suffering and death also compromises the possibility of experiencing mourning, generating a kind of "perpetual mourning" (Volkan, 2001), a psychic state characterized by a frozen internal life and a disinvestment of libido on the external world. In a context dominated by the feeling of guilt, no longer thinking about the lost object or attempting to replace it implies a transgression to a sort of superegoic mandate that compels one not to stop grieving for the absence of the lost object as a tangible testimony to one's value and affection.

2. Objectives

Such evidence strongly suggests the need to adopt an integrated approach toward patients and caregivers, improving the development of active strategies tailored on the peculiar features of the individuals and their living environment.

For those reasons the Research-Intervention Group of the Department of Psychology of the University of Turin, coordinated by Professor Antonella Granieri, developed a psychological intervention addressed to both patients and caregivers with the idea to contribute to ameliorating the quality of their internal and external relationships amid such suffering.

3. Methods

The Brief Psychoanalytic Group (BPG), comprises 12 one-hour weekly sessions in a psychoanalytic group specifically designed for the first months following the diagnosis, which seems to represent a highly traumatizing time during which subjects go through intense experiences of disintegration, splitting, and post-traumatic conditions (Arber & Spencer, 2013; Guglielmucci et al., 2018). The group is co-conducted by two psychoanalytically oriented psychotherapists trained in clinical work with cancer patients and groups. Like other forms of brief psychoanalytically oriented interventions, the BPG consists in different phases, each of them with specific aims and tasks (Lemma, Target & Fonagy, 2011).

In the first phase, clinicians define with the group a somatopsychic focus shared by the participants. A focus that integrates the physical repercussions related to the new medical condition (e.g., symptoms, restrictions, physical transformations) and the related painful feelings, that are often hard to express for patients and their families. During the first three sessions, throughout the narratives shared in the group, the co-conductors explore how people relate to an ill body and to its new limitations and needs, along with the desires, anxieties, and unconscious affects related to the danger of living in a CS.

In the second phase the co-conductors help the group to work through the SPF, helping members to recognize their inner states (e.g., feelings, thoughts, fantasies, desires) and connecting them to daily events, medical treatments, and new emerging symptoms. Co-conductors work on the identification and sharing of affects related to the danger of living in a Contaminated Site and the possible strategies, appropriate or inappropriate, that individuals use to cope with it.

The last four sessions are aimed at helping the group go over its story (e.g., absences/deaths, resources, common strategies), explore conscious and unconscious fantasies about the meaning of the end of the therapy, and identify what each member will bring home of the work done together. The co-conductors invite the participants to retrace the most meaningful moments and images of the psychotherapy journey and the main transformations of intrapsychic, interpersonal, and group dynamics.

4. Discussion

Thus, we strongly believe that a psychoanalytic group intervention for patients and their caregivers may constitute a valid contribution to the integration and elaboration of unconscious somatopsychic processes. Thinking together within the group can help participants give meaning to the transformations in their lives brought about by the diagnosis, the experience of the disease and the related feelings, to weaken its pathogenic effects, and to identify more adaptive ways of handling the diagnosis.

5. Conclusions

Enhanced by the clinical experience in Casale Monferrato, we believe BPG could be a suitable intervention for helping people living in CSs to face traumatic affects and experiences and to restore a sense of vitality in a threatening landscape surrounded by death.

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BODY DISSATISFACTION AND BODY WEIGHT CONTROL STRATEGIES AMONG DEPRESSED AND NON-DEPRESSED ADOLESCENTS

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Abstract

Despite substantial evidence that body dissatisfaction explains depression directly or indirectly, there is limited information regarding the specific ways depressed adolescents regulate their body weight and what specific body parts they are dissatisfied with compared to their non-depressed counterparts.

The current study aimed to explore a sample of adolescents under the care of a psychologist with risk of depression as the criterion for body dissatisfaction and weight control strategy differences.

60 adolescents (75% girls) aged between 11 and 18 (mean age = 14.58, SD = 1.75) in the care of a psychologist reported their body weight and height (BMI was calculated), body dissatisfaction (Hibell et al., 2012), perception of actual body figure (Contour Drawing Rating Scale), whether they were on a diet, what weight control strategies they use and depressive symptoms (6-item Kutcher Adolescent Depression Scale) using a paper – pen questionnaire.

61.7% of the adolescents in the sample reported a higher risk of depression. The risk of girls being depressed more than boys was statistically insignificant (66.7% vs. 46.7%). Those at risk of depression are more dissatisfied with their appearance ($U = 183.5$, $z = -3.80$, $p < .001$, $r = .49$) and perceive their body as significantly bigger ($U = 209$, $z = 2.51$, $p < .05$, $r = .34$) in comparison to those who are not at risk. Dietary behavior is more typical for those who are at risk of depression (77.1% vs 22.9%, $\chi^2(1, n=60) = 6.98$, $p = .01$, $\phi = .38$) with a medium effect size. Regarding weight control strategies, the content analyses showed that non-depressed adolescents use more adaptive strategies (sports, exercising, strolling, not overeating, avoiding sweets, fatty or junk food). More depressed adolescents tended to control their body weight in more extreme or maladaptive ways (fasting, vomiting, daily calorie counting and weighing on personal scale, extreme exercising...). With respect to dissatisfaction with certain appearance components, it seems there were no relevant content differences.

The current results support previous research findings regarding the association between body dissatisfaction and depression and extend them to a more specific subclinical population with more specific and qualitative information. In terms of the implications for psychological practice, it would be worth addressing body concerns even if there are no confirmed diagnoses to prevent depression and unhealthy maladaptive weight controlling behavior.

Keywords: *Body dissatisfaction, depression, body weight control strategies, adolescents.*

1. Introduction

Even though there is a lack of theoretical knowledge explaining the association between depression and body dissatisfaction, there is substantial evidence that body dissatisfaction explains depression directly or indirectly (Brechan & Kvaem, 2015). Controlling body weight could in turn serve as a way of restoring self-worth (Brechan & Kvaem, 2015) which could simultaneously decrease depressive symptoms. However, there is limited information on the more specific ways as to how depressed adolescents regulate their body weight (Moitra et al., 2020) and what specific body parts they are dissatisfied with compared to their non-depressed counterparts.

In terms of controlling body weight, experts tend to distinguish between unhealthy or maladaptive strategies and healthy or adaptive strategies. Unhealthy weight control strategies include behaviour such as fasting, skipping meals, eating very little food, vomiting... (American Psychiatric Association, 2010), smoking more cigarettes (López-Guimerà et al., 2013). Another means of retaining or changing body weight or shape is physical exercise, which can represent both a healthy or unhealthy way (excessive exercising) of weight reduction. Excessive exercisers are considered those who report

“frequent (e.g., daily) hard exercise primarily intended to influence their weight or shape” (Mond & Calogero, 2009, p. 227). With the occurrence of extreme and unhealthy dietary practices, the occurrence of depression or anxiety symptoms increases (Loth et al., 2014).

As adolescence is the period of increased autonomy in making food choices (Moitra et al., 2020), further exploration could bring useful information for psychological practice as to whether it might be necessary to address body concerns among clients with no specific associated diagnoses to prevent the development of depression and unhealthy weight control.

2. Objective

The current study aimed to explore a sample of adolescents under the care of a psychologist for various types of problem behavior with risk of depression being the criterion for body dissatisfaction and weight control strategies differences.

3. Methods

3.1. Sample and procedure

The information about the adolescents in their care was provided by 15 psychologists (all female) working at pedagogical-psychological counselling and prevention center, 12 private psychologists and 3 school psychologists at school. The conditions for being included in the research were (1) being aged between 11 and 18 years old, (2) present manifestations of externalized/internalized problem behavior and (3) willingness of the parent to allow participation in the research. The experience of psychologists varies from one year to 38 years, with an average of 14 years.

The sample consisted of 60 adolescents (75% girls) aged between 11 and 18 (mean age = 14.58, SD = 1.75). The adolescents had been under the care of a psychologist from one month to eight years (most of them for one year) as a result of various types of problem behavior such as ADD/ADHD (5%), autistic spectrum disorders (6.7%), specific learning disorders (10%), disordered behavior (3.3%), other diagnoses (13.3%). 61.7% had no specific diagnoses, because of which they are in psychological care. 36.7% of the adolescents are also under the care of another professional (psychiatrist, clinical psychologist, special teacher). According to the psychologists, 68.3% of the adolescents reported feelings of anxiety and 45% had some depressive symptoms, even though only three of them were officially diagnosed as depressed. From the psychologist reports, 26.7% of the adolescents were reported as having eating problems.

3.2. Measures

The respondents filled in a paper-pen questionnaire under the presence of a psychologist. They reported their body weight and height from which their body mass index (BMI) was calculated.

Body dissatisfaction was addressed by a single question “How are you usually satisfied with your appearance” on a response scale from very satisfied (1) to very dissatisfied (5) (Hibell et al., 2012).

Perception of actual body figure was measured by one question from the Contour Drawing Rating Scale (CDRS, Thompson & Grey, 1995). The CDRS consists of nine drawings of a female figure (for female participants) or a male figure (for male participants). Each drawing increases in size from extremely thin (1) to very obese (9). Participants were asked to rate their perceived figure.

Dietary behavior was addressed by a question as to whether they are currently on a diet and what weight control strategies they use.

Depressive symptoms were measured by an abbreviated 6-item Kutcher Adolescent Depression Scale (KADS-6, LeBlanc et al., 2002). It assesses the severity of adolescent depression over the past week and addresses specific symptoms of depression such as anhedonia and affect (e.g.: “Over the last week, how often have felt a low mood, sadness, feeling blah or down, depressed, just can’t be bothered.”). A 4-point response scale from never or almost never (0) to regularly (3) was used. The total score of the instrument is the sum of all the items. A total score of 0 to 5 indicate those who are probably not depressed, while a total score of 6 and above indicates possible depression. However, a more thorough assessment is needed to provide a clinical diagnosis. The internal consistency of the scale reached an acceptable value of Cronbach’s alpha (.87).

3.3. Statistical analyses

Descriptive statistics, a Chi square test for independence (with Yates Continuity Correction), Mann-Whitney U Test and brief content analysis focused on manifest content and using an inductive procedure – explorational orientation (Gavora, 2015; Guest et al., 2012) were used to analyze the data.

4. Results

61.7% of the adolescents were identified as having a higher risk of depression (according to KADS-6), while (not statistically significantly) more girls were at risk than boys (66.7% vs. 46.7%). Those who are at risk of depression are more dissatisfied with their appearance ($U = 183.5$, $z = -3.80$, $p < .001$, $r = .49$) and perceive their body as significantly bigger in comparison to those who are not at risk ($U = 209$, $z = 2.51$, $p < .05$, $r = .34$) with a medium effect. They also reported higher BMI than those who are not depressed ($U = 234$, $z = -2.20$, $p < .05$, $r = .29$). Dietary behavior is more typical for those who are at risk of depression (77.1% vs 22.9%). This was statistically confirmed by the Chi square test $\chi^2(1, n=60) = 6.98$, $p = .01$, $\phi = .38$, with a medium effect.

A brief content analysis was processed separately for both the adolescent groups with respect to their risk of depression. 11 out of the 23 non-depressed adolescents (47.83%) reported 17 ways of controlling their weight (some of them used more than one strategy). Others stated that they did not control their weight (whether explicitly or by omitting the answer) or that they do not need to control their weight as they are satisfied with it. These ways of controlling body weight were categorized into 9 separate categories – weight control strategies out of which 7 were interpreted as adaptive and relatively healthy and 2 (22.22%) as unhealthy and maladaptive (Thøgersen-Ntoumani et al, 2010). Moreover, the maladaptive strategies were only reported 2 times in this group (one adolescent in particular used them both) while the adaptive ones occurred 15 times.

With respect to the depressed adolescents, 23 out of 37 (62.16%) reported 38 ways of controlling their weight, (some of them used more than one strategy). Others stated that they did not control they weight (by omitting the answer). 15 separate weight control strategies were identified in this group, out of which 5 were considered adaptive and 10 (66.67%) as maladaptive (Thøgersen-Ntoumani et al, 2010). The adaptive strategies were reported 17 times while the maladaptive categories were represented by 21 assertions.

Table 1. Overview of categories and examples of content analysis among non-depressed adolescents.

	Weight control strategies	Example	Frequency
Adaptive	Sports	I do sports; Sometimes I go for a run	4
	Exercising	Sometimes I exercise, mainly at school; I exercise at the gym and I do my trainings; I exercise regularly	3
	Eating	I eat when I am hungry	1
	Strolling	I go for a walk	2
	Not overeating	I don't overeat; I try not to eat too much too many times a day	2
	Avoiding sweets	Sometimes I avoid sweets	1
	Avoiding fatty or junk food	I try to avoid fatty food; I don't eat too many meals from which I gain weight	2
Maladaptive	Daily exercising	I exercise daily	1
	Controlling weight every day	I write down my weight every day	1

Table 2. Overview of categories and examples of content analysis among depressed adolescents.

	Weight control strategies	Example	Frequency
Adaptive	Sports	Sometimes I go for a run; I do sport at home	6
	Exercising	Sometimes I exercise at home; I try to exercise regularly	5
	Eating regularly	I try to eat regularly	1
Maladaptive	Eating less unhealthy food	I eat less sugar; I try to eat fewer sweets; I limit fast food; I try to eat less badly	4
	Calories counting	I try to count calories	1
	Less eating	I eat less; I try to limit big portions of food; I try not to eat much; If I eat, it is a small portion	4
	Not eating regularly	I don't eat regularly because my body is not used to eating that often; I skip meals	2
	Not eating (fasting)	I don't eat (because I don't have time) I eat almost nothing, or very little; I usually eat only the amount I need in order not to collapse	5
	Avoiding meals by other activities	I spend less time at home; I brush my teeth early and I go to sleep	2
	Avoiding meals by drinking more water	I drink more water in order to skip meals; I drink more lemon water to keep my stomach full	2
	Vomiting	I vomit	1
	Daily calories counting	I count calories daily	1
	Daily weighting on personal weight	I weight myself daily on personal scale	1
Daily checking in the mirror	I check my body in the mirror daily	1	
	Extreme exercising	I try to exercise a lot; I exercise at night secretly	2

We can conclude that non-depressed adolescents use more adaptive strategies (sports, exercising, strolling, not overeating, avoiding sweets, fat or junk food) while more of the depressed adolescents tended to control (reduce) their body weight in more extreme or maladaptive manners (such as fasting, vomiting, drinking more lemon water to avoid eating or in order to keep the stomach full, daily calorie counting, daily weighing on personal scale (extreme exercising...)). These are considered as risky to health. With respect to dissatisfaction with particular body parts or appearance components, it seems there were no content differences.

5. Discussion

The present results regarding the difference in body dissatisfaction according to depression rate are in line with previous research findings. The current study provides evidence of greater body dissatisfaction among those who are identified as depressed which supports studies indicating the association between depression and body dissatisfaction (Brechan & Kvalem, 2015). The current study also shows that depressed adolescents perceive their body as bigger when compared to non-depressed adolescents. Darimont et al. (2020) found that perception of higher weight and measured higher weight were associated with depression although only for female participants. However, further content analysis in the present study did not reveal any relevant differences in specific body parts they are dissatisfied with. It seems that their body dissatisfaction focus is not different for both groups although the extent of dissatisfaction is higher for those who are depressed.

Furthermore, the current study showed that depressed adolescents reported a higher frequency of dietary behavior in order to reduce their weight. Eating habits have previously been found to be important predictors of mental health and are also inversely associated with the risk of depression among adolescents (Moitra et al, 2020). Similarly, an association has been found between depression and restricted eating (Serin & Koç, 2020). In the current study, maladaptive unhealthy weight control strategies were more often used by depressed adolescents when compared to their non-depressed counterparts. This supports and develops previous research findings that adolescents with depression often engage in unhealthy eating habits (Moitra et al, 2020) and that regardless of a special type of diet, depression was associated with a greater number of foods excluded from the diet (Ljungberg et al, 2020). Healthier eating habits can also serve as a means of reducing depressive symptoms (Parletta et al, 2019).

In terms of the limitations of the current study, the self-report character of the data (height and weight, depressive symptoms), impossibility to generalize the findings to the population (clinical or non-clinical) and the lack of methods to indicate causality should be considered. Further research could

focus on the deductive form of content analyses and quantitative statistical processing of the obtained data.

6. Conclusions

The current results support previous research findings and extend them to a more specific subclinical population with more qualitative information. In terms of implications for psychological practice, it is of importance to address body concerns and dietary behavior even if there are no particular diagnoses confirmed to prevent depression. Moreover, among those who already control or reduce their body weight, the degree of depression should be considered to prevent or reduce maladaptive unhealthy weight controlling behavior.

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A PSYCHOLOGICAL CONSULTATION MODEL FOR CANCER PATIENTS AND THEIR CAREGIVERS

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Abstract

Cancer and its treatment have a significant impact on patients' and caregivers' lives. A cancer diagnosis compels to confront feelings of helplessness and vulnerability and with intense anxieties related with grief and death. Patients and caregivers may experience high levels of hopelessness, dissatisfaction and unhappiness, increased feelings of discouragement and demoralization, as well as concerns related to bodily perception. A feeling of having failed in their own life and having insufficient resources to cope with everyday circumstances can emerge.

Looking at the biological, psychological, and social complexity of cancer from a clinical perspective, it is crucial to investigate the subjective response of each patient and caregiver in the somatopsychic experience of illness and their ability to represent and attribute meaning to it.

The consultation model in the field of Clinical Psychology in Oncology proposed within the San Giovanni Bosco Hospital in Turin (Italy) sets assessment goals about the different dimensions influencing affective regulation, and aims to assess the subjects ability to symbolize their own level of psychophysical integration through five psychological interviews and an assessment of the psychophysiological profile using biofeedback. In the initial phase of assessment, is important to gather information about symptoms, investigate their subjective perception, recognize their significance, and promote their adjustment if they occur in the interview. Transversely, the possibility of put in words and making representable the dysregulation at a psychic, relational or psychophysiological level offer an opportunity of regulation and the possibility of asking for psychological help. Sensory, somatic, and emotional experiences related to the disease are embodied and experienced primarily at a bodily level by patients and caregivers.

In such consultation model, the clinician's focus on body is enhanced by the use of biofeedback, which offers an opportunity to observe their own spontaneous self-regulatory strategies and draw connections between bodily sensations (interoceptive states) and emotions, providing an initial opportunity of regulation and representation.

The Investigation of the relational and community context of cancer patients, caregivers, and family unit, with a focus on psychic, relational, and psychophysiological dysregulation elements, can uncover unexpressed needs and risk situations for the development or the exacerbation of physical and mental health issues.

It is important for the clinical psychologists to promote the recognition of such needs both facilitating patient access to psychological support services both sensitizing health care providers to recognize signs of distress in patients and caregiver through a multidisciplinary teamwork.

Keywords: *Assessment, cancer patients, clinical psychology, biofeedback, affective regulation.*

1. Introduction

The experience of cancer entails a significant impact on the somatopsychic balance of patients and their caregivers. Patients can feel vulnerability, helplessness and death anxieties (Borgogno et al., 2015; Guglielmucci et al., 2014), as well as anxious and depressive symptoms (Hammermüller et al., 2021; Hinz et al., 2010; Linden et al., 2012), distress (Carlson et al., 2019) and preoccupation about their somatic Self (Liu, Peh & Mahendran, 2017; Miaja et al., 2017). Caregivers can also suffer from physical, psychological and interpersonal impairment (Hsu et al., 2014; Vahidi et al., 2016; Wong et al., 2020), because of the demanding caregiving tasks, the sense of helplessness, the fear of losing their beloved one

(Granieri, 2015; Granieri et al., 2018) and because of loss-related pain, which sometimes leads to prolonged grief (Kustanti et al., 2022).

Experiences such as cancer diagnoses can be processed through a non-symbolic level of representation, expressed on a bodily level, and through a symbolic level of representation, expressed through images and language (Bucci, 1997). The ability to symbolize experience supports mental health (Klein, 1930; Caspi, 2018), allowing individuals to live experiences of separation, loss, and integration (Segal, 2006). However, oncological diseases can induce a sense of threat which is experienced through interoception (Sleight e Clark, 2015), and the possibility to symbolize emotions and experience can be compromised (Granieri et al., 2018), fostering the presence of psychophysiological dysregulation, sympatho-vagal unbalance and mentalization deficits (Bateman and Fonagy, 2019; Porges, 2018; De Couck, 2012; De Couck, 2018). Patients and caregivers can react to mental pain through the body, implementing “secondary alexithymic responses” (De Vries et al., 2012) that protect themselves from a suffering which is difficult to represent. Moreover, physical limitations connected to cancer can lead to a narrowing of the mental field on concrete aspects (Granieri et al., 2018), limiting the ability to process the experience.

Furthermore, some risk factors might exacerbate the impact of cancer on patients and their families. These risk factors include a low socio-economic status (Sumner et al., 2020), critical housing conditions (Fan et al., 2022), the presence of minors (Walczak et al., 2018) or family members affected by disability (Lovell and Wetherell, 2011; An, 2006; Lim e Lee, 2010), the absence of caregivers or significant relationships (Hodgson et al., 2020; Cacioppo & Cacioppo, 2014; Malcom, Frost & Cowie, 2019; Steptoe et al., 2013), a history of insecure style attachment (Pietromonaco & Powers, 2015) and psychophysiological dysregulation (Beauchaine and Thayer, 2015).

Thus, we strongly believe that physical, psychological, and interpersonal consequences of cancer require a psychosocial care, even if patients and caregivers not always have access to psychosocial services and to prolonged interventions (Deshields and Nanna, 2010).

2. Design

The consultation model offered by the Psychology Service within the Oncology Department of San Giovanni Bosco Hospital in Turin, in collaboration with the Department of Psychology of the University of Turin, aims at assessing the psychological, interpersonal, and psychophysiological functioning of patients and caregivers.

During the assessment, conducted by clinical psychologists, interviews comprise also the use of psychometric tests and a multiparameter polygraph for biofeedback.

In our perspective, consultation interviews already have a therapeutic function, since they can promote affective regulation (Schore, 2008) and support symbolization (Granieri et al., 2018). Indeed, by listening to the affective and non-verbal elements arising from the clinical encounter (Carli & Paniccia, 2003), the clinical psychologist enables the patient to name and acknowledge the presence of a possible dysregulation, as well as of psychological, relational, and psychophysiological resources, as a first opportunity to regulate and recognize her own psychological needs.

3. Methods

The consultation consists in five weekly interviews, lasting 45-50 minutes, conducted by a psychoanalytically oriented psychotherapist trained in biofeedback.

The first interview explores the patient’s demand. The clinical psychologist listens to the subjective meaning attributed to the experience of cancer, assesses the quality of present relationships, and supports the patient to recognize her psychosocial frailties and resources. Whenever, during the interview, the patient shows symptoms of affective dysregulation, the clinician observes the regulation strategies she spontaneously adopts or invites her to try other ways of regulation. At the end of the first interview, patients are administered some questionnaires.

The second interview is dedicated to the collection of patient’s personal history, and to the observation of the Self-Other representations which have been internalized within attachment relationships and during moments of crisis.

The third interview is about recording a five-minutes baseline using biofeedback. After positioning sensors (respiration belt, photoplethysmography for BVP, thermistor for temperature, skin conductance sensor, electromyography for muscle activity), the clinician explains their function to the patient and shows the psychophysiological measures on a monitor, during a habituation phase which precedes the baseline registration. The clinical psychologist observes patient’s ability to make

connections between her emotions, interoceptive states and behaviors emerging during the baseline and other life situations.

During the fourth interview, a registration of a second five-minutes baseline and a fourteen-minutes stress assessment are completed. The stress assessment consists in several tasks, that last two minutes each: baseline, Stroop test, arithmetic calculation, and recalling of a stressful event. Every task requires two minutes of recovery in between, where the person is asked to stay quiet and silent. The stress assessment highlights the presence of a possible chronic hyperarousal, an excessive reactivity, or the inability to recover from stress (Pierini, Rolandi & Bertolotti, 2013). The clinician can encourage the patient to draw connections between stress assessment responses and patterns of thoughts, emotions and behaviors related to cancer experience or to her personal history.

The fifth interview is dedicated to the clinical feedback and a further treatment is proposed when necessary.

During the consultation, the clinician listens to the verbal and non-verbal communications of patients and caregivers, and she performs a constant, internal, work of symbolization, related to alpha function (Bion, 1970). At the same time, she can choose to invite patients to experience changes in their psychophysiological arousal, for example by modifying the respiration rate or posture, in order to draw attention to the body and to promote the regulation of dysregulated states (Ferenczi, 1929; Speziale-Bagliacca, 2010).

4. Discussion

When affective experiences related to cancer are embodied and lived at a somatic level (Granieri et al., 2018), during the clinical consultation the body can become a theater where changes can take place, such as a transit from a concrete, external-oriented thought, to an affect-oriented thought, which includes emotional aspects of experience.

The use of biofeedback during assessment provides an opportunity for the patient to receive an external response to her own interoceptive signals from both the clinician and the visual feedback given by the instrument (Pierini, Rolandi, Bertolotti, 2013). The joint observation of a possible psychophysiological dysregulation and of the patient's resources can validate patient's feelings and promote symbolization (Granieri, et al., 2018).

This information, along with an evaluation of patient's psychological and relational frailties and resources, enables the clinical psychologist to offer more targeted interventions, optimizing the use of therapeutic resources and reducing healthcare costs (Yates & Taub, 2003).

5. Conclusions

This consultation model can also detect unexpressed needs and risk situations for the development or the exacerbation of physical and mental health issues (Compton e Shim, 2020). It is important for clinical psychologists to promote the acknowledgment of such needs both facilitating patients' access to psychosocial support services, and sensitizing healthcare providers to recognize signs of distress in patients and caregiver through a multidisciplinary teamwork (Gonella in Gallina & Gonella, 2017).

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THE EFFECT OF DEFENSE STYLES ON DARK TRIAD PERSONALITY TRAITS ACCORDING TO THE LEVELS OF EMOTION REGULATION DIFFICULTIES IN A NON-CLINICAL ADULT SAMPLE

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Abstract

The aim of this study is to examine the types of defense as a predictor of the dark triad personality traits within the framework of emotion regulation difficulties in adults without a psychiatric diagnosis. 1395 people, 57.8% of whom were women, who were not diagnosed, participated in the study. Participants were chosen by convenience sampling method, and those who were diagnosed were excluded from the analysis. In the survey form the Difficulties in Emotion Regulation Scale (DERS), the Defense Style Questionnaire (DSQ-40), the Short Dark Triad (SD3-T) scales and the demographic form were used. Emotion regulation difficulty levels were created to be one standard deviation above and below the mean of the total score of the DERS. According to these levels, whether machiavellianism, psychopathy and narcissism scores were predicted by the defense types were examined with the Multiple Linear Regression Model. Results have shown that the effects of defense types differ in the dark triad personality traits according to the levels of difficulty in emotion regulation.

Keywords: *Emotion dysregulation, defense mechanisms, dark triad, MLR.*

1. Introduction

As it can be understood from the example of DSM and ICD, the view that the use of a categorical approach may not be suitable for all psychiatric disorders in the classification of psychopathology (Fusar-Poli, 2019). It is emphasized that categorical models may cause difficulties in distinguishing between people with subclinical symptoms and those who fully meet these symptoms, and in this context, it is emphasized that although the groups may need different treatments, they may need similar treatments (Lyons, 2019). In response to this problem, it is recommended to adopt a transdiagnostic approach. The transdiagnostic approach, which originates from cognitive behavioral theory and treatments, assumes that similar causes may lie on the basis of different disorders and that these disorders may have similar etiologies and maintenance processes with some similar cognitive, affective, interpersonal and behavioral features (Hallam, 2013; Fusar-Poli et al., 2019). According to the transdiagnostic approach, disorders can be classified according to underlying mechanisms or disorders (such as attention functions, affect, emotion regulation, intolerance of uncertainty) (Sloan et al., 2017).

In this respect, emotion regulation is one of the concepts that has attracted great attention in the literature in recent years (Gross, 2014). According to the APA (2015), emotion regulation is a person's ability to modulate an emotion or a set of emotions. In other words, it is defined as the observation, evaluation and management of emotional experiences and expressions (Garofalo, Neumann, Kosson, Velotti, 2020). Difficulties related to emotions and emotion regulation seem to be present in at least one of the symptoms related to the disorders within the scope of DSM and in the majority of the diagnosis categories in general (Kring and Sloan, 2010).

It's assumed that the research on emotion regulation started with Freud's studies on defenses, then gained momentum with the studies of theorists such as Lazarus, Bowlby and Mischel on different subjects, and finally, with the introduction of the concept of emotion regulation in the 1990s, it gained its contemporary meaning (Gross, 2014).

The emphasis in the literature that studies on emotion regulation begin with the concept of defense mechanisms put forward by Freud (1894) is very important in that defense mechanisms can be considered as an emotion regulation tools and that these variables can be viewed as they are theoretically related. Also both structures can be considered as transdiagnostic structures (Babl et al., 2019).

Dark triad traits are defined as subclinical structures, which are composed of Machiavellianism, psychopathy and narcissism are in between normal and abnormal dimensions of personality functionality (Grigoras, Wille, 2017). Machiavellianism refers to a person's thinking that it is beneficial to manipulate others and to exhibit a moral stance that prioritizes interests rather than principles (Miao, Humphrey, Qian, Pollack, 2019). Psychopathy is defined as a lack of remorse and guilt for hurting others, lack of empathy, impulsivity and indifference towards other people (Miao, Humphrey, Qian, Pollack, 2019). Finally, narcissism refers to excessive self-glorification and love, an exaggerated attitude in self-evaluation, and fantasies of control, admiration, and success (Miao, Humphrey, Qian, Pollack, 2019).

There are many studies reporting that there is a relationship between emotion regulation and personality traits (Garofalo, Neumann, Kosson, & Velotti, 2020; Richardson & Boag, 2016; Velotti & Garofalo, 2015; Pollock, McCabe, Southard, and Zeigler-Hill, 2016; Abdi, and Pak; 2019). Similarly, it has been reported that there is a relationship between immature defense mechanisms and dark triad personality traits (Richardson & Boag, 2016). Although the relationship between these variable pairs is studied, no study has been found which examines all three under a single model.

2. Methods

2.1. Participants

The sample of the study consisted of 1395 people between the ages of 18-65, of which 57,8% (806 people) were women and 42,2% (589 people) were men.

2.2. Instruments

The Difficulties in Emotion Regulation Scale (DERS) developed by Gratz and Roemer (2004) and adapted to Turkish by Rugancı and Gençöz (2010) and the Defense Style Questionnaire (DSQ-40) developed by Andrews, Singh and Bond (1993) and adapted to Turkish by Yılmaz, Gençöz and Ak (2007) and the Short Dark Triad (SD3-T) developed by Jones and Paulhus (2014) and adapted to Turkish by Özsoy, Rauthmann, Jonason and Ardiç (2017) were used.

2.3. Procedure

Emotion regulation difficulty levels were created to be one standard deviation ($sd= 20,68$) above and below the mean ($= 82,13$) of the total score of the DERS. It was observed that the distribution of the participants to the levels of emotion dysregulation was 285 (20,4%) for the lower level, 907 (65%) for the medium level, and 203 (14,6%) for the upper level.

3. Results

Multiple linear regression analysis results are shown in tables below (Table 1 for Machiavellianism, Table 2 for psychopathy and Table 3 for narcissism).

Table 1. Multiple linear regression analysis results of Machiavellism.

<i>Levels</i>	<i>Independent Variables</i>	<i>B</i>	<i>Std. Error for B</i>	<i>Beta</i>	<i>t</i>	<i>R²</i>	<i>F</i>
<i>Lower</i>	<i>Constant</i>	16,288	1,405	-	11,590***	0,178	61,477***
	<i>IMM</i>	0,136	0,017	0,422	7,841***		
<i>Medium</i>	<i>Constant</i>	18,553	1,026	-	18,083***	0,130	45,001***
	<i>IMM</i>	0,081	0,009	0,329	9,473***		
	<i>MAT</i>	0,083	0,023	0,132	3,660***		
	<i>NEU</i>	-0,055	0,023	-0,088	-2,395**		
<i>Upper</i>	<i>Constant</i>	15,554	1,891	-	8,220***	0,189	46,786***
	<i>IMM</i>	0,108	0,016	0,435	6,840***		

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$; IMM- Immature defenses, NEU- Neurotic defenses, MAT- Mature defenses

Table 2. Multiple linear regression analysis results of psychopathy.

<i>Levels</i>	<i>Independent Variables</i>	<i>B</i>	<i>Std. Error for B</i>	<i>Beta</i>	<i>t</i>	<i>R²</i>	<i>F</i>
<i>Lower</i>	<i>Constant</i>	13,452	1,414	-	9,515***	0,052	47,372***
	<i>IMM</i>	0,111	0,011	0,514	9,716***		
	<i>MAT</i>	-0,074	0,026	-0,148	-2,803**		
<i>Medium</i>	<i>Constant</i>	13,440	0,821	-	16,373***	0,085	113,72***
	<i>IMM</i>	0,114	0,008	0,490	15,030***		
	<i>NEU</i>	-0,097	0,019	-0,164	-5,021**		
<i>Upper</i>	<i>Constant</i>	13,864	1,933	-	7,171***	0,146	45,893***
	<i>IMM</i>	0,155	0,016	0,640	9,577***		
	<i>NEU</i>	-0,208	0,043	-0,322	-4,825***		

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$; IMM- Immature defenses, NEU- Neurotic defenses, MAT- Mature defenses

Table 3. Multiple linear regression analysis results for narcissism.

Levels	Independent Variables	B	Std. Error for B	Beta	t	R ²	F
Lower	Constant	22,399	1,198	-	18,699***	0,052	15,636***
	IMM	0,058	0,015	0,229	3,954***		
Medium	Constant	20,003	0,905	-	22,100***	0,085	28,087***
	IMM	0,051	0,008	0,242	6,795***		
	MAT	0,082	0,020	0,153	4,131***		
	NEU	-0,050	0,020	-0,093	-2,455*		
Upper	Constant	15,722	1,824	-	8,648***	0,146	17,094***
	IMM	0,056	0,017	0,259	3,335***		
	MAT	0,094	0,042	0,175	2,252*		

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$; IMM- Immature defenses, NEU- Neurotic defenses, MAT- Mature defenses

4. Discussion

The fact that the related structures are predicted by different variables at low, moderate and high levels of emotion dysregulation shows that emotion dysregulation have an effect on traits. Machiavellianism being predicted by immature defenses only in the low and high dysregulation groups and by all variables in the moderate emotion dysregulation group seems to distinguish Machiavellianism from psychopathy and narcissism. This finding is consistent with the literature. The fact that neurotic defenses have a negative effect in every model in which it is statistically significant can be explained by the fact that the use of neurotic defense is associated with partial insight preservation is in line with the literature. The negative effect of mature defenses in the low emotion dysregulation group in psychopathy is similarly consistent with the defense mechanisms literature. When the findings are examined, it can be interpreted that the predictive quality of mature defenses is incompatible with the literature, but this may be due to the suitability of the traits for dimensional evaluation. Similarly, it is confusing that both immature mechanisms and mature mechanisms have predictive effects in the same groups. This may also be due to the measurement tools used. When the literature is examined, it is seen that different measurement tools are used both for the dark triad traits and for the evaluation of defense mechanisms. Repeating the same study with different measurement tools can eliminate this confusion. When the results of the research are examined in general terms, it is thought that studies that model emotion regulation and defense mechanisms in particular for different personality traits and diagnosis groups will be important.

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SEXUAL ABUSE / RAPE IN FEMALE PRISONERS AND ITS LINK WITH SUICIDE ATTEMPT / DEPRESSION

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Abstract

Motivation for the paper: The interest in studying the phenomenon of sexual abuse in some of its dimensions arises from the possibility of analyzing a database of a research project on women in prison who presented addictive behaviors.

Objectives: Investigate the frequency of sexual abuse in women in prison and its association with other mental health problems such as suicide and depression.

What was done: A secondary analysis of a research study of women in prison in Mexico was conducted. How it was done and validated: Three variables of interest were analyzed from a statistical analysis which yielded various data in relation to sexual abuse and rape in women in prison, the database was approved by the research and ethics committee of the National Institute of Psychiatry Ramon de la Fuente Muñiz, in Mexico.

Major results: There was a significant relationship between sexual abuse and suicide attempt in women who are incarcerated, 11.3% attempted suicide in the last month, while 41.3% attempted suicide, at some time in their lives, mostly sexual abuse and rape occurred during childhood, within their homes and the main perpetrator was a family member or close friend of the male gender.

Conclusions: Prevention and awareness programs on sexual abuse and comprehensive care in prison spaces are required to meet and prioritize all the needs of those women who are deprived of liberty. Policies and measures aimed at redressing harm for victims of sexual abuse and rape are needed.

Keywords: Women, sexual abuse, prison, suicide, depression.

1. Introduction

According to the World Health Organization (2021), sexual violence is a public health problem, which violates women's human rights globally. According to UNWOMEN (2022), data it is estimated that, at some time in their lives, 736 million women, almost 1 in 3 women (30% aged 15 and over) have experienced physical and/or sexual violence by their partner, by someone other than their partner or both. In Latin America, prevalence studies indicate that sexual violence by their male intimate partners is common in the region.

The most common type of violence reported against women is psychological violence, followed by physical and finally sexual violence. This last type of violence has a great cultural load which causes it not to be reported so openly for reasons of shame or stigma (UNWOMEN, 2022). International surveys show the proportion of women who report ever having been subjected to forced sex by an intimate partner was 5% to 47%, while the percentage indicating having experienced forced sex in the previous year is 2% to 23% (Contreras, 2010).

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In Mexico, sexual abuse is a problem that directly affects women and occurs in various public and private spaces and within any social scale. Sexual abuse can be understood as a form of control, marginalization and discrimination against women that results from excessive and structural violence based on the difference in power between genders, stereotypes and cultural patterns according to each context. The emotional and psychological toll of sexual abuse on women if left unattended can be irreparable and inestimable.

Based on a study by Chen, et al. (2010) an association is reported between sexual abuse and other mental health problems such as; post-traumatic stress, anxiety, sleep disorders and suicide attempts, as well as an increased risk of developing major depression. Rape severity is often unknown as approximately one-third of women who suffered sexual abuse does not disclose their experience or do so many years later (Sciolla, 2011).

The consequences of sexual abuse depend on the age at which the abuse began, the duration of the event, and the type of relationship and sex of the abuser (López, 2019). One of the psychological consequences of people who have experienced sexual abuse can be suicide attempt or suicide, in addition to other mental health disorders such as depression (Baita, 2021). Traumatic events in people's lives are a risk factor for their mental health. It has been found that female victims of sexual abuse who reported the event, 43% reported suicidal ideation and 32% suicide attempts (Brokke, 2022).

People who attempt or commit suicide have been found to be 11 to 14 times more likely to do so if they use alcohol and drugs. Aggression, pessimism, hopelessness, impulsivity, a history of child and sexual abuse are all factors that influence the risk of suicide of a person with an addictive disorder (Yuodelis, 2015).

Another factor coupled with sexual abuse is the context in which women develop. According to available information, women living in societies with inequalities and violence may lack psychological and social well-being (Romero, 2018).

The National Survey on the Dynamics of Household Relations (ENDIREH) is one of the main sources of information on the situation of violence experienced by women in our country. In the latest report on the group of women who suffer some type of violence, it has been considered to women of the third age, indigenous, disabled, etc. Although vulnerable groups of women such as Afro-descendant women, street women, migrants or women in prison are not included (ENDIREH, 2011). This last group of women is for which there is very little data at the national level, which is why it does not allow their problems to be visible from the field of mental health.

Within prisons there is little information about people suffering from various mental disorders such as depression, anxiety and post-traumatic stress. 14% of women in prison reported having major depression. There are also cases of child sexual abuse among people who are incarcerated; about 20 to 70% reported having suffered it (Caravaca, 2019).

2. Design

Non-experimental, descriptive, ex post facto cross-sectional field study.

Instrument: The variables that were used were chosen from a questionnaire designed specifically of 242 questions, which investigates various topics of mental health and addictions in women in prison. A statistical analysis was performed with the following reagents; specifically, the sexual abuse questions were from the National Survey of Addictions (Secretaría de Salud, 2002).

Sexual abuse:

- Has anyone ever forced or pressured you into sexual contact? That is, have you been touched by your sexual parts, or have you touched someone else's sexual parts against your will?
- Has anyone ever forced you to have sex against your will, i.e. using blows or physical force or threatening you in any way, i.e. raped you?
- How many times has it happened to you?
- How old were you the first and second time that happened to you?
- Did a single person or more than one force you?
- What sex were they?
- Where did this happen?
- Did you take a report, report or tell someone?
- Did the complaint proceed?
- Did they believe you?

The reactivities exploring depression and suicidal risk were taken from the MINI International Neuropsychiatric Interview (Sheehan, 1998). The MINI International Neuropsychiatric Interview is a short, structured diagnostic interview that explores the diagnostic categories of DSM-IV and ICD-10. It contains 130 questions organized into modules that assess 16 disorders of axis I of the DSM-IV. The administration time of the instrument is around 15 minutes.

According to the DSM-V for the diagnosis of an episode of major depression, the presence of 5 or more symptoms is required in a period of 2 weeks (Tolentino, 2018). For suicide attempt, at least 5 symptoms are needed to diagnose suicidal behavior disorder (Fehling, 2021).

Depression:

- In recent weeks, have you felt depressed or down most of the day, almost every day?
- In recent weeks, have you lost interest in most things or enjoyed less of the things you usually liked?
- In the last two weeks, when you were feeling depressed or uninterested in things, did your appetite decrease or increase almost every day?
- Did you have trouble sleeping, almost every night?
- Almost every day, did you talk or move slower than usual or were you restless or had difficulty staying calm?
- Almost every day, did you feel most of the time fatigued or without energy?
- Almost every day, did you have difficulty concentrating or making decisions?
- On several occasions, did you want to hurt yourself, did you feel suicidal, or did you wish you were dead?
- Over the course of your life, did you have other periods of two or more weeks, when you felt depressed or uninterested in most things and that you had most of the problems we just talked about?
- Have you ever had a period of at least two months without depression or lack of interest in most things and this period occurred between two depressive episodes?

Risk of suicide:

- During the last month, have you thought you would be better off dead or have you wished you were dead?
- Have you wanted to hurt yourself?
- Have you thought about suicide?
- Have you planned to commit suicide?
- Have you attempted suicide?
- Throughout your life, have you ever attempted suicide?
- How old were you the first time you tried?
- When was the last time?

3. Objective

The objective of this paper is to study the frequency of sexual abuse in a group of women in prison who have used psychoactive substances and to determine if there is a relationship between sexual abuse, depression and suicide attempts.

4. Methods

This is a secondary analysis of a study of women in prison conducted in Mexico. (Romero, 2002; Galvan, 2006; Saldívar, 2006; Colmenares, 2007; Romero, 2007; Romero, 2010)

5. Results

Sexual abuse

According to the statistical analysis, of the 213 study participants, 42.3% report having suffered sexual abuse. The age range in which sexual abuse occurred begins from 3-33 years, the most representative being the range of 3-8 years with 27%, followed by 9-13 years, 24% and 14-18 years, 23%. Based on the results, sexual abuse occurs more when the victim is a minor. Regarding how many times sexual abuse occurred only once, 74.4% was only 1 time, followed by 2 times, 3.7% and 5 times, 4.9%. Regarding where the sexual abuse occurred for the 1st time, 17.8% was in the victim's home, followed by

the street, 6.6% and the aggressor's house, 5.2%. As for the second time, 3.8% was in the house the victim followed by the house of the aggressor, 2.8% and the hotel, 2.3%. In the case of the perpetrator of sexual abuse was a relative or known person of the male gender, being the stepfather the highest percentage with 5.6% followed by the partner, 4.2%, and the uncle, 3.2%.

Rape

From the statistical analysis, of the 213 study participants, 41.8% report having suffered a rape. The age range in which the rape occurred starts from 1-39 years, with the highest percentage being 14-18 years with 15.9%, followed by 9-13 years, 7.5% and 1-8 years, 6%. In the case of the perpetrator of the rape was a relative or known person of the male gender, being the partner of the victim the highest percentage with 8.9% followed by a known 3.8%, and the cousin, 2.8%.

Based on the statistical analysis, the differences observed in Table 2, there is no statistical relationship between sexual abuse and depression according to the results obtained. According to the Chi-square test in Table 3. The relationship between sexual abuse and rape and suicide attempt can be seen to be statistically significant.

6. Discussion

In recent decades, interest has increased in the study of sexual abuse in childhood and its consequences in adult life in various areas, since it has been observed that the consequences of inattention do not allow people to have a satisfactory quality of life. Although internationally there have been many works on the subject in Mexico, research on this topic is little. International studies have consistently indicated that child sexual abuse is a risk factor for psychopathological development during adulthood (Sumalla, 2017). Long-term consequences such as major depression, post-traumatic stress disorder, phobias, panic attacks, depersonalization, suicide, and substance abuse have been identified.

Women who suffered some sexual abuse during childhood do not receive comprehensive care within the prison, since within the institution other forms of violence are consolidated through the mistreatment of the victims. Similarly, one way to resist pain, the trauma generated by sexual abuse and confinement within the prison itself is the consumption of various substances, such as a form of forgetting, pain suppression, and a therapeutic method that sometimes may not work when the effect no longer suppresses pain and generates other conflicts (EQUIS, Justice for Women, 2020).

The results of this study can help to understand an edge of the problem of sexual abuse in women in prison since little has been explored with this type of population in Mexico. Sexual abuse can occur at any stage of life, although according to the results, sexual abuse occurred more in childhood than in other age ranges. Therefore, prevention and awareness programs on sexual abuse should be implemented.

Sexual violence should be addressed from a gender perspective and based on comprehensive care which includes health services, education and access to justice to report the act and seek reparation for the damage. Sexual abuse could be understood from that use of the body of the other, taking away all value, a violent act without a sense of domination and control that permeates the life of the person, an aggression for aggression (Segato, 2017).

This study can show that women in prison who reported sexual abuse in childhood could also suffer some type of rape in adulthood or sexual violence within the same prison, which we can consider this population with a multitraumatic process that can continue to worsen and not allow a recovery or management of daily problems, so suicidal ideation is more present.

The urgency of treatment for this type of population is necessary to achieve a reintegration of the population and for this it is necessary to train the personnel in charge of this type of population, not only in psychological or psychiatric care but also with a work of sensitization of this type of population in gender and violence. A limitation of the present study is that the data are not current, but it is the only information available on the subject. Surely a new project would yield higher frequencies.

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THE CHARACTERISTICS OF THE FUTURE ORIENTATION OF ARAB ADOLESCENTS WITH INTELLECTUAL DISABILITIES

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Abstract

Future orientation focuses on the image an individual constructs regarding their future; including future goals and courses of action they set for themselves in order to realize these goals. The present study discusses the consolidation of the future orientation of Arab adolescents with mild intellectual disabilities who attend special education schools in northern Israel. In this study, both qualitative and quantitative research methods were used. 79 adolescents, aged 16 to 21, participated in the study. The questionnaires which were used were originally designed for adolescents without disabilities. Hence, they were adapted for the population of this study. The results show that the future orientation of adolescents with intellectual disabilities is obscured, pessimistic, and dependent on close ones. It also reflects the division of gender roles in the Arab society. It further reveals the loneliness and helplessness the adolescents feel because of the social rejection and the repulsive attitudes towards them.

Keywords: *Adolescents, Arab society, future orientation, gender differences, intellectual disabilities.*

1. Attitudes of the Arab society toward people with intellectual developmental disabilities

Attitudes of the Arab society toward people with and toward people with intellectual disabilities in particular are influenced by stereotypical negative beliefs. Hence, people with an intellectual disabilities are usually rejected. People treat them with misery, compassion, and patronization. society, and considers them as a burden (Karni, Reiter & Bryen, 2011).

2. Future orientation

Future orientation is the subjective intention of a person toward his future. It is composed of a person's self-perception, ambitions, plans, expectations, hopes and fears of the short term and long term future. All of these are vital for the purpose of establishing personal goals, examining future possibilities, and making important decisions and binding them (Seginer, 2009). According to Seginer the consolidation of future orientation is influenced by the proximate environment and cultural values (Seginer, 2009). Moreover, the development of future orientation is an interactive process, which is complex and ongoing within socio cultural, familial, and internal personal spheres (Seginer, 2009). Future orientation can be presented based on two approaches. The first one is the thematic approach. This approach focuses mainly on cognitive representation processes. Two categories of future orientation may be distinguished (Seginer, 2009): (1) the prospective life domain which covers higher education, work and career, marriage and family. (2) The existing life domain which encompasses "concern for self," and "concern for others". The disadvantage of this approach is its lack of identifying the process which underlies thoughts regarding the future and the changes over time. The second approach is the three components approach. Future orientation in this approach is described to have motivational, cognitive, and behavioral components (Seginer, 2009). It is a generic approach which offers a common model for several different future domains. The order of the components is fixed. The motivational component leads to the cognitive component which in its turn leads to the behavioral one. The motivational component is defined by three variables : (a) values which is the importance of each of the future domains for the adolescent; (b) expectations which is the probability for an adolescent to achieve future ambitions or goals (c) control which is the extent to which the adolescent can achieve a certain goal independently or dependently on others. The cognitive component deals with the construction of expectations according to a future time course and it includes both a positive aspect expressed by hopes, as well as a negative aspect expressed by fears. The behavioral component is

expressed in activities the adolescents make in order to examine the future domains that interest them. This approach is an extension to the thematic approach because it does not only deal with the cognitive component but also with factors that motivate and trigger the adolescents' interests in the different domains (Seginer, 2009).

3. The socio-cultural context of the future orientation of Arab adolescents

The sociocultural contexts of the future orientation were examined in several studies which focused mainly on the socio-political aspect (Seginer & Mahajna, 2018). According to them Arab adolescents invested in prospective life domain. In addition, studies of Arab adolescents revealed gender differences in relation to the future orientation.

4. Gender differences in the future orientation of Arab adolescents

There is a rigid demarcation of gender roles in the Arab society. Women are found on a low rung of family hierarchy (Odeh, 2007). Arab girls became unsatisfied with their status. Therefore, they emphasize higher education in their future orientation more than boys, but they are still more concerned with the family domain than other domains (Seginer & Mahajna, 2018).

5. The family context of the future orientation

Family interaction and context affect the consolidation of future orientation of the adolescents in three ways: (a) setting normative standards by parents (b) Parents being a model for problem solving and carrying out tasks. (c) Parents can make their children interested in a particular domain of adults' life. According to Seginer (2009) Positive parenthood motivates the adolescent to consolidate a positive future orientation, and parental support motivates adolescents to think of options for their future, and develop skills for that purpose.

Unfortunately, former studies took into account solely the formation of future orientation of adolescents with no disabilities. Scholars did not study the future orientation of adolescents with disabilities directly. Rather, in their studies they examined concepts similar to those of the future orientation, such as hopes, fears and expectations (Raz, 2019). A literature review by Raz (2019) shows that adolescents with disabilities have hopes and ambitions related to future career, education and leisure where the main theme raised related to this is the need of keeping relation with important other and making decisions. Yet the expectations of adolescents with disabilities were low. Most of them expect to finish school and have a job, but still fear being financially independent due to low wages. Fears repeatedly expressed by adolescents with disabilities were fears of losing loved ones such as family members, fear of being abused and harmed, fear of loneliness and being unable to keep relations, and fear of failure in general. According to Raz (2019), due to the fact that adolescents with disabilities are overly protected by their families and teachers, and the limited role models and opportunities they are given to explore existed options, they develop unrealistic expectations regarding their future.

6. Aims

This research focuses on the characteristics of the future orientation of Arab adolescents with intellectual disabilities, while trying to shed light on the ways cultural values might influence this orientation.

7. Method

A mixed design method was use, both quantitative and qualitative, which enabled a greater understanding of the future orientation of Arab adolescents with intellectual disabilities. The quantitative component was dominant while the qualitative component was to complement quantitative findings (Kelle, 2001).

8. Participants

79 Arab adolescents (66% males, 34% females) with mild intellectual disabilities between the ages 16 and 21 participated in the study. All subjects lived and attended special education schools in northern

Israel. 89% of the adolescents were Muslims, 6% were Druze and 5% were Christians. Most of them were of a low socio-economic status.

9. Measures

The original tools used for the examination of the future orientation were designed for adolescents without disabilities. Therefore, it was necessary to adapt them for the research participants by: (a) simplifying the language. (b) reducing the number of options from 5 to 3 on Likert scale so the participants would be able to distinguish between the various options (c) adapting the questions to the Arab culture. Because of the fact that the participants could not read, the data was collected by using a structured interview. The questions were read aloud and explained to them if needed.

The future orientation of the adolescents was examined using four questionnaires: (1) "Future Life Fields" (Seginer & Halabi, 1991). A future orientation questionnaire which is concerned with life aspects. It was designed to measure the motivational and behavioral aspects of future orientation. (2) The "hopes and fears" questionnaire (Seginer, 1988) which contains two questions: when you think about the future, what are your hopes; when you think about the future, what are your fears? To assess the assumptions in light of the future orientation questionnaires and to analyze the sum of the relevant responses regarding hopes and fears separately, three categories of subject matter were delineated: (a) education and employment (b) social relationships (c) marriage and family. (3) "My Future" questionnaire (Seginer, 1988) which examines the frequency of thoughts on hopes and fears. The participant was asked to rate each statement on a 3-point Likert scale. Internal consistencies (Cronbach's alpha) were found (hopes: $\alpha = 0.85$, and regarding fears: $\alpha = 0.94$). (4) "Perception of the Future" questionnaire (Seginer & Lilach, 2004). The first part deals with profession, while the second part deals with social relationships. Subjects had to rate statement on a 3 point Likert scale. Internal consistencies (Cronbach's alpha) were found (professional training: $\alpha = 0.79$, and personal relationships: $\alpha = 0.84$).

10. Procedures

School referrals were made with the approval of the chief scientist of the Ministry of Education. Adolescents participation in the research was subject to the consent of the adolescents' parents or guardians.

11. Analysis

Statistical analysis for this study encompassed a number of stages: (a) testing and describing the frequencies and distributions of the background characteristics of the study participants (b) testing the internal consistencies (c) defining the study variables and examining their distributions. For future orientation variables which were extracted from the interviews with the adolescents, the frequencies and percentages were described in all of the future orientation fields (d) the study hypotheses were tested through the appropriate means, using various analyses and executing hierarchical regressions. The first research hypothesis was tested through a gendered perspective.

12. Results

In the results section, the future orientation of the adolescents was described according to the results of the interviews and the questionnaires. The adolescents were asked about the perceptions of their future in three fields: acquiring a profession (employment), social relations, marriage and family. The analysis was carried out according to motivational, cognitive, behavioural, and other components.

Motivational component, more than 95% of the adolescents expressed positive feelings regarding the domains of their future. Cognitive component, more than 60% of the adolescents reported thinking about acquiring a profession or employment and social relation 'all the time', 50% of the adolescents reported thinking about marriage and family 'all the time'. Behavioural component, Approximately 66% of the adolescents had already taken steps to acquiring a future profession and initiating social relationships. No adolescent took an actual step towards marriage.

In the present study, an additional component was added to these three existing components: searching for the archetype (modelling). This component includes the following various five elements which were highlighted in the personal interviews with all of the adolescents: the source of influence, the source of support, the degree of realism within the future ambitions, consistency, and devotion to one's goal. Acquiring a profession, 96% of the adolescents reported having a support in this domain, 31% of the adolescents described their professional future in a realistic way, 80% showed consistency, and almost

40% expressed devotion to their goal. Social relationships, 62% reported having no support at all, 76% of the adolescents described their social future in a realistic way, most of them (94%) expressed consistency, and 13% expressed devotion to their goal. Marriage and family, 75% of the adolescents reported family support, 89.7 % expressed consistency, 7.8% showed devotion to a goal.

Gender differences were found regarding the behavioural component in the domain of acquiring a profession. 64% of the male adolescents and 72% of the female adolescents took an actual step towards their professional future. However, 40% of the male adolescents and only 19% of the female adolescents had previous experience in this domain ($Z=1.85$, $p=.64$). Almost 29% of the male participants worked for wages in comparison to 4% of the female adolescents. This gender difference was significant ($Z=2.75$, $p<.01$). An additional gender difference was found in the degree of 'realism' in choosing a profession. In this field, the perception of reality among the male adolescents was significantly higher (40%) than that of the female participants (15%) ($Z = 2.26$, $p < 0.05$). In the domain of marriage, the number of the supporters of the male adolescents in this domain was bigger than the number of supporters for the females ($Z= 2.31$, $p<.05$). Furthermore, significant gender difference was found in the number of fears in the domain of 'education and profession'; the number for male adolescents was higher than that of the female adolescents.

13. Discussion

The future orientation of Arab adolescents' with intellectual disabilities is affected by the sociocultural values of the Arab society. The influence was reflected in various contents raised by the adolescents during the interviews. One of these contents is gender differences. Significant gender differences were found in the future orientation of the adolescents in the domain of acquiring a profession. Male adolescents expressed more fears about their future than females, and the professions they mentioned were realistic and compatible with their abilities in comparison to those mentioned by female adolescents. The former gender difference can be explained by another significant gender difference which was revealed in the study. Males, in comparison to females, showed more experience in the behavioral component of acquiring a profession. They have been paid for their work more than female adolescents. This made males consider jobs which suit their abilities. This gender difference indicates that boys are given the attention, and are raised to fulfill the male role as a bread winner in spite of their disability. The second influence of the Arab society on the future orientation raised by the adolescents during the interviews is their perception of themselves as helpless and easy to be harmed. It seems that adolescents are aware of society's repulsive attitudes towards them (Karni et al., 2011). The way adolescents with intellectual disabilities tried to deal with the fact of being socially rejected was also affected by gender (not significant). Girls prefer to stay at home and be cared for by their mother, while boys intend to have a normal male life relying on the fact that their fathers, brothers, or uncles will protect and help them. That emphasize the passivity adopted by the adolescents in dealing with the social rejection they face that might stem not only from helplessness, but also from the lack of training and providing them with active tools to deal with this rejection.

As a result of being rejected, loneliness was another characteristic of the adolescents' future orientation. Their narratives emphasized that their recent and future relations are confined to their schoolmates, brothers, sisters, and their relatives. When adolescents were asked about the possibility of having other friends than those who they mentioned, they answered that they do not know who their future friends will be. Some even answered that their parents will forbid them from having other friends because they want to protect them from being hurt. An additional characteristic of the future orientation of an Arab adolescent is dependence. The component "searching for an archetype (modeling)" add by Arslan-Suleiman (2013) articulated the difficulty for adolescents with intellectual disabilities to think about the future, and emphasized their strong dependence mainly on their families and support system. They are an adolescent's role model and the source of support which is required to guarantee the fulfillment of their ambitions. Even an adolescent's devotion to a certain goal is conditioned by having the expected support, especially in the domains of acquiring a profession, and family and marriage. Pessimism characterized the future orientation of female adolescents with intellectual disabilities despite the fact that they kept repeating clichés of being confident of having a future job, social relations, and a future family. Their pessimism stems from their awareness of girls being socially rejected and their perception of themselves as helpless and easy to be harmed. The future orientation of adolescents with intellectual disabilities can be also described as obscured. This obscureness stems from their awareness of being socially rejected and from the lack of sufficient plans that might prepare them in their transformation from adolescence to adulthood. Their future orientation might also be described as limited due to the lack of transformation preparation plans, social rejection, and repulsive attitudes towards them. This resulted in their exposure to a small number of role models and opportunities.

14. Conclusions

The results of the research indicate that an action is required in the various domains mentioned earlier. First, there should be programs focused on empowering families and help them cope with their children's transition from adolescence to adulthood, and raise their awareness towards their children's abilities and weaknesses. Second, there should be programs focused on society and its institutions. Such programs should aim to change attitudes toward people with disabilities. Teams should be trained to prepare an appropriate plan for an individual to help them transform from their adolescence to their adulthood. Lastly, there should be programs focused on adolescents in order to empower them, raise their awareness regarding their abilities and weaknesses, and expose them to the various opportunities and barriers which exist in society.

15. Limitations of the study

The study has a number of limitations, such as an unequal gender representation, and an unequal representation of the three religions.

16. Suggestions for future research

We suggest to conduct the following future studies: (a) an examination of the future orientation of adolescents with other disabilities; (b) a comparison between the future orientation of individuals with different disabilities; (d) significant factors in the life of adolescents with disabilities and their impact on their future orientation.

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PERSONAL RESOURCES THAT HELP IN COPING WITH DISTRESS: WHAT HAS THE COVID-19 PANDEMIC REVEALED TO US?

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Abstract

The COVID-19 pandemic has run into all aspects of people's life and individuals were emotionally drained from its social, financial, and emotional impact. Thus, this global situation has resulted in increased levels of distress (e.g., stress, anxiety, and depression). Given the individual differences observed in how people faced the pandemic, it was hypothesized that certain personal resources may help in coping with distress. The aim of the research was to evaluate the impact of psychological inflexibility, mindfulness, and resilience on the susceptibility to experiencing stress, anxiety, and depression. Study 1 recruited 501 participants (58.9% women; mean age = 26.97 years, SD = 11.85) who completed the following scales: the Acceptance and Action Questionnaire (AAQ-II), the Mindful Attention Awareness Scale (MAAS), the Connor-Davidson Resilience Scale (CD-RISC-10), and the Depression Anxiety Stress Scale (DASS-21). The same measures were administered to 423 participants in Study 2 (62.4% women; mean age = 30.97, SD = 12.46) selected from a larger sample because they had a more intense subjective perception of loneliness (scored a 3-item-UCLA Loneliness Scale ≥ 6). In Study 1, linear regression showed that the AAQ predicted stress ($\beta=.29$), anxiety ($\beta=.34$), and depression ($\beta=.44$). Moreover, the higher the MAAS score, the lower the stress ($\beta=-.15$) and anxiety ($\beta=-.10$), while the CD-RISC was not a significant predictor. In Study 2, the predictive role of the AAQ on stress, anxiety, and depression was confirmed ($\beta=.42$, $\beta=.40$, and $\beta=.46$, respectively). Moreover, resiliency was negatively associated with depression ($\beta=-.17$). The current results showed that psychological inflexibility interferes with coping with distress, and mindfulness and resilience can prevent stress, anxiety, and depression even in an unexpected and complex situation, such as the pandemic. Indeed, some personal resources continued to act as protective factors as previously documented in the literature on "everyday" time also among people who subjectively perceived greater loneliness. This result underlines the relevance of these resources and, therefore, the need to develop interventions aimed at strengthening them.

Keywords: *Personal resources, mental disorders, psychological inflexibility, resiliency, mindfulness.*

1. Introduction

The spread of COVID-19 has led to inevitable consequences for the mental health of people who experience it. Most surveys of the general population show an increase in symptoms of depression, anxiety, and stress as a result of pandemic-related stressors such as fear of illness, fear of negative economic effects, and daily life disruption (Li et al., 2020; Yuan et al. 2020). Although the experience of distress during the pandemic may have a negative impact on the mental health and well-being of some individuals, this may not be the case for all people. Individual differences in personal resources may influence how a person responds to stressful experiences. In particular, the tendency to control one's thoughts by avoiding negative experiences (Bond, 2011), named psychological inflexibility, is often functionally associated with many of the major psychological disorders (Hayes et al., 2006). Psychological inflexibility refers to patterns of behavior characterized by experiential avoidance and cognitive control at the expense of personal values and contact with direct experience. It generally prompts rigid responses (e.g., persistent avoidance) to internal and external stimuli that interfere with engagement in meaningful activities. Its inverse is psychological flexibility defined as the ability to thoughtfully observe experiences occurring in the present moment to intentionally choose tailored actions and solutions in line with personal values (Hayes et al., 2006).

Because it is directly related to psychological flexibility (Kashdan & Rottenberg, 2010), resilience tends to protect against experiencing depression and may decrease the risk of not being depressed (Edward, 2005). In general terms, all definitions of resilience are divided into two macro-groups: resilience as a personality trait and resilience as a developmental factor (Mestre et al., 2017). The first group of definitions states that resilience is a fixed and stable element over time (Lee et al., 2012). In contrast, the second group of definitions states that resilience is a dynamic process, changeable over time and influenced by the environment, thus a kind of adaptation process in the face of adversity (American Psychological Association, 2017). According to this second group of definitions, resilience is a process that is built on the skills that the individual puts into practice to overcome trauma. Therefore, they view resilience as the ability to overcome traumatic situations that are based on the interaction between the individual and his or her coping strategies (Connor et al., 2003).

In addition, it was shown that having a great awareness of the present moment (i.e., mindfulness) minimizes depressive, anxious, and stressful symptoms through lasting effects over time (Cash & Whittingham, 2010; Idusohan-Moizer et al., 2015). Mindfulness is based on the ability to bring one's attention to what they are currently experiencing in the present moment, to accept it without judgment, and to identify sensations, emotions, and thoughts (Vásquez-Dextre, 2016). As a broader disposition or trait, it refers to a relatively stable (natural or trained) tendency to engage mental states in everyday experiences (Brown & Ryan, 2003). Conversely, the fear of contracting the virus (Fitzpatrick et al., 2020) and/or losing a loved one to death as a result of the disease (Bertuccio & Runion, 2020) means to be focused on future events, and not on the present time.

Finally, along with unpredictability and uncertainty, physical blockage and lockdown can lead to social isolation and loneliness, which in turn is strongly correlated with negative physical and mental health outcomes, including depression, anxiety, and chronic stress (Bruce et al., 2019; McHugh & Lawlor, 2013).

Starting from this premise, the objective of this study was to assess the impact of psychological flexibility, mindfulness, and resilience on susceptibility to experiencing stress, anxiety, and depression during the COVID-19 pandemic. It was expected that higher levels of psychological flexibility and greater predisposition toward mindfulness and resilience would be predictive of less distress. In addition, within a selected sample of people experiencing intense levels of loneliness, the influence of these personal resources on distress was investigated.

2. Methods

The current work consists of two studies. In Study 1, 501 Italian participants (59% women; mean age: $M=26.97$, $SD=11.85$) were recruited, and 234 (46%) were college students. For Study 2, a total of 3003 questionnaires were collected from the general Italian population, and approximately one-sixth was selected based on scores obtained on the Three-Item UCLA Loneliness Scale (Hughes et al., 2020). We calculated the scale score (range 3–9) and used a score of 6 or greater to define a dichotomous loneliness variable (Rosenberg et al., 2020) to constitute the nonrandomly selected sample for this study. More specifically, the sample consisted of 423 Italian participants (62.4% women; mean age: $M=30.97$, $SD=12.46$). Data collection took place in 2021. For each study a questionnaire was administered using GoogleForms that included scales measuring the following constructs.

Psychological inflexibility. Acceptance and Action Questionnaire-II (AAQ-II) (Bond et al., 2011; Italian version: Pennato et al., 2013) is a measure of psychological inflexibility and experiential avoidance which are related to a wide range of psychological disorders and quality of life. In this study, the ten-item Italian version is evaluated on a seven-point Likert scale (*from 1=never true to 7=always true*) was utilized. It is a unidimensional measure where higher scores indicate greater psychological inflexibility.

Resilience. Connor Davidson Resilience Scale 10© (CD-RISC 10) (Connor & Davidson 2003; Campbell-Sills et al., 2006; Italian version: Di Fabio et al., 2012) is a brief, self-rated measure of resilience that examines one's ability to cope with adversity. Ten items are rated on a scale from 0 to 4 (*0 = not true at all to 4 = true nearly all the time*). A higher score indicates greater resilience.

Mindfulness. The Mindful Attention Awareness Scale (MAAS-11) (Brown & Ryan, 2003; Italian version: Chiesi et al., 2017) measures the awareness and attention to the present moment. Respondents rate how often they experience this kind of consciousness on a six-point Likert-type scale, ranging from "almost always" to "almost never." A higher score indicates lower mindfulness.

Psychological Distress. Depression Anxiety Stress Scales-21 (DASS-21) (Henry & Crawford, 2005; Italian version: Bottesi et al., 2015) is a self-report questionnaire with 21-items measuring depression, stress, and anxiety (seven items for each subscale) based on a four-point rating scale (with endpoints labelled *0= did not apply to me at all* and *3=applied to me much, or most of the time*). A high score on each subscale indicates elevated depression, anxiety, or stress.

Participation was voluntary and anonymous. The university’s local institutional review board approved the study in accordance with the Ethical Standards of the 1964 Declaration of Helsinki. The average time to complete the questionnaire was 20 minutes.

3. Results

After having checked for the absence of multicollinearity (see Tolerance and VIF values in Tables 1 and Table 2), multiple linear regressions were conducted to test the hypotheses. The criterion variables were stress, anxiety, and depression, while the predictors were psychological inflexibility, mindfulness, and resilience.

Psychological inflexibility, mindfulness, and resilience explained 33% and 26% of the variance of stress in the two studies, respectively ($R^2 = .33$, $R^2 = .26$). The same variables explained 31% and 20% of the variance of anxiety ($R^2 = .31$; $R^2 = .20$), and 43% and 32% of the variance of depression ($R^2 = .43$; $R^2 = .32$). In Study 1, the predictor with the highest β value was psychological inflexibility for the criteria of stress ($\beta = .29$), anxiety ($\beta = .34$) and depression ($\beta = .44$). Similarly, in Study 2 psychological inflexibility was the most influential in predicting stress ($\beta = .42$), anxiety ($\beta = .40$), and depression ($\beta = .46$). Mindfulness significantly predicted anxiety ($\beta = -.10$) and stress ($\beta = -.15$) in the first study, but only this latter relationship was confirmed in the second study ($\beta = -.10$). Finally, although no evidence was found in the first study, in Study 2 the depression criterion was predicted by resilience ($\beta = -.17$). To sum up, psychological inflexibility was a significant predictor for all criteria in both studies, whereas mindfulness was never significant for depressive symptoms. Resilience was not a significant predictor in Study 1, but it was for depression in Study 2.

Table 1. Multiple regression analysis with dependent variables stress, anxiety, and depression and as predictors psychological inflexibility, mindfulness, resilience for those in the general population (Study 1).

	STRESS			ANXIETY			DEPRESSION		
	F(3,453)=38.34*** R ² =.33			F(3,455)=36.18*** R ² =.31			F(3,460)=58.84*** R ² = .43		
Predictor	B	T	VIF	B	T	VIF	B	T	VIF
Psychological Inflexibility	.29***	.46	2.19	.34***	.45	2.22	.44***	.46	2.19
Mindfulness	-.15**	.75	1.33	-.10**	.74	1.36	-.07	.74	1.35
Resilience	-.02	.67	1.50	.04	.65	1.54	-.07	.67	1.49

Note. B = standardized beta value; T = Tolerance, VIF = Variance inflation factor. VIF >10 and T < .020 values indicate absence of multicollinearity. Statistical significance: * $p < .05$ ** $p < .01$ *** $p < .001$.

Table 2. Multiple regression analysis with dependent variables stress, anxiety, and depression and as predictors psychological inflexibility, mindfulness, resilience for those who experienced more loneliness (Study 2).

	STRESS			ANXIETY			DEPRESSION		
	F(3,418)=37.70*** R ² =.26			F(3,418)=25.52*** R ² =.20			F(3,418)=48.19*** R ² = .32		
Predictor	β	T	VIF	B	Tol	VIF	B	T	VIF
Psychological Inflexibility	.42***	.81	1.23	.40***	.81	1.23	.46***	.81	1.23
Mindfulness	-.10*	.92	1.08	.00	.92	1.08	-.04	.92	1.08
Resilience	-.09	.80	1.26	-.07	.80	1.26	-.17***	.80	1.26

Note. B = standardized beta value; T = Tolerance, VIF = Variance inflation factor. VIF >10 and T < .020 values indicate absence of multicollinearity. Statistical significance: * $p < .05$ ** $p < .01$ *** $p < .001$.

4. Conclusions

Based on the literature, there is often an increase in distress in terms of anxiety, depression, and stress among people during the pandemic. Because early indications point to an enduring impact of the pandemic on mental health (Wang et al., 2020), the identification of modifiable therapeutic processes is critical to the development of targeted interventions.

Overall, the findings of the present study suggested that during the pandemic in situations where loneliness and social isolation are associated with a lack of viable personal resources (e.g., psychological flexibility, mindfulness, resilience), the conditions for the development of a mental disorder are created. In agreement with our first hypothesis, psychological flexibility seems to be the most important determinant of decreased anxiety, stress, and depression in the first study (Hayes et al., 2006). Within the same study, similar but smaller effects were also found for mindfulness, which reduced stress and anxiety in pandemic situations (Cash & Whittingham, 2010; Idusohan-Moizer et al., 2015). However, resilience showed no significant effect. In Study 2 we measured the subjective perception of loneliness to confirm the effects of psychological flexibility as a protective factor in coping with distress. These findings echo the literature results showing that individuals who experience loneliness are more likely to experience distress (McHugh & Lawlor, 2013). Mindfulness was found to have a role as a personal resource in protecting against stress, while resilience was shown to be a significant personal disposition against depression among those who subjectively perceived greater loneliness (Edward, 2005).

The COVID-19 pandemic produced a threatening combination of unknown events, uncertainty, fear of illness, fear of negative economic effects, daily life routine disruption, and loneliness that have been a negative impact on people's mental health. Nonetheless, even in this unexpected and complex situation, we observed that some personal resources were able to shield from distress (as previously documented in the literature on "everyday" time) and continued to act as protective factors. This result underlines the relevance of these resources and, therefore, the need to develop interventions aimed at strengthening them. For example, interventions proposed by *Acceptance and Commitment Therapy (ACT)* may be used to promote greater psychological flexibility that improves resistance to adversities by creating a more adaptive way of relating to experiences regardless of their exceptionality and unpredictability. Also, dispositional mindfulness has the potential to be used as a treatment for stress-related and other mental health disorders (Baer, 2003). Fortunately, mindfulness is a free-cost and easily accessible personal resource that can be implemented by individuals to diminish the adverse psychological effects associated with large-scale stressors. Finally, resilience-training programs developed for, and conducted in, a variety of clinical and non-clinical populations using various formats, such as multimedia programs or face-to-face settings, and delivered in a group or individual context can be adopted to contrast mood disorders (Southwick & Charney, 2018). Finally, the current findings not only provide evidence of the importance of the above-mentioned protective factors but also suggest the need to test the existing tailored interventions after the destructive effects produced by the pandemic.

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SCHOOL ENGAGEMENT AND EDUCATIONAL OUTCOMES OF SLOVAK ADOLESCENTS IN THE CONTEXT OF SOCIAL MEDIA USE

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Abstract

Objectives and methods: School engagement is an important prerequisite for psychological and educational development in students. The two-fold effect of information technology on adolescents' academic performance is currently the subject of professional debate (Quahri-Saremi and Turel, 2016; Turel and Serenko, 2012; Turel et al., 2011). This empirical study aims to explore how school engagement in adolescence relates to problematic Internet use with the specific focus on social networking. The goal of this study is to investigate the potential correlations between the tendency to overuse social media in Slovak adolescents ($N = 1,005$; 73% women; $AM_{age} = 16.99$; $SD_{age} = 1.24$) and the dimensions of school engagement (behavioural, cognitive, affective, agency). The correlation between the selected variables and adolescents' academic performance is observed as well. The research instruments included: SES-4DS/Student Engagement in Schools – Four-Dimensional Scale (Veiga, 2016) and BSMAS/Bergen Social Media Addiction Scale (Andreassen et al., 2016). **Results:** The results indicate a negative correlation between the tendency to overuse social networking and the affective and behavioural dimensions of school engagement. Students' academic performance in Slovak language, biology, and mathematics correlated negatively with the individual dimensions of their school engagement and positively with excessive social networking. **Conclusion:** These results can be used for the creation of educational programmes focused on students with critically low academic performance. This paper is a part of the VEGA 1/0765/21 Multidimensional self-concept of the digital adolescent generation in Slovakia and its contexts research project.

Keywords: *School engagement, social media use, learning outcomes, adolescence.*

1. Introduction

Specialised literature has paid considerable attention to students' school engagement over the last two decades (Appleton et al., 2008; Fredricks et al., 2004; Reeve & Tseng, 2011). It is assumed that highly engaged students tend to have solid knowledge of different subjects, efficient learning strategies, achieve good study results, maintain satisfying interpersonal relationships, experience sense of belonging, and behave in ways appreciated by their peers and teachers (Wentzel, 2003). Student engagement in school (SES) has been defined as the student's centripetal experience with school. SES has been previously operationalised as the rate of students' devotion to school and motivation to learn (Simons-Morton & Chen, 2009; Veiga et al., 2012). In general, there is a consensus regarding its multidimensional nature, and it is often presented as a meta-construct (Fredricks et al., 2004; Jimerson et al., 2003). School engagement refers to "energized, directed, and continued action, or the discernible qualities of students' interactions with learning activities or environments" (Wang & Peck 2013, p. 1266). In fact, engagement involves a trichotomy of behavioural, cognitive, and emotional dimensions (Fredricks et al., 2004; Wang & Peck, 2013; Watton, 2014). Behavioural engagement in school involves participation in educational activities and physical presence in the classroom or school (Fredricks et al., 2004; Wang & Peck, 2013). Cognitive engagement in school refers to hard work and investment in self-regulated learning approaches as well as strategic planning, monitoring, and assessment of short- and long-term learning outcomes (Fredricks et al., 2004; Zimmerman, 1989). Emotional engagement in school includes affective responses to the school environment and activities (Fredricks et al., 2004; Skinner & Belmont, 1993; Voelkl, 1997). This multidimensional concept of school engagement facilitates understanding of students' actions, feelings, and ideas in relation to school, which can influence their learning outcomes both directly and indirectly (Fredricks et al., 2004; Wang & Peck, 2013). Students with higher behavioural engagement are more likely to learn the subject matter, they feel they belong to their

form, attend classes, and in turn, achieve academic success. Conversely, students displaying lower engagement, e.g., truancy, are more likely to fail their education (Appleton et al., 2006; Simons-Morton & Chen, 2009; Wang, 2009; Wang et al., 2010). Educational progress is influenced by cognitive engagement in school as well. The willingness to make the cognitive effort necessary to use self-regulating learning strategies helps the student to understand and master complex concepts (Miller & Byrnes, 2001; Zimmerman, 1989). High affective engagement in school (i.e., positive emotions related to school, joy of being in school) can also facilitate the educational progress (Fredricks et al., 2004; Wang & Peck, 2013). On the other hand, low affective engagement in school may lead to developmental issues, such as substance abuse and depression (e.g., Hawkins et al., 2001; Li & Lerner, 2011; Maddox & Prinz, 2003; Wang & Peck, 2013).

The debate about the use of information technology (IT) is important because of its two-fold effect. Quahri-Saremi and Turel (2016) differentiate between utilitarian (i.e. school) and hedonic (i.e. for pleasure) use of IT. On one hand, it can support adolescents' engagement in schoolwork, e.g. they can ask for help with homework or look up information (Ensor, 2012; Jacobs, 2012). On the other hand, IT can distract them from school, e.g. they play non-educational games or use social media for socialisation and entertainment (Christakis et al., 2004; Ong et al., 2011). IT is definitely a double-edged weapon: many researchers praise it as an accessible tool to facilitate schoolwork (e.g., Gross, 2004; Jackson et al., 2006; Madell & Muncer, 2004; Willoughby, 2008), others point out that students use it to escape or distract themselves (e.g., Junco, 2012; Karpinski et al., 2013; Kirschner & Karpinski, 2010; Turel, 2015; Turel & Bechara, 2016; Turel et al., 2015; Turel et al., 2016; Xu et al., 2012). Other studies (Turel & Serenko, 2012; Turel et al., 2011) express concern about the negative effects of hedonic or excessive use of IT, such as gaming and/or social media, on adolescents' academic performance.

Social networking sites (SNS) have become the most popular sources of entertainment and communication online (GlobalWebIndex, 2018). Their users spend there 2.5 hours per day on average (Hootsuite, 2019). At the same time, however, there is growing evidence that excessive SNS use trigger symptoms traditionally associated with substance abuse (Andreassen, 2015; Grant et al., 2010; Griffiths et al., 2014; He et al., 2017). According to estimates, as many as 210 million users around the world are "addicted" to SNS and the Internet (Truelist, 2021). The available findings indicate that this "addiction" can affect mental health, especially psychosocial functioning, and can have serious consequences for the lives of those close to the person (Andreassen, 2015). The Internet addiction theory is often referred to in literature (Andreassen et al., 2016; Kuss & Griffiths, 2011; Montag et al., 2014; Müller et al., 2016; van Rooij et al., 2017), Andreassen and Pallesen define SNS as a type of behavioural addiction: "being overly concerned about SNSs, to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being" (2014, p. 4054). As the debate about the existence/non-existence of SNS addiction or its distinctive concepts is not currently closed, and due to our goals and research design, this paper will operate the term "social media overuse" instead of addiction.

The goal of this study is to examine the correlations between engagement in school, educational outcomes, and the tendency to overuse SNS.

2. Methods

The research file consisted of 1,005 Slovak adolescents aged 15 to 20 years, 73% of whom were females. It was a combination of cluster sampling (because of multiple random collection sites) with voluntary sampling (because people in these sites responded to an online survey). The online questionnaire link was distributed via official representatives to secondary schools across Slovakia. The online form included:

Student Engagement in School – Four-Dimensional Scale /SES-4DS (Veiga, 2016). It is a 20-item self-reporting questionnaire for adolescents, which explores the four dimensions of their school engagement. The three standard dimensions (*cognitive, affective, behavioural*) were complemented by *agency*, which refers to the students' active interest in learning and their level of independence in relation to learning and knowledge acquisition. Each dimension consists of five items. The respondent comments on each statement on a 6-point scale (1 = absolutely disagree; 6 = absolutely agree). Besides the rough score for individual dimensions, an overall school engagement score can be calculated. The internal consistency of the individual dimensions of the adapted questionnaire was satisfactory ($\alpha=.67-.84$).

The *Bergen Social Media Addiction Scale (BSMAS)* derived from the original Bergen Facebook Addiction Scale (BFAS). The word "Facebook" was replaced by more general "social media" (Andreassen et al., 2016). The scale measures six factors: salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. Each of them is captured by a single item on a 5-point Likert type scale (1 = very rarely; 5 = very often). The points are added up, and the total score ranging from 6 to

30 points is interpreted as follows: the higher the score, the riskier SNS use. According to the authors of the Slovak version of this instrument (Izrael et al., 2019), its internal consistency is $\alpha=.94$. In the presented sample, the instrument showed satisfactory reliability ($\alpha = .78$).

Educational outcomes are represented by the students' typical grades in the following disciplines: Slovak language and literature, mathematics, and biology (1 = Excellent, 2 = Very good, 3 = Good, 4 = Passing, 5 = Failure).

3. Results

The results indicate a negative (Spearman) correlation between the tendency to overuse social networks and the overall school engagement of Slovak adolescents ($-.18^{**}$). A more detailed analysis has shown a negative correlation between SNS overuse and the affective ($-.15^{***}$) and behavioural ($-.34^{***}$) components of school engagement. Educational outcomes (typical grades) in all three subjects correlate negatively with all school engagement dimensions in adolescents. ($-.11^{***}$ to $-.28^{***}$) and positively with their tendency to overuse SNS (from $.12^{***}$ to $.13^{***}$). The comparative analysis showed a significant gender difference in SNS overuse, which was more prevalent in women ($d_{COH} = .36$).

4. Discussion and conclusion

Although the observed correlations are mostly trivial or weak, they can be considered systematic because of their statistical significance. This means that with the growing tendency to excessive use of social networks, the student's school engagement decreases and the adolescent's educational results also deteriorate. Findings are consistent with the results showing the existence of a risk relationship between the excessive use of social media and the adolescent's involvement in the school environment and his educational results (Junco, 2012; Karpinski et al., 2013; Kirschner & Karpinski, 2010; Turel, 2015; Turel & Bechara, 2016; Turel & Serenko, 2012; Turel et al., 2011; Turel et al., 2015; Turel et al., 2016; Xu et al., 2012). The gender comparison analysis indicates that adolescent females are more vulnerable to SNS overuse.

The already mentioned initial bivariate findings of systematic relationships suggest that a deeper search for the contributions of other variables at our disposal will continue prospectively, through multivariate methods, especially regression and mediation analysis. The first goal of this research should be a better understanding to what extent (proportion) the use of social networks is the cause and to what extent the consequence of the deteriorated involvement and educational results. If it makes sense, we will also try to create a quantitative model of the connections between the main variables and the context variables.

The limits of the presented study, which encourage caution when generalizing the conclusions to the entire population of our adolescents, are the use of self-rating scales and some necessary compromises regarding data collection. However, despite them, the research again deepens the knowledge of the relationships between the use of new technologies, specifically social media, and the functioning of the Slovak adolescent at school. Its results can be used for the creation of educational programmes focused on students with critically low academic performance.

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MOTIVATIONAL STRATEGIES IN CLASSROOM OF SECOND LANGUAGE TEACHING

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Abstract

Motivation is one of the most important factors required for effective foreign language teaching. Nowadays, faced with the pandemic and the fast development of new technology, with the new hybrid teaching form of the combination of online and offline teaching, the universities are innovating their teaching methods and strategies to give more motivation in the classroom, stimulate the students' learning enthusiasm and improve the teaching efficiency. In this article, considering the new situation that university teaching is faced with, we formulate a list of methods of motivational teaching strategies for foreign language teaching in universities, such as promote students' autonomy, collaborative group working mode, create a pleasant classroom climate, enrich the class with foreign country's culture and values, make the learning tasks stimulating and integrate in the teaching new information technology. We also realize an empirical experiment to apply these strategies in the Spanish teaching classrooms for Chinese students in the University in order to discuss the application method and its results. We also elaborate questionnaire among the students to find out their learning results with these strategies.

***Keywords:** Foreign language teaching, motivational strategies of teaching, university teaching, students' autonomy.*

1. Introduction

Motivation is the driving force which initiates, directs, and energises goal-oriented behaviors. It has long been considered as an important factor to better the classroom teaching and learning. As to the teaching of second language, which is a highly interactive and interdisciplinary course that needs largely to make the class teaching more effective, more attractive and more practical. That is to say, the second language teaching should use different methods to focus the students' attention on the words and grammar learning in class, stimulate them to practice actively, relate the linguistic knowledge with other disciplines and informations to form a complete integrated system of foreign language, and reduce the negative influences of the mother language to commit less errors possible in their use of the foreign language. Considering the features of the second language discipline, as well as the new situation that this kind of teaching faces nowadays, the language teaching profession meets profound motivational challenges. On the one hand, with the new changes mentioned, the popular motivational strategies and methods appear to be obsolete and monotonous, so there's a pressing need for new reforms and innovation in the teaching strategies. On the other hand, the universities raise standards and respond to curricular innovations and new society needs for foreign languages talents, and the students are less likely to accept of a submissive role in class and expect to entertain and learn efficiently at the same time, and all these factors force the teachers to provide learners with new motives for learning (Gallagher-Brett 2004).

2. Motivational strategies in classroom of second language teaching

The importance of motivational strategies in second language (L2) teaching has been well recognised in research, and it often ranks high among the decisive factors that bring success in the attainment of the second language (Dörnyei, 1998). In recent years, the second language teaching has met with new situation, and thus causing new needs for the creation and application of innovational motivational strategies. Hence, in the present article, we base on the theory of Dörnyei (2001) and formulates a list of innovational motivational strategies, taking into account of the new changes and new demands for foreign language teaching.

2.1. Dörnyei's taxonomy of motivational strategies

Dörnyei & Ushioda (2011: 103) define motivational strategy as instructional techniques deployed “to consciously generate and enhance student motivation, as well as maintain ongoing motivated behaviour and protect it from distracting and/or competing action tendencies”. The “10 Commandments for Motivating Language Learners” formulated by Dörnyei and Csizér (1998) represented groups of teaching techniques which Hungarian teachers claimed to use to motivate their pupils, namely set a personal example with your own behavior; create a pleasant, relaxed atmosphere in the classroom; present the tasks properly; develop a good relationship with the learners; increase the learners’ linguistic self-confidence; make the language classes interesting; promote learner autonomy; personalize the learning process; increase the goal-oriented learning; familiarize learners with the target language culture.

Later, Dörnyei (2001) expanded the list into a full taxonomy of 102 motivational strategies, grouped into 35 main strategies which can be used in language classrooms and can be grouped into four consecutive phases: (1) creating basic motivational components; (2) generating initial motivation; (3) maintaining and protecting motivation; and (4) encouraging positive retrospective self-evaluation.

2.2. Motivational strategies in the new teaching situation

However, as we have mentioned, nowadays appeared many new circumstances that changed the needs and the situation of second language teaching. First of all, due to the pandemic, there’s an increasing need for hybrid teaching and online teaching. Secondly, with the development of information technology, the application of technology in second language classroom is more and more popular. Thirdly, in China the interdisciplinary integration is proposed widely in the higher education. Hence for the second language teaching, teachers are looking for ways of integrating other disciplines in the classroom teaching in order to make the education more integral. Moreover, it’s also necessary to stimulate the enthusiasm of the students to get the autonomy to learn.

Faced with the new teaching situation, we apply in the second language teaching classroom a series of new motivational strategies: promote students’ autonomy, collaborative group working mode, create a pleasant classroom climate, enrich the class with foreign country’s culture and values, make the learning tasks stimulating, integrate in the class information technology. The detailed information of applying the strategies are as follows.

Promote students’ autonomy. In this aspect, teachers can organize a series of autonomy-supporting teaching practices. To begin with, flipped classroom is a very popular practice in the second language learning, for the student-centered mode allows students to take responsibility of their learning and realize the learning at their own pace with more flexibility. In the session of grammatical exercises after the new content dictation, the teacher can design exercise games, invite the students to teach the exercises and make oral speeches or tell stories, role play, group discussion, etc. Another important method to promote students’ autonomy is to distribute questionnaires between the students, to collect information about their personal learning needs and the difficulties they meet with, with which teachers can have a direct channel of communication with the students about their personal thinking and requirements, thus realizing individualized teaching and differentiated teaching. Moreover, self-evaluation with the guidance of the teacher is also an effective method of realizing the autonomous learning. After each session of learning, the teachers design self-evaluation forms for the students to fill, including their performance of the learning, the domain of the knowledge, the plan for the next session, the gains and weaknesses. The self-evaluation makes the students responsible for their learning, aware of the distance between their expectations and their true level of the second language, get to know their strong and weak point, and thus having sufficient motivation and confidence to progress. (Li, 2016:81)

Collaborative group working mode. This mode is an effective way to enhance the exchanges between students, to capacitate them with the ability of communicating and cooperating with others, and to erase their interest of deep learning. Let’s take for example the teaching of a Spanish text “El caballo de Troya” (Trojan horse) to the Spanish major college students. There’s a variety of group activities that teachers could organize. Before entering in the explication of the new Spanish text, the teacher can ask students to discuss in groups, recall the main plot of the Greece story, and narrate it in Spanish with the assistance of the new vocabulary of this lesson. Another option is to ask the students to prepare for the new lesson in groups. The teacher gives each group a preparation list with all the tasks, such as organizing example sentences, summarizing grammar usage, marking the key points of the text, and reflexing about the meaning of the article. The students can divide the tasks between the group members and prepare with group work. After learning the linguistic knowledge of the text, the teacher can organize different groups of students to perform the story “The Trojan Horse”, which gives full play to their subjective abilities, designing lines and actions, and modifying the plot. In other cases, teachers can also assign tasks like group discussion, debate, group project, etc. Collaborative group working mode ensures

the participation of the students in the active learning and in the classroom, and also stimulates different senses and attention to learn the new knowledge.

The creation of a pleasant classroom climate. It is the guarantee of an effective and pleasant learning. To create a supportive climate, the appropriate teacher behavior and the good relationship between the teachers and the students are indispensable. According to Dörnyei and Csizér (1998), teacher's own behaviors are considered to be the single most important motivational tool. Furthermore, the results also expose that this “tool” is one of the most under-utilised motivational resources in the teacher's classroom practice. Needless to say, the teachers' emotional state, dedication and passion to the teaching, their availability to communicate with the students and to offer them the help and care that they need are important factors that can motivate or demotivate the students in their learning. There's research that shows that student perception of teacher happiness is positively linked with students' overall attitude and motivation towards learning, as well as students' attitude towards the teacher. (Moskowitz, S. & Dewaele, J:2021) So it's significant that during the class, the teachers can use various method to project enthusiasm and set good personal example of the positive attitudes and interest in the subject of second language learning.

Enrich the class with foreign country's culture and values. This strategy is a special motivational strategy for foreign language teaching. As is known, teaching a language can be seen as imposing elements of another culture into the students' own. In other words, language learning is a deeply social event that requires the incorporation of a wide range of elements of the culture. In order to learn a second language, students need to develop a corresponding identity. For example, for the students specialized in Filology of Spanish, they need to create in their mind a linguistic system of Spanish language, and at the same time, integrate the Spanish culture in their identity. They need to familiarize the politics, society, economy, culture, the interpersonal relationship, as well as the customs of the Spanish speaking countries. Hence, one of the objectives of the class is to enrich the teaching with the foreign country's culture and values, and in the meantime, the integration of these elements can surely improve the overall linguistic level of the students, and make the class more vivid and attractive. The teachers can do this in various ways, for instance, record short videos introducing foreign festivals, customs, tourism, gastronomy, and play them in the class or as a flipped class material; design cultural theme explanation according to the content of different texts and invite students to present the cultural theme in class with powerpoint; share reading materials, news, TV programs, conferences with students to let them appreciate vividly the foreign culture; integrate the foreign cultures and values in the class exercises, namely brainstorm discussion, collection of information about foreign cultures, group presentation.

Make the learning tasks stimulating. This aspect mainly consists in selecting tasks which require mental or body involvement from each participant, as well as creating specific roles and personalized assignments for everybody. (Dörnyei, 2001:78). As a matter of fact, the way the tasks are designed and presented can make a huge difference in how students perceive and approach them. Therefore, when designing and presenting a task, the teachers need to think about the following questions: what's the purpose and objective of the task? What may be the students' expectation for the task? What are the difficulties that the students may encounter in doing the task? In which way can the teacher present the task to make it more attractive and accessible? Let's take an example of a classroom task to analysis the motivational strategies that can be applied to make the tasks more stimulating.

After learning the Spanish text entitled “Hacer compras” (Go shopping), the teacher asks the students to collaborate in groups and make up their own dialogues occurred in the scene of shopping. To begin with, the teacher may present the task explaining the objective of the task, which is to practice the new words and expressions in going shopping, and help the students to express in Spanish how to select goods, consult prices, realize payment etc. The explanation of the objective can orient the students in their practice and guide them to relate the dialogue with the new knowledge learned in the text. (Gershon, 2019:110) Secondly, the teacher can offer some advice for making up the dialogue, trying to stimulate their interest and promote their divergent thinking: “There are different kinds of stores that we may purchase in our daily life, like clothes stores, book store, supermarkets. You may go shopping alone, with your friends or with your family. During the shopping, many things may occur, you may discuss the things to buy with your friends, you may choose between different things and select your favourite one. Use your imagination and make up a dialogue showing one of your experiences of going shopping.” The possible difficulty of this task is the unknown words of the things to purchase, so the teacher can offer them guidance and consult during their preparation. During the presentation of the dialogue, the teacher plays the role of guide, creating a positive classroom climate for appreciating the dialogue and organizing exchanges and comments after the dialogue. The teacher can offer advice and corrections for the dialogue after it's finished.

Integrating in the class information technology. With the development of information and communications technology, this motivational strategy is more and more widely and frequently used in the second language classroom. The application of the information technology can manifest in the following aspects. To begin with, the integration of information technology permits a diversity of innovational methods of teaching and learning, like the blended learning, the use of interactive multimedia learning materials, the Moodle class, the learning zone in blog, and mini class, internet platforms, as well as other technology of teaching tools. (Zhu, Xu&Han, 2021) Moreover, the use of new technology also means a reform in the teaching philosophy. It makes the education more personalized, for that the Moodle class and mini class allow the students to organize their learning according to their language level and learning needs; the online learning platforms permit the communication and tuition with the teacher at any time. The language teaching also transforms from teacher-centered into students-centered, focusing on the learning needs, the active participation, the multi-task design and the knowledge structure and language level of the students.

Moreover, the integration of technology also expands the time and space of the classroom of second language teaching. Before class, the teacher can share preparation tasks, mini-class and other materials with students and distribute questionnaires to analysis the learning needs and learning difficulties. During class, teacher can dictate the class with the assistance of the intelligent classroom, and organize activities like Bingo, pictionary, matching game, watch videos or movies. After class, students can do the homework and discuss with classmates online, while teachers can correct students' work and tutor the students with their questions and problems.

3. Effects of the motivational strategies

With the purpose of verifying the effectiveness of the motivational strategies designed for the second language teaching classroom, we conduct an experiment with 20 Chinese college students who select the Spanish course in 2021-2022 Spring semester. With the application of these strategies, we notice that the students have the following improvements in their study.

Firstly, the use of information technology and the design of a variety of activities can satisfy the students' diversified needs of learning. In a survey distributed among the students about the efficiency of the class teaching mode, 59% of the students think that interactive exercises and scene stimulation is most efficient for the Spanish learning in the classroom, 18% maintain that they prefer the traditional mode in which the teachers dictate and explain the content to the students, 10% think the workshop mode is more beneficial, 13% think that autonomous learning is more effective, for that the students can have more opportunities for presenting, discussing, and thinking in class. Besides, 72% of the surveyed students think that information technology plays an important role in the assistance of classroom teaching and learning, for the reason that it offers them vivid videos and pictures to learn the cultural and linguistic knowledge, help them to consolidate the knowledge learned and widen their horizon. Concerning the question of the learning result of using the technology to enlance the time before, during and after the class, 60% of the students think the combination of online and offline study is very effective, because in this way they can make use of all the fragments of time to learn, make good preparation before the class, make full use of the time in the classroom and also maintain the contact with the teacher and students after the class for further practices and discussions.

Secondly, there's more interest and dedication of students in the second language learning. Before applying the motivational strategies in the classroom, in one semester the absence rate registered is 4 times. After employing the mentioned strategies, during 2021-2022 Spring semester, full attendance of the class is registered. Moreover, there also appears to be a more active and pleasant classroom atmosphere, for that the students are more willing to participate in various classroom activities, exchange ideas with classmates and teachers, and finish all the homework carefully.

Thirdly, an improvement of the students' domain of the linguistic knowledge is observed. Students' performance in classroom for answering questions, realizing group work and doing exercises are more satisfied. There's also a notable improvement in the final exam. In 2020-2021 Autumn semester, the highest score registered is 95 points, and the lowest score is 65 points. Meanwhile, in 2021-2022 Spring semester, the highest score registered is 94 points and the lowest score, 73 points. From these statistics we can see that the students whose Spanish level is not good has advanced notably in the final exam and the overall level of the students has increased.

Last but not least, we also find that with the application of the new motivational strategies, the integral abilities of the students are also improved. They have better communicating skills and a more fluent speaking ability, which enable them to present in the class and participate in the intercultural events or participate exchange programs abroad and communicate with foreigners without obstacles; more solid knowledge of vocabulary and grammar, which has clear demonstration in the improvement of the exam

scores; knowing how to realize group work and cooperating with others; a wide domain of Spanish speaking countries' cultures and values permit our students participate in the foreign language singing competition; a grasp of computer skills, that enables them to realize attractive powerpoint presentation, search information in internet, use learning assistance tools like e-dictionaries and electronic database.

4. Conclusion

In recent years, due to a series of changes in the society and technology, there're growing needs of reform and innovation in the motivational strategies in the second language teaching classroom. Second language teaching needs to find new ways to implement hybrid teaching, combine online and offline learning, make full use of the new information and communications technology and fulfill the expectations for a higher level of interaction and innovation of curricular design from the institutions and the students. Thus, faced with the new situation, based on the theory of motivational strategies of Dörnyei (2001), we formulate a new list of motivational strategies applied in the second language teaching classroom: promote students' autonomy, collaborative group working mode, create a pleasant classroom climate, enrich the class with foreign country's culture and values, make the learning tasks stimulating, integrate in the class information technology. Later, we observe the learning result of the Chinese college students who choose the Spanish course during one semester through surveys and comparative studies, and discover that the implementation of the strategies implemented have notables benefits and satisfying effects. the use of information technology and the design of a variety of activities can satisfy the students' diversified needs of learning. With the new motivational strategies, students have more interest and dedication in the second language learning, have an obvious improvement in the domain of the linguistic knowledge, and form integral abilities as a foreign language talent.

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ATTITUDES TOWARDS CHANGE AMONG TRANSFORMATIVE LEADERS IN EDUCATION

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Abstract

Introduction of Objectives: Attitude towards change is one of the fundamental characteristics of an educational leader's personality, and we seek to analyse it from the perspective of transformative leadership.

Methodology/sampling techniques: The research sample consisted of 133 primary school class teachers with an average age of 41 years working in the Banska Bystrica, Zilina and Presov regions. Attitudes to change were measured with the Attitudes to Change questionnaire (Dunham, Grube, Gardner, Cummings & Pierce, 2011), personality structure with the NEO-FFI questionnaire (Ruisel & Hlama, 2007), and individual types of transformational leader behaviour with the questionnaire Leadership Practices Inventory (LPI) questionnaire (Kouzes & Posner, 2002). SPSS software was used to process the research data. The study has a quantitative comparative and correlational design.

Findings: the results show that the most open attitude towards change was among female teachers over 40 years of age who scored higher on the Model the way and Encourage the heart types of behaviours, which were also significantly positively associated with attitude towards change.

Conclusion: The present paper could contribute to developing the field of human resource management.

Implication of the study: Occupational psychologists and managers in educational settings could be assisted in developing strategies for change and, in fact, in implementing any change brought about by the transformation of the Slovak education system.

Keywords: *Leaders, teacher leader, followers, Big Five factors.*

1. Introduction

The need for transforming Slovak education along the lines of foreign models is highly topical. Many organisations, not least schools, are striving to improve the quality of their target processes by seeking and developing strong leaders to guide them most effectively through a difficult period of dynamic change. This search is one of the reasons why, in today's world of globalisation, rapid change and competition, schools need to identify and develop leaders who can lead them successfully through any change and under any circumstances. Organisations face increasing competition from new services or products coming onto the market. Similarly, schools need to deal adequately with all the contexts of a pandemic situation, in addition to the speed of technical development, changes in information technology, and the like. This process requires innovation and change, the perception of which must be based on acceptance not as a threat but as a normal part of the organisation's life. The issue of leadership is not a new one in professional circles. This, however, is its establishment in schools and school settings, the necessity of which is reflected in the fact that if teachers adopt certain dispositions, knowledge and skills for leadership, the whole culture of the school will improve and systemic changes in educational institutions will be kick-started. Leaders, who are the engineers of pushing for new strategies and new goals, are excellent at sensing the need for change in an organisation early on. They have a genuine, natural vision and the ability to get the right people behind the necessary changes. They can be leaders at crucial moments and transcend the school's boundaries. Change means something new, surprising, and irregular, but it is also a step into the unknown. Being successful means changing faster than the environment changes. The secret to managing change is how leaders and the organisation can respond to what is happening outside. In a competition, the first to implement the demands of a rapidly changing social and educational environment more efficiently and qualitatively wins. The demands of society are changing rapidly, and the time needed to adequately prepare young people for life in society is shortening. Organisations, and not forgetting schools, rely on so-called 'change leaders' to manage

change. A 'change leader' is a person who sees change as an opportunity, actively seeks it out and can apply it to the organisation at the right time and place. Every true and effective leader is essentially a 'change leader' because a constantly changing environment is a natural part of any organisation. The task of leading change may arise because the leader has identified the need for it, or it may have arisen by a decision of a superior authority. However, the fact remains that change management requires a wide range of managerial and leadership skills, abilities and, not least, personal dispositions.

Oreg and Berson (2011), who discuss employee attitudes towards change, state that leaders who openly value novelty, reward innovation, and stimulate creative thinking among their followers are more likely to encourage organisational change and thus lead employees to embrace change. Whereas leaders who attach importance and priority to rigorous procedures, stable and less risky actions of employees create an environment in which employees develop negative attitudes towards organisational change. Tabaka and Barr (1999) addressed a similar theme, suggesting that change managers' self-confidence, ability to accomplish the task and tolerance for risk may influence their intention to adapt to potential new technologies. These results highlight the significant impact of personality differences on strategic decision-making processes and outcomes. Several authors emphasise that the attitudes of organisational members can play an important role in whether workers support or resist change (Tuckman, 1965). In terms of individual well-being, general resistance to change may be important because it may indicate that a person feels threatened by change. Therefore, it seems desirable to be able to assess the extent to which employees respond favourably or unfavourably to job changes.

Organisation development specialists often recommend an organisational diagnosis prior to a change. A behavioural checklist has been developed that focuses on past behaviour in coping with organisational change. Past behaviour is often a good predictor of future behaviour. Such a tool can be helpful in change management. However, Ajzen (1987) notes that attitudes are often a better predictor of future behaviour than past behaviour. Therefore, an instrument that assesses attitudes towards change is handy. Such an instrument could be an important part of periodic attitude surveys and would be used as part of the diagnostic process conducted prior to implementing organisational change. In addition, some instruments have been developed that assess attitudes towards change in general or a particular area, such as work-related activities.

2. Design

The change agent in the team should be the leader, whose attitude often determines how they communicate the change to their followers and how they will perceive it. Kouzes and Posner (2002) found that employees put up less resistance to change if they are provided with reliable information that allows them to make their own judgments about the need for change. Anxiety and a slight level of resistance are considered typical reactions of employees after learning that an employer is planning a major change to the traditional work environment (Fyock, 1990; Schermerhorn, Hunt & Osborn, 1991; Tuckman, 1965). Therefore, it is essential that the leader has a positive attitude towards change and is a leadership personality.

3. Objectives

Our research aimed to determine how and whether attitudes towards change are related to leaders' personality factors and gender.

VO1: Will a leader's personality factors in education be related to their attitudes towards change and the specific type of transformational leader behaviour?

VO2: Will there be gender differences in the personality factors of a leader in education, their attitude to change and the specific type of behaviour of a transformative leader?

4. Methods

The study has a quantitative comparative and correlational design. The Big Five personality factors were identified using the 60-item version of the NEO-FFI (Ruisel & Hlama, 2007). The five scales (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) comprise 12 items. Cronbach's alpha, for each factor, ranges from .67 for the Agreeableness factor to .86 for the Extraversion factor.

To measure employees' attitudes towards organisational change, we were inspired by the instrument from Dunham, Grube, Gardner, Cummings and Pierce (*Attitudes to Change* - 2011). Their questionnaire was adapted for the research using a dichotomous Likert scale with YES/NO options

instead of a 7-point Likert scale. The questionnaire contains 18 items, the sum of which reflects the overall attitude towards change (Cronbach's $\alpha = .87$). The research instrument also allows for the calculation of three dimensions of attitude toward change - six items each on the cognitive dimension, the affective dimension, and the behavioural dimension. We did not work with these dimensions in our research.

We measured the different types of transformational leader behaviours using the *Leadership Practices Inventory* (LPI; Kouzes & Posner, 2002). The LPI is an inventory that focuses on analysing five main types of leadership behaviours: 1) Showing the way; 2) Inspiring with a shared vision; 3) Encouraging activity; 4) Enabling others to grow, and 5) Encouraging with the heart. The questionnaire consists of a 30-item self-assessment inventory in leadership skills, with six items for each leadership skill area, in which respondents rate their behaviours on a 10-point Likert scale. The sum of each leadership area is an extra score, which can take values from 6 to 60. The reliability of the questionnaire, as measured by Cronbach's alpha for each component, took values ranging from .69 to .83.

The research population consisted of 133 teacher-leaders at different levels of management with a mean age of 41yrs. (86 females and 47 males). The selection was guided by the criterion of availability and conducted during March 2022 online to educational leaders who agreed to participate in the research. The research data were processed using SPSS Statistics version 19. The normality of the distribution of the variables was assessed by describing the shape of the distribution (*skeweness, kurtosis*). Since the data did not show the characteristics of a normal distribution, we used non-parametric statistical methods in their processing.

5. Results

Gender differences were analysed using the Mann-Whitney U - test, and the relationship between attitude to change and Big Five personality factors were analysed using Spearman's correlation analysis. We found the following correlations between the Big Five factors and attitude toward change: Neuroticism ($r_s=.03$; $p=.81$), Extraversion ($r_s=-.15$; $p=.34$), Openness to Experience ($r_s=-.09$; $p=.14$), Agreeableness ($r_s=-.15$; $p=.27$); and Conscientiousness ($r_s=.09$; $p=.57$). Based on our research findings, we conclude that our research did not support a statistically significant relationship between attitude towards change and the Big Five personality factors. Similarly, we analysed the relationship between the different types of leader behaviours and attitudes to change through Spearman's correlation coefficient. We found the following relationships: Model the way ($r_s=.11$; $p=.32$); Inspire a shared vision ($r_s=.27$; $p=.12$); Challenge the process ($r_s=.24$; $p=.10$); Enable others to act ($r_s=.22$; $p=.31$); **Encourage the heart ($r_s=.32$; $p=.04$)**. Hence, only Encourage the way type behaviours had a weak positive statistically significant correlation with attitude towards change.

Concerning gender differences, the arithmetic mean was higher for females, indicating that females perceive change more positively. However, this difference is not statistically significant ($Z = -.48$; $p = .59$). Thus, we can conclude that our respondents do not show a gender difference in attitudes towards change

In an attempt to answer the second research question, we found the following gender differences in the Big Five personality factors: Neuroticism ($Z=-.04$; $p=.59$), Extraversion ($Z=-1.25$; $p=.21$), **Openness to Experience ($Z=-2.91$; $p=.03$)**, **Agreeableness ($Z=-2.23$; $p=.02$)** and Conscientiousness ($Z=-.35$; $p=.67$). Thus, the statistically significant difference was only in Friendliness and Conscientiousness in favour of women. The gender differences in each type of leadership behaviour were as follows: **Model the way ($Z=-1.99$; $p=.05$)**, Inspire a shared vision ($Z=-1.54$; $p=.12$), Challenge the process ($Z=-.82$; $p=.42$), Enable others to act ($Z=-1.52$; $p=.12$), **Encourage the heart ($Z=-2.38$; $p=.02$)**. The Mann-Whitney U-test showed statistically significant significance in the model and encourage procedures in favour of women. Thus, we conclude that women in leadership positions show more of their values, set an example to employees through their behaviour, celebrate their victories, and value their ideas more.

6. Discussion

The main aim of our research was to investigate the relationships between the Big Five personality factors in leaders and their attitudes towards change. However, statistically significant relationships were not demonstrated in our dataset. We hypothesise that the results may have been influenced by the specificity of the educational reality in Slovakia, where leaders in schools are primarily tasked with communicating commands and changes from senior management but are not themselves change-makers and innovators. The group's diversity may have resulted in this, which is inconsistent with previous studies.

Regarding gender, women only score better statistically significant results in the agreeableness and conscientiousness factors. Our results are consistent with other studies that report that women are more agreeable, extraverted, and conscientious and score higher on the neuroticism factor. Feingold (1994) reports that in no country did men score higher than women on the neuroticism factor. Our research also confirms this, but the difference was not statistically significant. Regarding differences in leadership style, in all five practices described in the LPI questionnaire, women scored higher. However, there were statistically significant differences in only two practices. Model the way, characterised by a leader who follows this practice, clarifies their personal values and leads by example. The other practice was Encourage the heart, and thus a leader who uses this practice values the contributions of others, celebrations, values and victories. Our results are also consistent with the research result of Dunham et al. (1989), which argues that women's leadership style, in contrast to that of men, is more people-based and can be described as a modelling style, i.e. a style in which the leader is the role model. It further states that women set clear expectations and rewards. In their study, Zenger and Folkman (2012) found that when initiative, self-development, honesty and drive for results are taken into account, women are more skilled and competent than the opposite sex.

7. Conclusion

Regarding personality traits, four factors may be relevant to organisational change: openness to experience, which practically defines adaptation to change (Costa & McCrae, 1994). People with high extraversion tend to disclose their views on change and may gain useful influence. Agreeableness and conscientiousness indicate that people are likely to show goodwill in embracing change and will try their best to succeed (Watson & Clark, 1997). Agreeableness describes people as good, kind-hearted, and good-natured, avoiding tensions and disagreements in the workplace (Costa and McCrae, 1992). It is also a variable predicted to be related to positive attitudes towards change. For example, employees with high agreeableness scores are expected to be less resistant and more likely to try to follow new policies and procedures that may be applied to organisational change. The trait of conscientiousness, which describes people with self-discipline, ambition and competence (Costa and McCrae, 1992), is expected to be positively correlated with positive attitudes towards change because employees scoring high in this dimension are conscientious and tend to adhere strictly to the policies and responsibilities established by management. Our results indicate that women score higher in every factor, significantly so in the agreeableness and conscientiousness factors. In conclusion, regarding personality traits, women should perceive change better.

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EFFECTIVENESS OF INTERVENTION ARRANGING ASSIGNMENTS IN HIGH SCHOOL PHYSICS

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Abstract

Motivation is considered as a crucial element in acquiring physics concepts (Redish, 2003). Also, educational psychology has developed various intervention models to promote student motivation. Particularly, The Time Continuum Model (Wlodkowski, 1985) shows that strengthening the connection between consecutive classes enhances learner motivation. This study focused on assignments that emphasize links between classes and examined their effectiveness. In addition, I investigated whether the intervention would enhance student motivation such as autonomy and significance of assignments.

Six eleventh graders joined in the intervention from April to November 2019, which consisted of (1) arranging assignments that included many thinking tasks once every two physics classes, and (2) linking classes by offering answers to the assignments of previous classes at the beginning of the following classes. The surveys were conducted after the intervention on November 26th and measured student motivation through an interview asking each person why they study physics etc.

The results suggest that participants became autonomous physics learners through this intervention because they said “To learn physics is useful” and “Physics changed from a weak subject to interesting it”. They also showed that participants found the assignment significant because they said “Doing assignments made me more aware in class” and “I was able to study little by little for the test”.

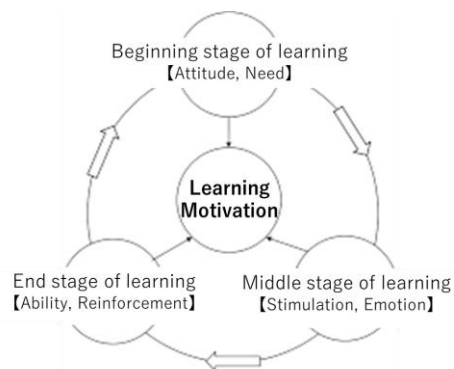
Keywords: *Assignments, physics, motivation.*

1. Introduction

In physics education research, the acquisition of physics concepts is one of the major goals, and research is being conducted from various perspectives. Among them, motivation is considered as a crucial element in acquiring physics concepts (Redish, 2003).

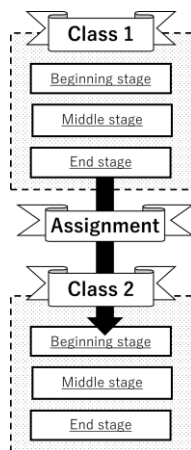
Also, educational psychology has developed various intervention models to promote student motivation. Particularly, The Time Continuum Model (Wlodkowski, 1985) shows that strengthening the connection between consecutive classes enhances learner motivation (Figure 1). Based on this model, the weak connection between classes and lessons becomes apparent as an issue in high school physics. This study focused on “assignments” that emphasize links between classes. In other words, assignments that strengthen the connection between classes can be considered to increase learner motivation (Figure 2).

Figure 1. The Time Continuum Model.



Source: Wlodkowski(1985)

Figure 2. Assignments that emphasize links between class1 and class2.



2. Objectives

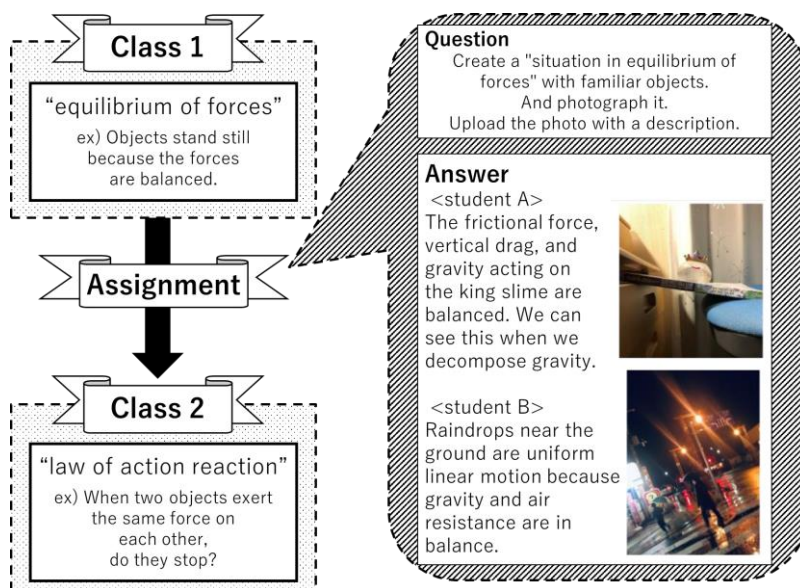
The purpose of the study is (1) examining effectiveness of the intervention , and (2) investigating whether the intervention would enhance student motivation such as autonomy and significance of assignments.

3. Methods

Six eleventh graders joined in the intervention from April to November 2019, which consisted of (1) arranging assignments that included many thinking tasks once every two physics classes , and (2) linking classes by offering answers to the assignments of previous classes at the beginning of the following classes. An example of an assignment and solutions of students is shown in Figure 3.

The surveys were conducted after the intervention on November 26th and measured student motivation through an interview asking each person “Why do they study physics?” and “What have you ever tried to understand physics?” etc. Interviews were conducted one-on-one between teacher and student.

Figure 3. Assignments for the class "equilibrium of forces" and examples of answers.



4. Result & discussion

The results of the interviews are shown in Tables 1. This table shows that people study physics because they enjoy learning physics. In particular, Student C and D feel that sharing opinions with others is the attraction of physics class. Based on Self-Determination Theory (Ryan & Deci, 2000), participants became autonomous physics learners through these classes. In addition, Student D improved attitudes toward listening to others in class in order to work on assignments. In other words, assignment may contribute to stimulating class discussions. Therefore, it is possible that participants find enjoyment in physics through the class, and that assignment is one of the factors contributing to this.

Table 1. The interview surveys.

Speaking	Statement	Speaking	Statement																
T	Why do you study physics?	T	What do you tried to do anything to understand the content of physics?																
S(A)	Um,,,What's it for,,, for a career? Well, I guess it's interesting.	S(D)	Compared to April, I started to listen to other people's opinions.																
T	I see. What makes you think that?	T	Why?																
S(A)	When I was in junior high school, I hated science, especially physics. So I thought "I can't do physics! " But that thinking changed in April.	S(D)	I heard other people's opinions and realize "I see! ", "Assignment is not such a bad thing." Also, I was asked to do assignment. So I think I have changed the way I look at assignments.																
T	How has it changed?	T	How has it changed?																
S(A)	Interesting! I think that I may have gone from what I didn't like to what I felt interesting.	S(D)	Well, I think that doing assignments made me more aware in class.																
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5. Conclusions

To increase high school students' motivation to learn physics, I used assignments as an intervention to promote connections between classes. After interventions were implemented, an interview survey revealed that participants became more autonomous in physics as a result of the classes, suggesting that assignments may have been involved in the activation of the classes.

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COMPARING ONLINE AND VIRTUAL REALITY MORAL DILEMMA DISCUSSION

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Abstract

Face-to-face moral dilemma discussion, which has been employed in moral education throughout the world, has been repeatedly shown to improve morality and sociality even though face-to-face discussions have recently been difficult to implement. Accordingly, in this study, the educational effects of online moral dilemma discussion (OMDD) and virtual reality moral dilemma discussion (VRMDD) for college students were examined. The participants, who included 38 female university students, were randomly assigned to an OMDD or a VRMDD condition, although they participated in both conditions with acquaintance pairs; Zoom was employed in the OMDD condition, and the VRMDD condition used a VR headset (Oculus Quest 2). The participants in the OMDD condition used individual personal computers, whereas those in the VRMDD condition utilized a VR headset that had been prepared individually in a small laboratory. Pair 1, Pair 2, and the experimenter participated from separate rooms. In the VRMDD condition, each experimenter assistant explained how to use VR to each participant. In both conditions, after following the experimenter's instructions and practicing, the pairs discussed Heinz's dilemmas (1) and (2). The discussion ended when the pair reached a conclusion. The standards for public space (SPS) scale, which comprised egocentric, peer standards, regional standards, care for others, and public values subscales, and the communication skills scale (CS), which included listening and speaking, nonverbal, assertiveness, and discussion subscales, were measured separately before and after the experiment. The SPS corresponds with Kohlberg's stages of moral development. After confirming the homogeneity of both conditions, an analysis of variance was performed with two factors for each subscale: condition (OMDD, VRMDD) and the time of survey (pretest, posttest). The results revealed that there were significant differences in the main effect of the condition for the subscales of the SPS. The respondents scored higher on the SPS egocentric and peer standards subscales, which had significant main effects at the time of the survey, on the pretest than on the posttest. The practice of OMDD and VRMDD decreased behavioral standards with a narrow social perspective (egocentric and peer standards), and OMDD and VRMDD were not related to behavior standards with a wider social perspective (regional standards, care for others, and public value) or CS.

Keywords: *Online moral dilemma discussion, virtual reality moral dilemma discussion, Zoom, VR.*

1. Introduction

Recently, communication with internet technologies has been used often because of COVID-19. Virtual reality in particular is one of the most realistic communication tools. The aim of this study is to compare VRMDD, which is a moral dilemma discussion using virtual reality, with online moral dilemma discussion (OMDD), and to examine the differences between them.

MDD (Blatt & Kohlberg, 1975) derives from Kohlberg's theory as a method of discussing topics in moral education. Prior to advocating for the effect of MDD, Kohlberg (1971) theorized that morality has six stages of development, later contending that morality develops from Stage 1 to Stage 6 along with cognitive development and that MDD promotes moral development (Blatt & Kohlberg, 1975). Among the moral dilemma tasks that constitute MDD in moral education, Heinz's dilemma is well-known. Rest's (1979) Defining Issues Test (DIT) also measures stages of moral development alongside Kohlberg's theory worldwide (Bayley, 2011), and subsequently developed the DIT2.

In Japan and other countries, researchers have determined that morality develops in stages with aging (e.g., Sakurai, 2011). Additionally, Japanese researchers and teachers have collaborated and spent more than 40 years comprehensively accumulating knowledge on teaching materials around moral dilemmas of interest to students, on how to perform MDD depending on the age of students, and on the educational effects of MDD (Araki, 2014). The interesting point concerning MDD is that it can encourage

students to engage in free discussion by adopting as teaching materials moral dilemmas in which multiple values conflict with each other. Although researchers have noted some issues around MDD, in general, conducting MDD not only improved morality (Blatt & Kohlberg, 1975; Araki, 2014; Lind, 2019) and business ethics (Oser & Schalafli, 2010) and influences prosocial formation (Salvador, 2019) but also activates thinking and deliberating skills (Fujisawa, 2018).

Following these principles, Japanese researchers have conducted many moral education of face-to-face MDD (FMDD); however, none have studied online MDD (OMDD). There has only been one study in Nagasaki prefecture in which the investigator conducted OMDD by connecting a group of schools' online morality classes, and no one has conducted discussion studies using online tools with individual elementary and middle school students. However, in one study, university students accepted online discussion, but preferred face-to-face discussion and considered the online discussions supplementary to face-to-face discussion (Tiene, 2000). Hedayati-Mehdiabadi, Huang, and Oh (2020) discovered that under supportive conditions, a group of university students experienced fresh awareness from participating in ethics education using online discussion. Cain and Smith (2009) compared OMDD and FMDD in a group of pharmacy students and found that the FMDD allowed the students to ponder the subjects, whereas the anonymity in OMDD tended to lend itself to criticism while hindering constructive discussion. Bell and Liu (2015) administered the DIT2 before and after conducting OMDD with college students, and the students' scores increased after the discussion.

Fujisawa (2018) conducted FMDD with pairs of acquaintances at the same university and administered the standards for public space (SPS) scale (Nagafusa et al., 2012) and the CS scale (Ueno & Okada, 2006) before and after the discussion. The SPS scale has five subscales that correspond to Kohlberg's stages of moral development. After FMDD, the subscales of egocentric and peer standards decreased and the subscale of care for others increased. The CS scale has four subscales: listening and speaking, nonverbal skills, assertion, and discussion. After FMDD, the scores of assertion and discussion increased. Fujisawa (2022) conducted FMDD and OMDD with pairs of acquaintances from the same university and administered the SPS and CS scales (in Microsoft Forms) before and after each discussion. Fujisawa's students recorded higher scores on the SPS public values subscale following OMDD than after FMDD, and she found no significant differences in the CS subscale scores.

As described above, OMDD using Zoom or Webex was very convenient and meaningful, especially during COVID-19, but this type of OMDD is not entirely natural fully. In response, metaverse companies have promoted virtual reality environments such as Meta Quest2 in which it appears that we can conduct OMDD as smoothly as if we were together. In moral studies using VR, the VR technology enhanced empathy; pulses increased (Herrena et al., 2018; van Loon et al., 2018). In a different study, VRMDD made pulses increase, which predicted that nonutilitarian judgments were being conducted (Francis et al., 2016), and researchers have also found that using VR technology made study participants care for others (Terbeck et al., 2021) and improved children's social skills (Kellems et al., 2021). These results supported that using VR in education can positively influence our morality. However, it is not clear whether VR technology improves our morality and CS enhance as well as OMDD. The purpose of this study was thus to examine whether VRMDD would enhance a group of students' morality and CS.

2. Method

The participants were 38 female university students whom were randomly assigned to the OMDD or VRMDD condition. The OMDD proceeded on Zoom, and the students in the VRMDD condition used a VR headset (Oculus Quest 2). The participants in the OMDD condition used individual personal computers, whereas those in the VRMDD condition utilized a VR headset that had been prepared individually in a small laboratory. Pair 1, Pair 2, and the experimenter participated from separate small laboratories (Figure 1). In the VRMDD condition, each experiment assistant explained how to use VR to each participant. In both conditions, after following the experimenter's instructions and practicing, the pairs discussed Heinz's dilemmas (1) and (2). Figure 2 presents the setup of the VRMDD condition. The discussion ended when the pair reached a conclusion. Before and after the discussions, we administered to the students the SPS scale, which comprises egocentric, peer standards, regional standards, care for others, and public values subscales, and the communication skills (CS) scale, which measures listening and speaking, nonverbal skills, assertiveness, and discussion.

The SPS scale (Nagafusa et al., 2012) comprises 25 items on 5 subscales. This scale aims to evaluate what standards an individual considers important concerning egocentric behavior in public spaces in pursuit of profit or freedom without concern for the impression it creates on others. Peer standards denote the importance one places on aligning with one's peers. Regional standards influence the importance given to approval from the local community. Care for others refers to the importance one places on caring about unrelated others. Public values denote a concern for public interest and fairness for society as a whole.

Previous studies (Fujisawa, Azami, Sugawara, Nagafusa, & Sasaki, 2006) confirmed the reliability and relevance of the scale. The five subscales correlate with the five stages of the DIT (Fujisawa et al., 2006). Each item calls for a response on a five-point scale where 1 = “does not describe me at all” and 5 = “describes me very well.” A total score was calculated for each subscale. A higher total score indicates better skill in that area.

As noted above, the CS scale (Ueno & Okada, 2006) consists of four subscales, listening and speaking, nonverbal skills, assertion, and discussion skills. Listening and speaking, and nonverbal skills relate to the ways we directly and indirectly deliver and receive conversational input from others, and assertion is a communication skill that can help to build better relationships by openly conveying and receiving opinions with respect for others rather than unilaterally imposing one’s own opinion or having to tolerate a conversation partner who does so. Discussion of course ties the other skills together to comprise your communication abilities. Following Ueno and Okada’s (2006) scoring manual, synthetic scores were calculated for each field scale and the relevant scoring manual for the CS scale was followed as well. A higher total score indicates better skill in that area.

3. Results

Tables 1 and 2 present the basic statistics for the SPS and CS scale scores. After confirming the homogeneity of both conditions, an analysis of variance was conducted with two factors for each subscale: condition (OMDD, VRMDD) and time of the survey (pretest, posttest). The results revealed significant differences in the main effect of the condition for the SPS subscales (egocentric: $F(1, 36) = 5.5, p > .05$, biased $\eta^2 = .13$; peer standards: $F(1, 36) = 5.9, p > .05$, biased $\eta^2 = .14$). The students recorded significantly higher scores on the SPS egocentric and peer standards subscales on the pretest than on the posttest. The CS subscale scores showed no significant differences.

4. Discussion

With this study, we examined whether using VR technology in MMD (VRMDD) improves our morality and CS as well as FMDD. Interestingly, our findings seemed to indicate that OMDD and VRMDD lowered behavioral standards with a narrow social perspective (egocentric and peer standards) but were not related at all to behavior standards with a wider social perspective (regional standards, care for others, and public value) or to CS.

Regarding the SPS scale, our findings partially confirmed those of Fujisawa (2018) partially. We found the same results for the egocentric and peer standard subscales in this study using OMDD and VRMDD that Fujisawa found using FMDD: Both subscale scores decreased after all the forms of MDD, which means our narrow social perspectives (egocentric and peer standards) decrease. Meanwhile, OMDD and VRMDD did not influence areas with wider social perspective, such as regional standards, care for others, and public value, whereas FMDD did have effects. These results suggest that all MDD decrease our narrow social perspectives (egocentric and peer standards). Therefore, it concludes that FMDD, OMDD, and VRMDD decrease our narrow social perspectives. In other words, it means that any of the styles improve our narrow perspectives (egocentric and peer standards).

With respect to the CS scale, our findings did not support those of Fujisawa (2018) with FMDD. Although FMDD improved assertion and discussion in that study, VRMDD did not improve any CS subscales in this study. CS is an important social skill, so we considered that FMDD would influence CS but VRMDD would not. In fact, in online communication including VR and Zoom, it can be difficult to speak in turn, and many people hesitate to speak up; it is also not possible to exchange opinions with people near you in online discussion. Therefore, we thought that VRMDD would not affect the CS scale scores, considering that VRMDD is more realistic than OMDD. However, we showed that VRMDD cannot replace FMDD for CS. These results highlight that VRMDD, OMDD, and FMDD have their own characteristics, and we considered it meaningful to find that any method would be effective depending on the need or social situation.

5. Future tasks

It was meaningful to clarify with this study whether VR technology enhances our morality and CS as well as OMDD does. However, there were only a few participants, and it is left to future researchers to examine the effects of VRMDD with a large group of participants.

Acknowledgments

This study received a Uehiro Foundation Ethics and Education on Research Grant (2021-B-17). In carrying out this research, we received valuable advice from Prof. Masao Murota and Mr. Kohei Fujimoto of the Tokyo Institute of Technology, and we conducted the study experiment with Ms. Yasuko Tano and Ms. Miori Yukawa.

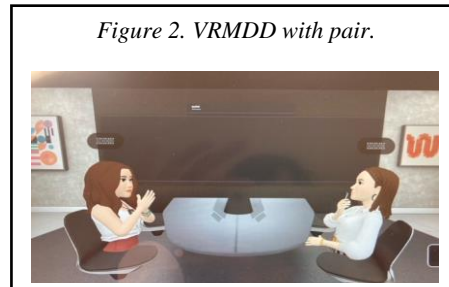
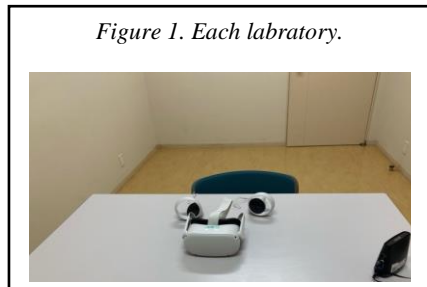


Table 1. SPS subscale scores in each condition.

	Condition	Egocentric		Peer standards		Regional standards		Care for others		Public values	
		M	SD	M	SD	M	SD	M	SD	M	SD
Pretest	OMDD	9.4	3.1	11.7	3.9	19.3	3.1	21.2	1.9	22.1	2.8
	VRMDD	9.2	2.8	12.7	4.7	20.2	4.0	21.5	3.0	22.7	1.3
Posttest	OMDD	8.7	3.0	11.4	3.3	19.6	3.6	21.2	2.2	21.9	2.8
	VRMDD	8.4	2.8	11.2	4.2	20.3	4.1	21.0	3.2	22.8	1.7

Table 2. CS subscale scores in each condition.

	Condition	Listening and Speaking		Nonverbal		Assertion		Discussion	
		M	SD	M	SD	M	SD	M	SD
Pretest	OMDD	1.8	0.5	1.8	0.8	13.9	1.8	4.1	0.9
	VRMDD	1.9	0.7	2.0	0.5	13.8	2.0	4.0	0.7
Posttest	OMDD	1.7	0.6	1.9	0.7	13.8	2.6	4.1	0.9
	VRMDD	1.8	0.7	2.1	0.5	13.8	2.4	4.3	0.7

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THE INTERPLAY BETWEEN MATH PERFORMANCES, SPATIAL ABILITIES AND AFFECTIVE FACTORS: THE ROLE OF TASK AND SEX

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Abstract

Science, technology, engineering and mathematics (STEM) fields are very important to modern society. Careers in STEM fields involve larger salaries than in all the other domains, and there is underrepresentation of females in STEM related fields. Hence, understanding the cognitive and affective foundation of math abilities, a core part in all STEM related careers, has central educational and social significance.

Over the last two decades, many studies have suggested that cognitive and affective factors explain individual differences in math. One of the central cognitive factors is spatial abilities. However, recent studies suggest that spatial abilities (real or spatial anxiety) affect emotional factors such as math anxiety. A large body of research has found stronger math anxiety in females and suggests that inferior spatial abilities in females compared to males are the origin of sex differences in math anxiety.

To fully explore the complex relationship among math anxiety, spatial abilities, spatial anxiety on math performance and sex differences, the current set of studies examined spatial skills, working memory skills, math anxiety, spatial anxiety and math self-efficacy as predictors of math performance in different math contents, in college students.

The results showed sex differences in a few domains: math anxiety was higher in females compared to males, males outperformed females in number line performance and spatial skills. The relationships among spatial abilities, math performance, and math anxiety were stronger in males than in females. By contrast, the relationship between math self-efficacy and performance was stronger in females compared to males.

Moreover, the results indicated that the interplay between math performances and cognitive and affective factors is related to task demand. Math anxiety and spatial abilities had a direct effect on math performances regardless of task. Spatial anxiety had only an indirect effect on math performances via mathematical anxiety, regardless of task. Math self-efficacy had an indirect effect on math performances via MA, and in the one case, also had a direct effect on math performances.

Few implications can be drawn from the current findings:

First, this finding demonstrated fundamental differences between the sexes, even with similar performances in curriculum-based assessments. Second, for math performances, contrary to math anxiety, real spatial abilities rather than spatial anxiety play a significant role in explaining individual differences. Additionally, math anxiety is a very important factor in explaining individual differences in complex math. Hence, the present result dissociates cognitive and emotional factors.

Keywords: *Mathematical anxiety, mathematical self-efficacy, spatial abilities, individual differences in mathematical performances, sex differences.*

1. Introduction

Science, technology, engineering and mathematics (STEM) fields are very important to modern society. Careers in STEM fields involve larger salaries than in all the other domains, and there is underrepresentation of females in STEM related fields (Bloodhart, Balgopal, Casper, Sample McMeeking, & Fischer, 2020; Botella, Rueda, López-Iñesta, & Marzal, 2019; López-Iñesta, Botella, Rueda, Forte, & Marzal, 2020). Hence, understanding the cognitive and affective foundation of math abilities, a core part in all STEM related careers, has central educational and social significance.

Over the last two decades, many studies have suggested that cognitive and affective factors explain individual differences in math. It has been suggested that spatial abilities are one of the cognitive building blocks of math abilities (Cornu, Schiltz, Martin, & Hornung, 2018; Geer, Quinn, & Ganley, 2019; Lauer & Lourenco, 2016). However, recent studies suggest that spatial abilities (real or spatial anxiety) affect emotional factors such as math anxiety (MA) (Delage, Trudel, Retanal, & Maloney, 2022; Sokolowski, Hawes, & Lyons, 2019). A large body of research has found stronger MA in females and suggests that inferior spatial abilities in females compared to males are the origin of sex differences in MA (Dowker, Sarkar, & Looi, 2016; Dowker, Sarkar, & Looi, 2016; Ferguson, Maloney, Fugelsang, & Risko, 2015).

To fully explore the complex relationship among MA, spatial abilities, spatial anxiety on math performance and sex differences, the current set of studies examined spatial skills, working memory skills, MA, spatial anxiety and math self-efficacy as predictors of math performance in different math contexts (Ashkenazi and Velner, submitted; Danan and Ashekanzi, 2022).

2. Methods and results experiment 1

The first study explores the interplay between MA, math self-efficacy, spatial anxiety and spatial abilities in explaining individual differences on two complex math tasks: math problem solution and computational estimation. Ninety-three college students took part in the experiment online, and completed 3 questionnaires 1) MA 2) math self-efficacy and 3) spatial anxiety, in addition to 3 tasks: 1) math problem solution (see Figure 1) 2) computational estimation (see Figure 2) and 3) a mental rotation task, to test spatial abilities. The results indicated that the interplay between math performances and cognitive and affective factors is related to task demand. MA and spatial abilities affected math performances directly, regardless of task. Spatial anxiety had only an indirect effect on math performances via MA, regardless of task. Math self-efficacy had an indirect effect on math performances via MA, and in the case of math problem solution, also had a direct effect on math performances (see Figure 1 and 2).

Figure 1. A) The results of the structural equation model (SEM) analysis with accuracy rates in complex verbal math problems as the dependent variable.

Note. MR = mental rotation; SA = spatial anxiety; Math = accuracy in complex math problem; MA = math anxiety. * = $p < .05$, ** = $p < .01$, *** = $p < .001$
 B) example for complex math problems.

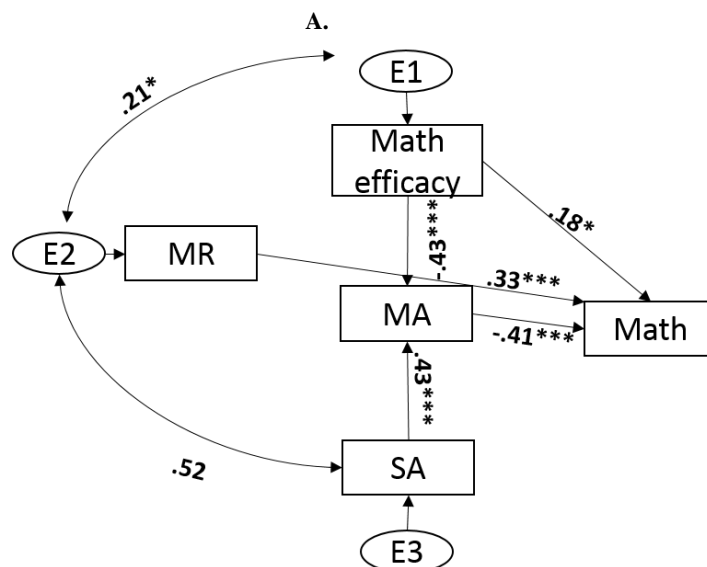
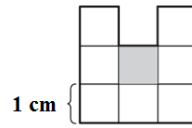


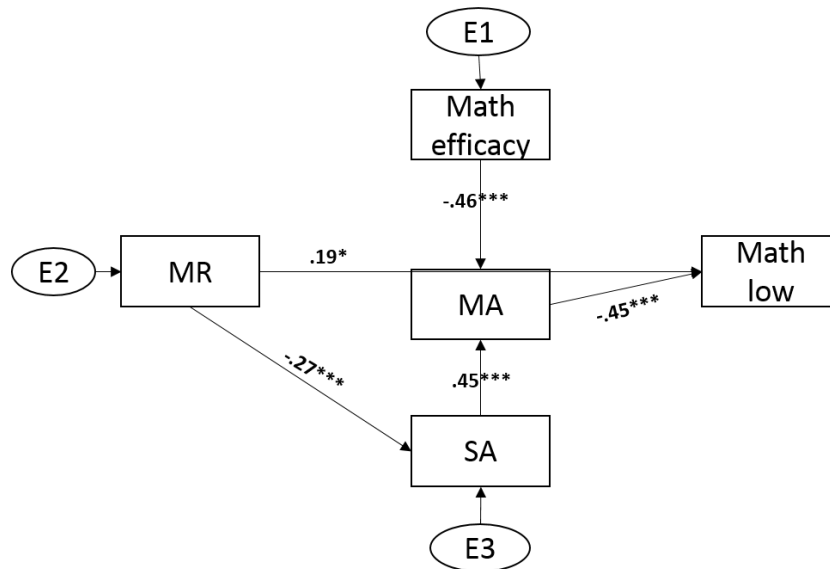
Figure 1. B) The drawing is composed of overlapping squares. Each Square rib is 1 cm. If you remove the dark square from the shape, the perimeter of the shape ___ in ___cm.



- (1) Decrease ; 3 ;
- (2) Decrease ; 2
- (3) Increase ; 3
- (4) Increase ; 2

Figure 2. The SEM analysis with accuracy rates in estimations of below problems as the dependent variable. Math low indicated accuracy in estimation were the reference number is lower or below the exact answer (e.g., $23 \times 34 = 156$).

Note. MR = mental rotation; SA = spatial anxiety; Math = accuracy in complex math problem; MA = math anxiety. * = $p < .05$, ** = $p < .01$, *** = $p < .001$



3. Methods and results experiment 2

To fully explore the complex relationship among math anxiety, spatial abilities, math performance and sex differences, the current study examined spatial skills, working memory skills, math anxiety, and self-efficacy as predictors of math performance. Participating in the study were 89 undergraduate Israeli students (44 males and 45 females).

The result showed sex differences in a few domains: MA was higher in females compared to males, males outperformed females in number line performance and spatial skills. The relationships among spatial abilities, math performance, and math anxiety were stronger in males than in females. By contrast, the relationship between math self-efficacy and performance was stronger in females compared to males (see Figure 3).

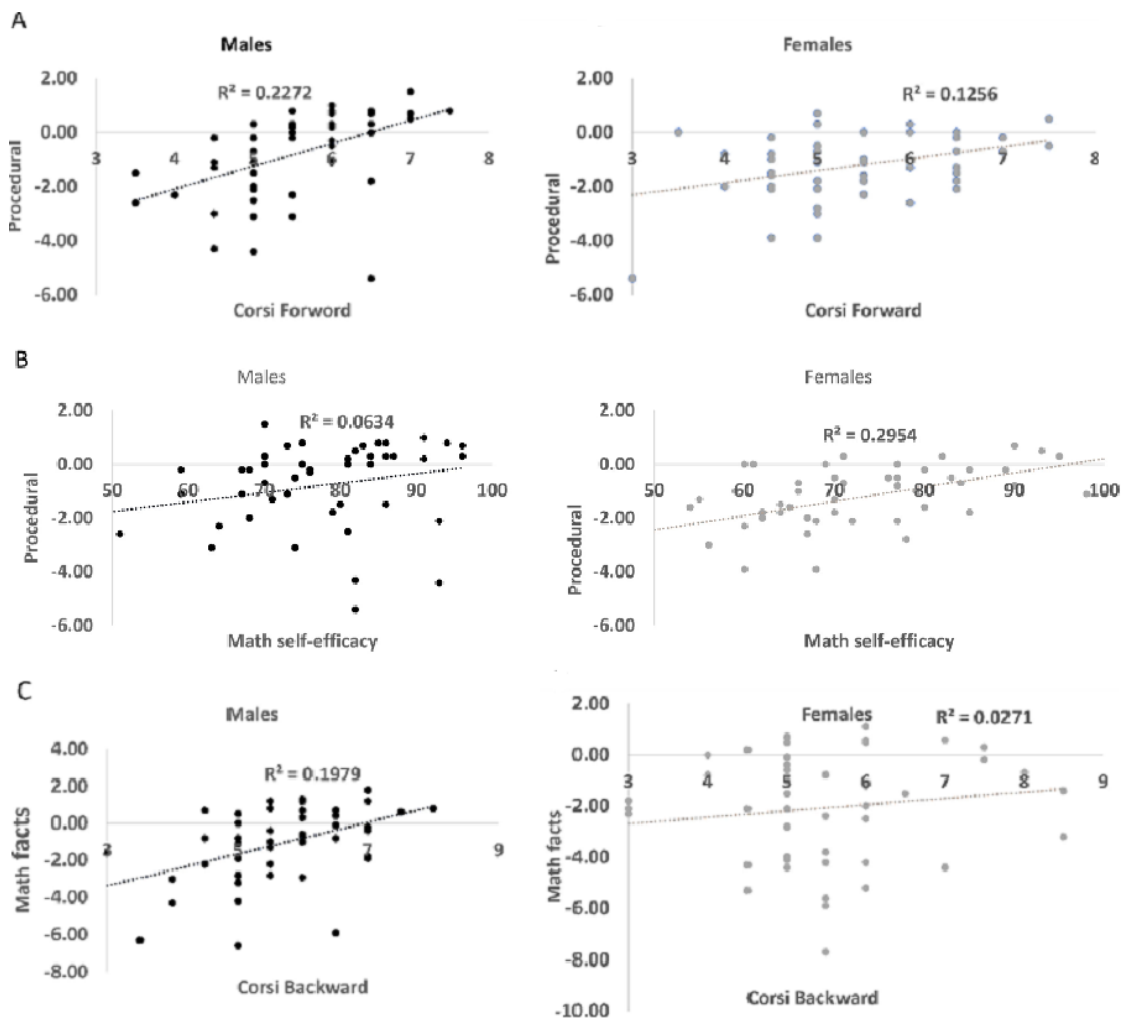
4. General discussion

These finding suggest that for math performances, contrary to MA, real spatial abilities rather than spatial anxiety play a significant role in explaining individual differences. Additionally, MA is a very important factor in explaining individual differences in complex math. Hence, the present result dissociates cognitive and emotional factors (Ashkenazi and Velner, submitted).

Moreover, the results indicated that the interplay between math performances and cognitive and affective factors is related to task demand (Ashkenazi and Velner, submitted).

Moreover, psychological factors, such as math self-efficacy can be the origin of sex differences since self-efficacy was more correlated to curriculum-based math tasks in females than in males. This demonstrated fundamental differences between the sexes, even with similar performances in curriculum-based assessments (Danan and Ashekanzi, 2022).

Figure 3. Correlation approached discovered that males have stronger associations between procedural math performances and visuospatial working memory than females (A). However, the associations between math self-efficacy and procedural math performances is stronger in females than males (B). Last, males have stronger associations between math facts performances and visuospatial working memory than females.



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FAMILIES OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS: PERCEPTIONS OF SOCIAL SUPPORT AND PARENTAL WELL-BEING

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Abstract

Research on social support in families of children with Special Educational Needs (SEN) points its influence in parents' health and well-being as well as in their involvement in the educational and therapeutic process. National and international laws assign parents a central role in assuring children's educational interests. Promoting quality of life and well-being are key areas in educational and therapeutic contexts. The aim of this study is to: i) compare parents of children with and without SEN in social support and parental well-being (life satisfaction) and these variables in parents of children with different problems; ii) understand the relationship between social support and well-being; iii) analyze the effect of sociodemographic variables on social support and parental well-being. This is a non-experimental and cross-correlated study with a non-probabilistic and convenience sample of 152 parents of children with SEN and 149 without SEN. Of the 152 children, 53.9% (n=82) showed Intellectual Disabilities (ID), 24.3% (n=37) Motor Disabilities (MD) and 21.7% (n=33) Autism Spectrum Disorders (ASD). Data were collected in the central region of Portugal. Instruments: Social Support Questionnaire

– short version, Life Satisfaction Scale; and a parental sociodemographic questionnaire. There are significant and positive correlations ($r=0.539$, $p<.001$) between social support and well-being (life satisfaction). Both parent groups have significant differences in well-being and in satisfaction with social support. In the SEN group, parents of children with ASD showed significantly higher values in social support than those with children with ID ($p=.001$) and MD ($p=.004$). A similar trend was observed in life satisfaction scale, but only with the ID group ($p=.005$). The results highlight the relationship between well-being/life satisfaction and social support and the need to invest in social support in SEN children's families. Intervention programs should include ways to support family's adaptation, empowering them to deal with these children giving them special attention. In the ecological/systemic and social support approaches, families are perceived as having skills, resources and needs, and the professionals should be, essentially, promoters, in a (co)constructed and dynamic process between family and technical expert, respecting family's autonomy.

Keywords: *Special education needs, families, well-being, life satisfaction, social support.*

1. Introduction

Research on social support for families of children with Special Educational Needs (SEN), in the context of inclusive education, has noted that it contributes directly and indirectly to several dimensions of parental and family functioning, including adapting to stress, parental well-being and involvement in the educational and therapeutic process (Dunst, 2017, 2021, 2022; Dunst & Trivette, 2010).

Social support can be defined as the set of resources provided to an individual or group by members of their social network. Family and child characteristics, themselves interdependent, partly determine social support and together affect adjustment and behaviour mechanisms in adverse conditions, affecting parental and family functioning and well-being (Dunst, 2017, 2021, 2022; Dunst et al., 2007).

The scientific literature on well-being is consistent in drawing attention to the vastness of this research area. Diener (2009) provides a definition of subjective well-being as an evaluative response of the individual to his/her own life, both in terms of satisfaction (cognitive dimension), and in terms of affectivity (stable emotional element). Thus, subjective well-being includes individual stable levels of positive affectivity, the absence or reduction of negative affectivity and life satisfaction. The affective dimension has two independent factors: positive affectivity and negative affectivity. Positive affect

consists of pleasant feelings and emotions, such as joy, enthusiasm, and happiness, while negative affectivity is reflected in the willingness to experience unpleasant feelings and emotions, such as shame, guilt, sadness, anxiety, and depression (Simões et al., 2000). The cognitive dimension of well-being refers to life satisfaction and involves the discrepancy perceived between aspiration and achievement varying with the degree of perception from totality to deprivation (Diener, 2009).

Within the framework of the inclusive approach, the theories and studies regarding social support and well-being are important because they adopt a positive perspective of parental/family functioning and perceive the potential of the parents' skills in promoting child development. Both Portuguese law (Decree-Law No. 54/2018 of 6 July) and international legislation assign parents a central role in promoting the educational interests of their children as participating decision-makers in the educational process, such that promoting their health and well-being are key areas of the educational and therapeutic intervention.

This study is part of a broader line of research on family of children with SEN functioning (Felizardo, 2010, 2013). The aim of this paper is to analyse social support and parental well-being (life satisfaction) of families with children with intellectual disabilities, motor disorders and autism. The following objectives have been defined: i) to compare parents of children with and without SEN in social support and parental well-being (life satisfaction) and these variables in parents of children with different problems; ii) to understand the relationships between social support and well-being; iii) to analyse the effect of sociodemographic variables on social support and parental well-being

2. Materials and methods

Research questions relating to the exploration of relationships between the study variables contribute to greater knowledge in the field, allowing an improvement in professional practices of those involved in the intervention. This study was designed to be non-experimental and correlational.

The participants were 152 parents of children with SEN and 149 without SEN, in a non-probabilistic and convenience sample. Data were collected in the central region of Portugal, contacting schools as well as institutions which support children and young people with disabilities and their families. With regards to the group of parents of children with SEN, our attention focused on the cases of parents or caregivers of children or young people with permanent SEN supported by the specialist services of Special Education, which in Portugal are covered by specific legislation (Decree-Law No. 3/2008 of 7 January). Of the 152 children, 53.9% (n=82) showed Intellectual Disabilities (ID), 24.3% (n=37) Motor Disabilities (MD) and 21.7% (n=33) Autism Spectrum Disorders (ASD).

The instruments used to collect data were:

i) Life Satisfaction Scale (Neto et al., 1990; Simões, 1992), which evaluates the cognitive dimension of well-being, with $\alpha=0.86$;

ii) The Social Support Questionnaire - SSQ6 (Portuguese version of the Social Support Questionnaire – Short Form; Pinheiro & Ferreira, 2001), which assesses two dimensions of support: the availability or extent of the personal network (SSQN) and overall satisfaction with the support (SSQS), with good levels of fidelity (respectively $\alpha=0.90$ and $\alpha=0.96$);

iii) Parental questionnaires, A and B, to be filled by parents of children with SEN and without SEN, respectively, to collect sociodemographic data (concerning to the child: age, and to parents: age, education, single or biparental family, occupation), and educational institutions attended.

3. Results

Referring to the objectives of this study, we carried out statistical analyses on both parent groups (with and without SEN) regarding social support and well-being (life satisfaction). In availability of support (SSQN), differences are not significant ($t=-1.033$, $p=.30$). However, in satisfaction with support (SSQS), the differences are statistically significant ($t=-6.099$, $p=.000$). Parents of children without special needs had higher results, $M=30.85$ ($SD=4.23$) than parents of children with SEN, $M=26.51$ ($SD=7.6$), meaning that, despite similarly extended network, it is a less satisfactory support form for the several needs of this parents. Regarding the well-being (life satisfaction), both groups showed significant differences ($t=5.736$, $p=.000$) with parents of children without SEN showing higher values ($M=19.36$, $SD=4.09$) than the other group of parents ($M=16.55$; $SD=4.394$).

Analysis of the relationship between perceived social support and the well-being dimension was performed initially using the correlation coefficients between the measures of social support and life satisfaction scale. Thus, we observe that social support in both subscales (availability/SSQ6N), shows significant and positive correlations ($r=0.539$, $p<.001$) with well-being (life satisfaction).

Social support and life satisfaction present statistically different results depending on the type of problem (one-way ANOVA). In Table 1, we can observe the significant differences in the subgroups of parents of children with ID, MD and ASD. From detailed analysis with post-hoc comparison (Scheffé test), we found on the perceived social support, extent of the network (SSQ6N), higher values in parents/caregivers of children with ASD, comparing with ID ($p=.001$) and MD ($p=.004$).

The life satisfaction scale follows a similar trend: better results in parents of children with ASD ($p=.005$) than with ID.

Table 1. Means, standard deviations and ANOVA of the social support measures and life satisfaction as a function of type of issue faced by child with SEN.

Measures	Intellectual Disabilities (ID) (n=82)		Motor Disabilities (MD) (n=37)		Autism Spectrum Disorders (ASD) (n=33)		F	p
	M	SD	M	SD	M	SD		
Social Support Questionnaire (SSQ6)								
SSQ6 Number	13.37	7.92	13.27	6.35	19.51	8.74	8.15	.000
SSQ6 Satisfaction	25.41	8.50	26.62	5.86	29.12	6.41	2.86	.060
	Scheffé Test – SSQ6N - ASD>ID; ASD>MD							
Life Satisfaction	15.74	4.59	16.48	4.37	18.63	3.16	5.40	.005
	Scheffé Test – Life Satisfaction – ASD >ID							

In the sociodemographic variables, the type of family stood out as a differentiator of social support and life satisfaction, with advantage for two-parent families (Table 2). Also in regression analyses, the biparental family has a considerable predictive value in the development of life satisfaction ($\beta=.119$, $p=.036$).

Table 2. Means, standard deviations and t test of the social support measures and life satisfaction as a function of family type (single parent or biparental).

Measures	Biparental (BP) (n=124)		Single parent (SP) (n=27)		t	p
	M	SD	M	SD		
Social Support Questionnaire (SSQ6)						
SSQ6 Number	15.8	8.41	11.1	7.1	2.7	.008
SSQ6 Satisfaction	29.4	5.98	24.7	8.39	3.42	.001
Life Satisfaction	18.49	4.26	14.38	4.13	4.56	.000

4. Discussion

The results highlight the relationship between well-being/life satisfaction and social support, according to the evidence in well-being and health (Diener, 2009; Kovalčíková et al., 2020; Pavot & Diener, 2009). In the social support, the lower results in satisfaction of parents with SEN children, could be due to the range of needs at the emotional and instrumental support level. These results lead us to rethink intervention, particularly the type of support provided which should be more according to the families' needs and resources. This is particularly important considering the responsibilities attributed to the school by legal framework on the inclusion of children with SEN.

The results show congruence with the social support validity studies (Saranson et al., 1983) which found significant negative correlations with anxiety and depression measures and significant positive correlations with variables of psychological well-being, particularly in positive relationships with others, personal development, and satisfaction (Jam et al., 2018; Pavot & Diener, 2009).

We found that parents of children with ASD have significantly higher values in social support (availability of support and satisfaction with support) and life satisfaction. This finding was not expected, due to the frequent specific difficulties of these parents, associated with the communication, social interaction, and behaviour problems of children with autism (Benson & Karloff, 2009; Anjos & Morais, 2021). The explanation may lie in the support from an institution with a specific vocation for this problem, attended by the children/young people, which works closely with parents or caregivers, promoting sharing and support between groups of parents. Additionally, children and their families benefit from specialized monitoring by structured teaching units located in regular schools.

The biparental family can be a form of emotional and affective support, but also instrumental, in sharing educational and childcare tasks. Thus, the values of satisfaction with life seem to be substantially linked to social support and the problems of the family system, which converges with investigations that emphasize the relationships between the dimensions of social support and results in well-being and health (Martínez-Rico et al., 2022).

5. Conclusions

The results highlight the need to invest in social support of SEN children's families. Intervention programmes should include ways to support family's adaptation, empowering them to deal with these children giving them special attention. The measures and actions should include the knowledge of specific children's problems as well as controlling and preventing inappropriate behaviour. This could be developed by counselling or family therapy. However, the support provided by parent groups and promoting positive, but realistic, expectations about children are particularly important, especially in the early stages of adjustment (Gupta & Singhal, 2004; Ragni et al., 2022).

In the ecological/systemic and social support approaches, families are perceived as having skills, resources and needs, and the professionals should be, essentially, promoters. Moreover, solutions to problems must be (co)constructed as a dynamic process between family and technical expert with respect for the family autonomy as the standard.

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VIRTUAL EDUCATION SYSTEM: A RESPITE FOR OUT-GROUP TEEN STUDENTS

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Abstract

The recent pandemic has presented a unique opportunity to test the impact of remote learning on students globally. Despite several shortcomings, the virtual education system had a beneficial effect on students who have been outcasted, bullied, or othered. Often, it is observed that the teenagers who are more likely to be bullied and display neuroticism, are shy and introverted. Studies have shown that intrinsic motivation is the key for the mind development of shy teenagers and operant conditioning strategies often fail, impacting their minds negatively.

Analyzing the personality traits on data collected through 126 surveys conducted in-person, electronically, and over phone, I observed that the statistically significant number of students who prefer a virtual education system over an in-classroom environment, are typically shy-natured and had faced some forms of othering situations while attending school in-person. Many were demotivated, disengaged, and felt un-included in traditional schools, stressing them towards behavior alteration, fake liking, and many times developing an aversion towards the school system itself.

Much of my initial research is conducted at Fulton Academy of Virtual Excellence (FAVE), a K-12 virtual public school based in Fulton County, Georgia, USA, which first opened its virtual classes during the pandemic and continues to enjoy popularity among certain sectors of the student population even in the post-pandemic era. The research here points out that an opportunity exists to extend the strategies that make up an effective virtual education system for teenagers to create leaders suitable for modern-day needs, because intrinsically motivated minds are found to be more effective leaders in the new knowledge economy.

Keywords: *Virtual, shyness, othering, intrinsic motivation, knowledge economy.*

1. Introduction

As a 10th grade student with exposure to both in-person and online schooling due to the pandemic disruption, I am a datapoint myself experiencing the pros and cons of both online and in-person learning approaches. Virtual learning systems may pose some unfamiliarity and challenges, but it also can lead to some advantages to a sector of students who have been ignored due to them being a minority in numbers for various reasons. I noticed that I could learn better in a virtual setting and prefer the virtual education system over in-person classes, the reasons of which I have discussed in the following sections.

The current research is motivated from my own experience and understandings that were generated from my discussions with friends that made me believe that my experience is not unique. This made me delve into finding connections between personality traits and effectiveness in a virtual learning environment.

1.1. Impact of digital technology on mind formation in Generation Z

I was born just a year before the first release of the iPhone. By the time I was 2 years old, I was playing with an iPhone. I used to enjoy playing with my smartphone more than any of my other toys which might have shaped parts of my early childhood behavior as well as my personality (Savina, E., et al. 2017).

I didn't speak till I was 4 ½ years old, which was classified in my elementary school as a speech delay. I went through speech therapy, and I always enjoy being in my own world: I love numbers, playing video games, electronic media, alongside possessing a vivid memory of numbers/images often not important to others. When I introspect, I have been considered and still am an extremely shy person. I want to point out that the digital media does and can play an impacting role for this generation of smartphone, shy-natured kids and the virtual education system could provide a shelter for their mental growth.

After I graduated from my first grade, I can remember that I started fake-liking my school. I have some recollection that I was afraid of being ridiculed at school because of my actions. Later, I understood that the school system was primarily focusing on behavior which I felt was providing restrictions to freedom as well as flexibility. Now I realize many students go through similar dislikes as they attend schools.

1.2. Deficiency with the current school system

School may not be rewarding for many reasons, esp., if the kid is out grouped, bullied, or does not perform well on tests. Out-grouped kids feel unequal to the majority and tend to possess low self-esteem (Zhang Y, et. al., 2021). Lack of good teachers, teaching resources make the situation worse. Traditionally, two main attractions of school have been friends and playgrounds. But most kids do not have intimate friends in the US schools today primarily because of classmates changing from one class period to another and stars need to be aligned to get the same set of friends in next year's classes. Playgrounds are also losing their charm because most schools promote competitiveness in games as opposed to having fun, to a degree where an average student player gets no recognition, thus finding even games rather a demotivator. These somewhat unpopular, loner kids fall back on social media, where though they face other risks, they feel less threatened.

The recent pandemic had presented a unique test ground for virtual learning; across the world, schools tried remote teaching methods and understood the pros and cons. During this time, it brought a great opportunity for me as well to discover the best way to learn without sacrificing self-esteem. Moreover, much of the content taught in classes are easily and freely accessible through the Internet. Sometimes, the quality of the material on Internet are more appealing than in a classroom setup. These together raise a question; how does traditional schooling today contribute to the progression of our generation?

I realized that many see school as a boring, mechanistic, system which primarily teaches through an operant conditioning strategy where test-taking abilities are rewarded more than actual learning. The ongoing school system is derived from the onset of the Industrial Age when manufacturing workers were needed (Brooks, D., 2012). Over the last 100+ years, the education system had been modified, but it still tries to fit in the old framework where obedient behavior, rote-based learning, and competition between students are rewarded more than collaboration and creativity. PBAs, or Project Based Assessments, are newly introduced practices in school that are designed to increase collaboration amongst students. However, most often, one or two group members hard carry the rest of the members. To those contributors, PBAs do not feel "just" in terms of rewards, efforts, as well as contributions being put forward for the project.

With the new millennium, the work nature has shifted towards knowledge space, where knowledge workers will be fueling growth, economy, as well as future practices. This requires overhauling of the education system. If we need to improve the education system, it should be driven by the need of the students of my age rather than a modified system designed by the educators who had been educated and associated within the past system. This has been my second main incentive for carrying out this research.

1.3. Creativity, motivation, and teen psychology

Based on my own experience and inputs from my friends, I have formed a hypothesis that shy or introverted kids who are intrinsically motivated and had experienced being outcasted find the virtual education system as a better fit. I am outlining the rationale of my thought in the following sections.

Perceived fear of embarrassment prohibits the timid and out-grouped kids to try and thus side-tracks them from gaining valuable hands-on experience; this also makes them learn fake-liking early on creating a distance between their outward and inward persona. Internally, they feel less confident, but they cannot afford to show the same feeling outside due to peer pressure or potential embarrassment. Over the years, the lack of having fun in school and the existing reward-punishment system practiced in schools can push some kids to develop anxiety, even depression. This is quite unfortunate for the newer generation of Gen Z and Gen Alpha because knowledge economy leaders should be fundamentally self-motivated, confident, creative, and problem solvers. Many of these left-out kids could have fulfilled that need.

In the article "Motivation for Creation", Jessica Koehler describes how Intrinsic motivation is the soul of a creative mind and how natural curiosity inspires imagination to spark creative thoughts (Koehler, J., 2019). According to the prominent psychologist Beth Hennessey, "Over the years, my colleagues and I have discovered that intrinsic motivation, the motivation to engage in an activity out of sheer interest in and excitement about a task, is essential for creativity; and extrinsic motivation, motivation driven by someone or something outside the task itself, is almost always detrimental." We must not forget this great observation. Shyness has its power, and the shy individuals often prefer digital platforms as information sources as well as to express their minds (Appel, M., et. al. 2019). The 2012 cover article in Time Magazine talked about the strength of shyness (Walsh B., 2012). It defined that "Shyness is a form of anxiety characterized by inhibited behavior. It also implies a fear of social judgment that can be crippling." But this

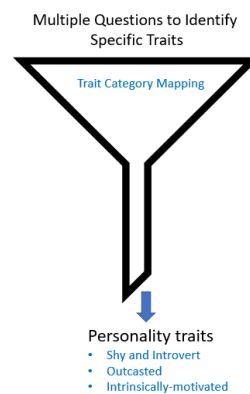
inherent characteristic can be powerful, as the later part of the article points out, "Wharton Business School psychologist Adam Grant has found that introverted leaders mesh best with empowered and independent employees, while traditionally extroverted executives work best with employees who take orders easily.

If the above observation is right, then the loner group could be turned into becoming leaders of the next generation. This has been my third motivation for this research because identifying and promoting the personality traits is key to build our futuristic leaders.

2. Objectives & methodology

To prove my hypothesis, I initially carried out 130 surveys electronically, in person, and over telephone, but 4 were dropped due to data errors. So, I had 126 surveys that I could use for the analysis. There were 3 demography related questions and 15 personality trait questions that were framed using 16PF and Myer-Briggs methodology. The survey was conducted and targeted towards middle and high school students, though for a generalization purpose, a decent number of surveys were also conducted amongst the college students and graduates. The 15 "virtual learning mentality" survey questions were prepared in a way so the responses can be grouped to ascertain if the students will fall in one or more of the three categories, e.g., "shy and introvert", "outcasted", "intrinsically motivated", along with their likings for a virtual learning environment. The answers to the survey questions generated an ordinal data set. Ordinal data are not quantitative enough for deriving a meaningful correlation coefficient, but they give a sense of 'preference order' alongside a qualitative relationship between the traits and the learning preference.

Figure 1. Survey questions and personality trait funneling.

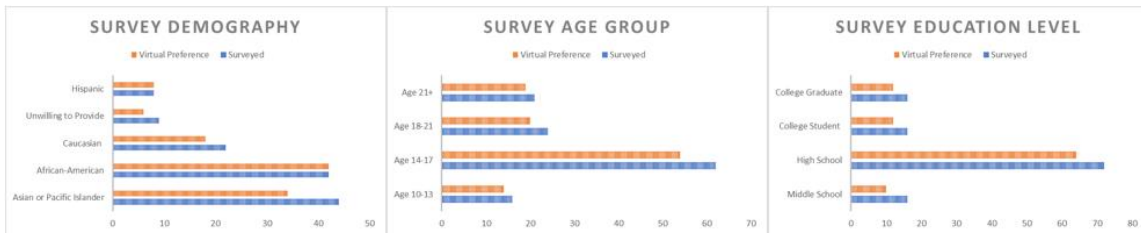


The responses to the survey questions that are pertinent to each personality trait category were first converted to a number between 1 and 5 (1 being strongly disagree, and 5 being strongly agree) and then were grouped on an average basis to create a score for that personality trait for each respondent. The score may not reflect the degree of the trait in a person e.g., how shy a person is but is indicative enough to classify if the person is more "shy and introvert" than not. Once the personality traits score is established, I used that to link with their virtual learning preferences. Figure 1 describes this funneling methodology.

3. Result interpretation

This survey was targeted to only those who are directly linked with the US education system and regularly experience a virtual learning environment. 71% of all who took the survey were middle and high school students. Figure 2 describes that about 80% of all who took the survey were either Asian or Pacific Islander or African American in ethnicity. Approximately, 78% belonged to the age group of 10-17. Here I want to point out that the survey was not discriminatory and was floated to all, but those who chose to take the survey are described in this demographic. To understand the hidden relationships between the virtual learning preferences expressed by the students and the personality traits, e.g., "shy and introvert", "outcasted", "intrinsically motivated", I chose to present my analysis using scatter plots rather than calculating a Pearson or Spearman correlation coefficient.

Figure 2. Survey details e.g., demography, age group, education levels.



The inherent difficulty of ordinal data over a quantitative measure, and on top, the impossibility of ranking one person’s response over another made me choose this approach. Figure 3 describes the “Virtual Preference” by the three personality traits for all who took the survey, whereas Figure 4 shows these same trends for those who are in middle and high school.

Figure 3. Virtual preference by personality traits for all respondents.

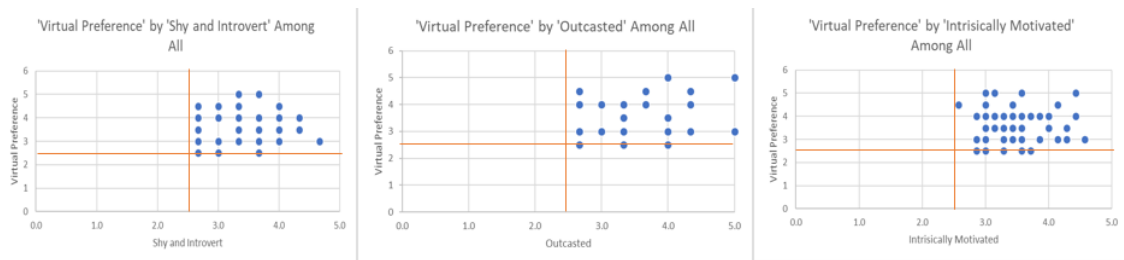


Figure 4. Virtual preference by personality traits in Middle and High School.

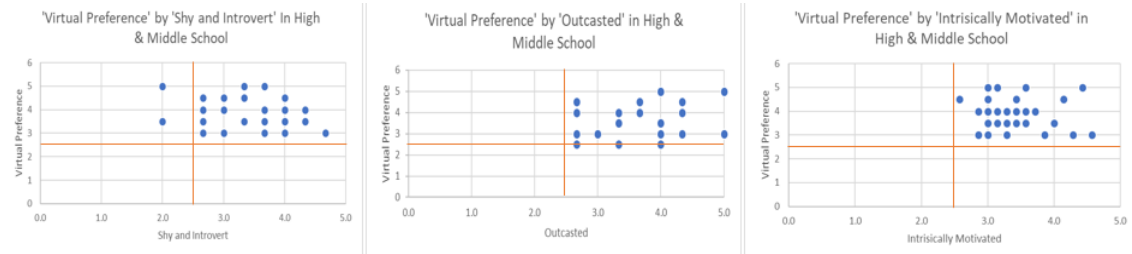
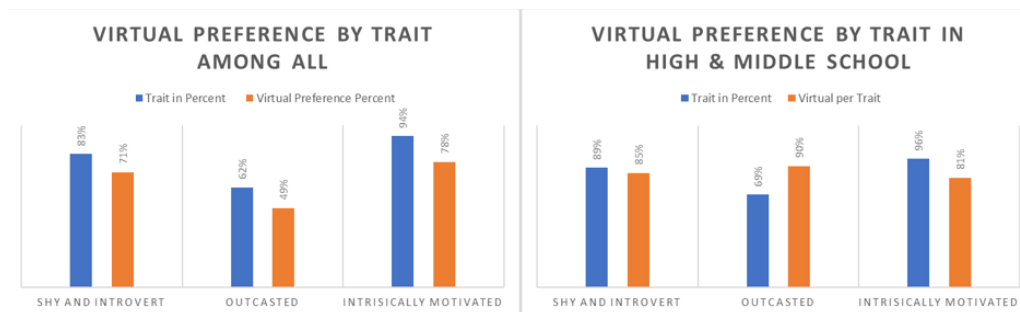


Figure 5. Virtual preference by personality traits.



The overwhelming concentration of data points in the “Top-right” quadrant proves the hypothesis that shy and introverted students who are Intrinsically motivated and have a feeling of being outcasted disproportionately favor the virtual education system among all who took the survey. The red line at the 2.5 mark specifies the midpoint of the trait and the virtual preferences (note: both domain and range of the plots are between 1 and 5). The correlation between virtual preference and the personality characteristics of the students aligns with my expectation.

Figure 5 above displays a very interesting observation. The blue bar in Figure 5 shows the personality trait that is present in the group that took the survey, whereas the orange bar shows those who not only have the traits but also have the preference for virtual learning. The distinction between the “outcasted” respondents who are in middle and high school when compared to the rest bring out one significant observation. The right-hand middle plot shows 69% of all who took the survey from middle and high school felt that they were outcasted but overwhelming 90% of those outcasted students preferred virtual learning. When compared to all students in all age-groups, 62% believed they were outcasted and only 49% of them showed inclination towards virtual education. This demonstrates that among teenage minds, the “out-grouped feeling” plays a more impacting role, and they find that virtual system is a more comfortable learning environment.

I think I can rationalize this intriguing observation presented in Figure 5 through my own experience. Fulton Academy of Virtual Excellence, also known as FAVE, is an up-and-coming K-12 online school in Fulton County, Georgia, and I’m in this school. Many online school programs focus on synchronous learning techniques where classes are offered over mandatory video calls for the duration of the class. But in FAVE, we have the coursework, study material, and assignments laid out for the entire semester, and we work on them at our own pace though class meetings are available to join. I enjoy this tutoring-like, self-learning environment, and the opportunity of limited interactions makes me comfortable. Also, many students who have joined this school enjoy this freedom and control of their own progress.

One more uniqueness of this school is that we can take quizzes or assignments multiple times. The questions do not repeat in the subsequent attempts; however, it motivates the students to learn more and try multiple times and improve upon. I believe that school should create an environment of encouragement, promote trials, and remove the stigma that is attached to failures. Multiple failures should not draw shame, rather should be exemplified because someone is showing tenacity and trying many times. It appears to me that the virtual education environment which not only refuges the out grouped teens, but also possess the ability to foster the intrinsic motivation of a creative mind, can create the leaders we need for the upcoming knowledge economy.

4. Conclusions

Though the sample data sets were limited, the preliminary research presented here shows a strong link between the positive preference in virtual education and intrinsically motivated, shy, introverted characteristics that are often prone to be bullied in an in-person environment, especially in middle and high school. I believe that the research should be further carried out in a larger group with more diversity, and virtual education techniques should be perfected to create new knowledge economy leaders.

I extend my thanks to my teachers and acknowledge my friends in FAVE, and to those unknown to me who took the survey electronically and helped me prepare this study.

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“BULLYING AND CYBERBULLYING AT SCHOOL”: AN ACTION RESEARCH PROJECT AT A LOWER SECONDARY SCHOOL

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Abstract

This paper describes a pilot action research study conducted at the "Aldo Moro" lower secondary school in Stornarella-Ortona (Foggia, Italy). The study in question involved the whole institute (six classes), as part of an outreach and training course co-managed by the Learning Science Hub research center of the University of Foggia. The main aim of the project was to carry out an intervention that directly involved young people, in a student-centered dynamic. The intervention integrated the use of Information and Communication Technologies (ICT) in a cooperative way to raise awareness of bullying and cyberbullying. Motivations and results of the present study align with some recent national legislative provisions put in place to discourage the phenomena, thus responding to a precise need detected by governance and surveying data in a socio-demographic context hitherto little considered in research processes on the topic. The project in question involved the delivery of validated self-report questionnaires to assess the effects of the intervention, namely the Florence Bullying and Victimization Scales (FBVSs) and the Florence Cyberbullying and Victimization Scales (FBCVSs). The present study presents the results of an intervention that integrated the use of ICT, and Digital Storytelling (DST) in particular, with the aim of implementing the intervention research model.

Keywords: *Bullying, cyberbullying, media education, digital storytelling, ICT.*

1. Introduction

Bullying dynamics, as well as the perpetration of the same in digital environments, i.e., cyberbullying (Smith et al., 2008; Smith, Del Barrio, & Tokunaga, 2013), represent a problem that afflicts many students around the world. This problem cannot be ignored at all, given its obvious negative impact on the well-being of young people: victims of bullying and cyberbullying show social anxiety and depression (Martínez-Monteaudo, Delgado, Inglés, & Escortell, 2020; Chou et al., 2020), and in some cases suicidal ideation or attempts (Hinduja, & Patchin, 2019; Dorol & Mishara, 2021). In Europe, the phenomenon of peer violence in school settings has been studied for several decades now (Olweus, 1973), with positive and concrete effects on the design of effective interventions (Salmivalli, Kärnä, & Poskiparta, 2011; Del Rey, Ortega-Ruiz, & Casas, 2019; Guarini et al., 2020) and policies aimed at preventing and counteracting its forms and manifestations.

Despite the excellent results reported so far and the adoption of legislative measures in response, the phenomenon continues and persists. From the "Global Status Report on Preventing Violence against Children" published by the WHO (2020) we learn with dismay that one-third of students between the ages of 11 and 15 are involved in bullying and cyberbullying dynamics. There is also to consider that the exponential increase in the use of the Internet makes young people increasingly vulnerable to cyber-violence incidents, which include hate speech, theft of personal data, grooming, non-consensual sharing of private and/or intimate material, and have the characteristic of invading the victim's private space without any physical limits to stop them (Tokunaga, 2010), thanks to the very digital medium. However, ICT (Information and Communication Technologies) themselves, from being a potential vehicle and catalyst for virtual aggression, can also become a helpful ally in prevention and intervention programs against such phenomena.

¹ All authors equally contributed to the study.

Exploiting contemporary technologies to their advantage in the field of bullying prevention, in fact, is useful, on the one hand, to update and implement traditional programs; on the other hand, it serves to train students and teachers involved in the conscious use of digital technologies, in line with what is prescribed by European development frameworks (EU, 2019; 2020). In this regard, the study is presented as a pilot study for an action research intervention aimed at integrating ICT within a prevention program to bullying and cyberbullying in a lower secondary school.

2. Research design

Bullying prevention programs that directly involve students, thus seeking to capture the youth perspective and make students co-researchers of the project itself, have, moreover, the advantage "to allow new friendships to develop with victimized students," since "classroom discussions about bullying may engender empathy toward victims, which would facilitate bystander interventions in bullying incidents" (Slee & Skrzypiec, 2016, cit. p. 164). In order to ensure the centrality of youth voices in the process, an action research intervention was chosen, traditionally understood as "a form of self-reflective enquiry (...) to improve the rationality and justice of their (*scil.* the participants) own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out. These participants can be teachers, students or principals and the process is most empowering when undertaken collaboratively, though sometimes it can be undertaken by individuals and sometimes in cooperation with outsiders" (Kemmis & McTaggart, 1998, cit. pp. 5-6). Based on this, the research was conducted by directly involving students, promoting circular communication and extracting useful data for project follow-up, which will take place in the second semester of the school year. The dual objective of the present pilot study, in accordance with the principles of action research (Meyer, 2000), is to collect data while attempting to influence the environment-in this case, the six classes involved in the project-in a positive light, preparing the ground for designing a targeted intervention to counteract bullying and cyberbullying. As such, the research question underlying the study was:

RQ: Which are the levels of bullying and cyberbullying after a 3-week action research intervention with ICT integration on a group of lower secondary school students?

3. Methods and materials

3.1. Participants and procedure

Eighty-six students participated in the project (December 2022-January 2023), called "Bullying and cyberbullying at school" and carried out at "Aldo Moro" lower secondary school in the province of Foggia (Italy). The intervention was articulated in 5 meetings, for a total of 15 hours. A research team composed of two psychologists and two pedagogists coordinated the activities, in collaboration with the reference teacher for bullying and cyberbullying of the institute². Meetings consisted in: 1. introduction on the topic and pre-test measurements; 2. interactive completion of a Mentimeter presentation and circle time for surveying youth's perspective on the topic 3. Digital Storytelling (DST) workshop with storyboard making (di Furia, Guarini, & Finestrone, 2022), theoretical introduction to the participant roles of bullying behavior (Salmivalli et al., 1996), and participants' production of digital role playing (3 meetings in total). The post-test measures were then administered upon return from the Christmas vacations. On February 7, during Safer Internet Day celebrated in about 100 nations around the world, a dissemination meeting on the project was held at the school, in the presence of parents and conducted entirely by the students.

3.2. Measures

Three families did not consent to data collection. All participants were given pre and post-tests self-report questionnaires, but only 75 of them actually completed both questionnaires. To measure the incidence and prevalence of bullying and cyberbullying, the Florence Bullying and Victimization Scales (FBVSs) and the Florence Cyberbullying and Cybervictimization Scales (FCBVSs) were used. These are self-report questionnaires validated on previous evidence-based interventions (Palladino, 2013; Palladino, Nocentini, & Menesini, 2016). In the post-test, the question "How many times in the last 2-3 months have you..." was changed to "How many times in the last few weeks have you..." in order to put the focus on the period of the intervention. The FBVSs has two versions: one for bullying; one for victimization. Each version of the FBVSs consists of ten items that assess how frequently have the respondents experienced specific situations (e.g., "I've been beaten up"; "I beat somebody up"); each item is measured on a 5-points Likert scale (1 =; 5 =). The FCBVS also includes two versions (e.g., cyberbullying; cybervictimization).

² This figure was introduced in Italian schools with the Law no. 71 (2017).

Each version has 14 items concerning specific online situations (e.g., “How many times have you received text messages with threats and insults”; “How many times have you sent text messages with threats and insults”). Each version of the FBVSs include 3 subscales, with 4 items on physical bullying (e.g. “receiving/giving punches and kicks”), 3 items on verbal bullying (e.g. “insulting/being insulted”), and 3 items on indirect-relational bullying (e.g. “ignoring/being ignored”). Each version of the FCBVSs includes 4 subscales, with 4 items on written/verbal behaviors (e.g. “receiving/sending threatening messages and/or calls”), 3 items on visual behaviors (e.g. “receiving/sending pictures of embarrassing situations”), 3 items on exclusion behaviors (e.g. “being deliberately ignored/ignoring in virtual group settings”) and 4 items on impersonation behaviors (e.g. “being deprived of personal data/stealing personal data”).

3.3. Data analysis

To measure the incidence of bullying and cyberbullying among our sample descriptive statistics (i.e., means, standard deviations, frequencies and percentages) were calculated. In addition to this, to verify possible changes in the levels of bullying and cyberbullying after the 3-week action research intervention with ICT integration a paired t-test was performed. All the analyses were conducted using SPSS v. 27 (IBM Corp., 2020).

4. Results and discussion

Among the respondents, boys and girls were balanced (53.3% and 46.6% respectively). None of them recognized him- or her-self as a non-binary person. The mean age was 11.96 (SD = .907). FCBVSs define two different levels of involvements in cyberbullying and cybervictimization, which are occasional (two or three times a month or more often) and severe (about once a week or more often). 29 students (42.6%) reported being occasional cyberbullies. After the action research intervention with ICT and DST, the percentage of students who reported being occasional perpetrators of cyberbullying was lower ($\chi^2_{(0, N=68)}=12.747, p=.000$). Also, there was a significant decrease in the levels of written/verbal cyberbullying [$t_{(72)}=2.180, p=.033$], visual cyberbullying [$t_{(70)}=2.113, p=.038$] and cybervictimization based on exclusion [$t_{(70)}=2.427, p=.018$]. The intervention did not have a short-term significant effect on the other variables investigated (i.e., occasional and severe bullying; severe cyberbullying). Table 1 shows mean scores of the investigated variables that significantly improved before and after the action research intervention:

Table 1. Significant mean scores before and after the action research intervention in relation with cyberbullying and cybervictimization.

	Pre-test	Post-test
Written-verbal CB	M=4.78, SD=1.94	M=4.30, SD=1.26
Visual CB	M=3.33, SD=1.08	M=3.05, SD=0.27
Exclusion CV	M=4.40, SD=1.80	M=3.78, SD=1.40

5. Conclusions

The present pilot study, by its very nature purely exploratory, has some limitations that need to be considered. First, the sample has a low degree of representability, since it refers to only one school in the area under consideration and thus represents a limited and fairly homogeneous population. Nevertheless, to our knowledge, there are no previous experiences of anti-bullying interventions with integration of ICT-based methodologies and data collection at the local level. Therefore, the results obtained, considered by the authors to be relevant and promising, open the way for reproducibility of the intervention on broader and more dishomogeneous populations. Furthermore, thanks to the circle time phase, aimed at eliciting social and emotional learning from a cooperative perspective (Cefai et al., 2014), qualitative data were collected that will be useful in developing subsequent lines of research and intervention, in accordance with the protocols of action research, whereby "action" and "research" are "contemporary," meaning that "research provides the cognitive support for action, which in turn modifies the situation and makes new research necessary to delineate the new picture that has been created" (Trincherro, 2004, cit. p. 142). The experience is presented as the first phase of a broader action research design aimed at implementing the previous models of intervention, employing the best practices from the fields of experimental pedagogy and media education. The results obtained take a snapshot of some of the dynamics at work among the survey population before and after the ICT-based intervention. In particular, the significant decrease in

occasional cyberbullying indicates the effectiveness of the intervention in terms of raising awareness and consciousness in managing online behaviors. In support of this, the significant decrease in written-verbal and visual cyberbullying can be cited; cybervictims also reported that they were less excluded in digital contexts. This can be the result of the collaborative activities carried out, particularly the digital role playing performed through the DST methodology (di Furia, Guarini, & Finestrone, 2022). Project outcomes were presented in a final dissemination event co-conducted by students and researchers with parents and teachers in the audience. In addition to the data obtained, during the course of the intervention 1) bullying and cyberbullying-themed posters were produced by the students, by means of recycled materials (old books and magazines, plastic objects, cloths, etc.) and designed by the students (Fig. 1), to be kept and displayed in the classrooms 2) Digital Storytelling products were written, interpreted, recorded, and edited by the students, and the published on the website of the "A. Moro" lower secondary school in a specially set up repository.

Figure 1. Examples of posters made by the students using bottle caps, plastic straws, images and texts cut from books, newspapers and magazines.



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THE RELATIONSHIP BETWEEN PRE-DEPARTURE RISK-RELATED INDICATORS AND POST-PANDEMIC EMIGRATION PLANS AMONG ADOLESCENTS

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Abstract

The negative effect of the COVID-19 pandemic on economic development of weakly diversified Slovak regions has been shown to be associated with emigration plans of young, educated people. The relationship between the emigration plans and the pre-departure health indicators during COVID-19 has become an important issue requiring further research. The aim of this study was to investigate the relationship between the pre-departure risk - related indicators (smoking, alcohol consumption) and the post-pandemic emigration plans and intentions to study abroad among Slovak adolescents. A cross-sectional survey design was adopted. A paper-pencil and online surveys were carried out between October – November 2021. A total sample consisted of 296 adolescents from the eastern part of Slovakia (50.7% girls, M= 17.7 years). Regression analyses examined associations between smoking, alcohol consumption (both during past 30 days), and post-pandemic emigration plans, as well as an intention to study abroad. Gender and COVID-19 related variables were included as the control variables. Adolescents who reported alcohol consumption were more than 2-times more likely to report post-pandemic emigration plans than those who did not report alcohol consumption, controlling for gender and all COVID-19 related factors in the model. Higher level of post-pandemic study abroad intention was found among girls and adolescents who reported alcohol consumption. The results of this study confirmed a gender dimension to intention on study abroad and emigration plans among Slovak adolescents. This study contributed to the understanding of the pre-departure migration – health indicators relationship with implications for alcohol school-based prevention and policy.

Keywords: *Emigration plans, smoking, alcohol consumption, adolescents, COVID-19.*

1. Introduction

This study is focused on secondary school students in Slovakia and aimed to investigate their intentions and plans to study abroad after completing their secondary education. Particularly, the factors related to emigration flows of students to universities abroad and their emigration plans after finishing their study were investigated.

Firstly, Slovakia is a country which has faced the demographic crisis and significant brain drain (IFP, 2017). “Slovakia is third in the OECD in terms of the number of young people leaving to study abroad.” (Bleha & Sprocha, 2020, p. 151). The interest of the most successful Slovak graduates to study at foreign universities has been increasing for a long time (Martinák & Varsik, 2020).

Secondly, graduates and especially those from the areas that generally suffer from unemployment migrated to more economically developed parts of Slovakia or abroad (Svabova & Kramarova, 2022). Additional important factor can be seen in the significant impact of the COVID-19 pandemic on the development of unemployment in the Slovak Republic which has been well documented (Svabova, Metzker, & Pisula, 2020, Svabova, Tesarova, Durica, & Strakova, 2021). The COVID-19 pandemic disrupted normal day to day life of adolescents and affected their health behaviors to a large extent. For example, the frequency of alcohol use, occurrence of depressive and anxious symptoms, and general levels of fear and concerns regarding the impact of COVID-19 on their lives among adolescents have increased (Samji, Wu, Ladak et al., 2022, Dumas, Ellis, & Litt, 2020).

Thirdly, emigration can be described as a process that begins well before the individual leaves his or her home country and the examination of the pre-departure experiences are important for

understanding the context of migration (Tabor & Milfont, 2011). Certain pre-departure health indicators can affect young people long after their arrival at their destination (Gushulak & MacPherson, 2011). Therefore, pre-migration individuals' alcohol and other drug use norms and alcohol and other drug use should be explored as a part of a comprehensive innovative preventive approach (Salas-Wright & Schwartz, 2019). An analysis of individual health-related behavior before leaving may significantly contribute to a deeper understanding of the healthy immigrant hypothesis (De Castro, Gee, Fujishiro et al., 2015). This study will limit its focus on behaviors concerning alcohol use and smoking.

2. Design

A cross-sectional survey design was adopted in this study.

3. Objective

To investigate the relationship between the pre-departure risk - related indicators (smoking, alcohol consumption) and the post-pandemic emigration plan and intention to study abroad among Slovak adolescents.

4. Methods

4.1. Sample and procedure

The data collection among secondary school students took place between October and December 2021. Considering to the ongoing second wave of COVID-19 pandemic and the tightened measures against COVID-19 disease at the time of the data collection we were forced to move the ongoing data collection from personal to online space. Eleven secondary schools that provide general secondary education and prepare students for further study at universities and other higher education institutions were invited to collaborate on data collection via email. Nine secondary schools accepted the proposal to collaborate. These schools were asked to distribute information and personal-administered questionnaires (the first 4 schools) or a link to an online questionnaire (other schools) to their third-year and fourth-year students via their websites, information systems, official Facebook page or as a part of online lessons. Filling in the questionair was voluntary and anonymous. In total, data from 321 have been obtained. Respondents who did not provide an informed consent to data processing or providing missing data were excluded from further analyses. Thus, the final sample study consisted of 296 respondents (50.7% girls, $M = 17.7$ years). The protocol of this study has been reviewed and approved by the Ethics Committee at the Faculty of Arts of P. J. Šafárik University.

4.2. Measures

The scale Intention to study abroad was used to measure this construct. Withing this measure respondents rated the frequency with which they think about studying abroad (Chang Hoong & Soon, 2011). A 5-point Likert-type scale ranging from 1(never) to 5 (all the time) was used. The higher score indicated a greater desire to study abroad.

Emigration plans were identified by the following question: „Are you planning to leave Slovakia after completing your secondary school?“ The possible answers were:

(1) No, I am not planning to leave (stayers, $n = 66$, 24.7%); (2) I do not know, I have not thought about it, (3) I do not know, I have not decided yet (undecided, $n = 87$, 32.6%); (4) Yes, I am planning to leave for a period up to 6 months, (5) Yes, I am planning to leave for a period from 6-12 months, (6) Yes, I am planning to leave for a period longer than a year, (7) Yes, I am planning to leave for a period longer than 5 years, (8) Yes, I am planning to leave permanently (leavers, $n = 114$, 42.7%). To separate and simplify the results for the planned analysis, the students' answers were recoded into 2 categories: stayers: students, who do not plan to leave Slovakia (answered with 1) and leavers: students, who plan to leave Slovakia, either for a short period of time (answered with 4 or 5) long period of time (answered with 6 or 7) or permanently (answered with 8).

Health related behaviors were assessed in the following way: a 30-day prevalence rate of smoking and alcohol consumption were assessed on a dichotomous level, had smoked / drunk or had not smoked/drunk alcohol in the past 30 days (Hibell et al., 2012).

A 7-item Fear of Coronavirus-19 Scale (Ahorsu et al., 2020) was used. Adolescents indicated their level of agreement with the statements using a five-point Likert type scale. Answers included “strongly disagree,” “disagree,” “neither agree nor disagree,” “agree,” and “strongly agree”. The minimum score possible for each question was 1, and the maximum was 5. A total score was calculated

by adding up each item score (ranging from 7 to 35). The higher the score, the greater the fear of coronavirus-19. Cronbach’s Alpha of the scale = 0.782.

The Depression Anxiety Stress Scale-21 (DASS-21) (Antony et al., 1998) with 7 items per dimension – depression, anxiety and stress were used. Students were asked to indicate the extent to which the statement applied to them on a 4-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). The higher score for each subscale indicates a higher level of depression (C α of 0.786), anxiety (C α of 0.843), and stress (C α of 0.892).

4.3. Statistical analyses

Chi-square analyses were performed to examine the associations between gender, smoking, alcohol consumption, and emigration plans. A Mann-Whitney U test was used to test for differences between independent groups (gender, smoking, alcohol consumption) on a measure of the intention on study abroad levels. Logistic regression was used to test the association between the independent measures and the likelihood that adolescents would report post-pandemic emigration plan. Multiple regression was used to assess the associations of independent measures and post-pandemic study abroad intention. All analyses were carried out using SPSS 25.0.

5. Results

An average mean of the intention to study abroad among adolescents was found (Table 1). A Mann-Whitney U test revealed:

- (i) significant difference in the intention to study abroad levels of boys (*Md* = 2, *n* = 130) and girls (*Md* = 3, *n* = 139), *U* = 11139.5, *z* = 3.39, *p* = .001. Girls reported significantly higher level of study abroad intention.
- (ii) no significant difference in the intention to study abroad levels of non-smokers (*Md* = 2, *n* = 178) and smokers (*Md* = 3, *n* = 92), *U* = 9044.5, *z* = 1.44, *p* = .149
- (iii) significant difference in the intention to study abroad levels of non-alcohol-users (*Md* = 2, *n* = 87) and alcohol-users (*Md* = 3, *n* = 183), *U* = 9995.5, *z* = 3.48, *p* = .001. Alcohol-users reported significantly higher level of study abroad intention.

36.7% of stayers and 63.6% of leavers were identified among adolescents in this study. Table 1 presents descriptive characteristics of variables explored in this study. A Chi-square test for independence indicated:

- (i) a significant association between gender and emigration plans, χ^2 (1, *n* = 180) = 3.92, *p* = .048. A recent study revealed that the percentage of girls (71.3%) who reported post-pandemic emigration plans was larger than boys (55.9%)
- (ii) no significant association between smoking and emigration plans, χ^2 (1, *n* = 181) = 2.15, *p* = .143
- (iii) a significant association between alcohol consumption and emigration plans, χ^2 (1, *n* = 181) = 8.76, *p* = .003. A greater percentage of adolescents with emigration plans reported alcohol consumption (71.8%) vs. 48.4% of adolescents with emigration plans who did not report alcohol consumption.

Table 1. Descriptive characteristics of explored variables.

	Emigration plans (n/%)		Study abroad intention	Fear of COVID-19	Depression	Stress	Anxiety	Smoking (n/%)	Alcohol consumption (n/%)
Stayers ¹	66 / 36.7%	N	270	273	269	269	270		
Leavers ²	114 / 63.6%	Minimum	1	7	0	0	0		
		Maximum	5	25	21	21	20		
		Mean	2.66	12.85	6.55	7.06	4.99		
		SD	1.40	4.09	5.50	5.32	4.67		
No							188 / 64.4%	93 / 31.8%	
Yes							104 / 35.6%	199 / 68.2%	

¹No, I am not planning to leave

²I am planning to go abroad (from 6 months to leave permanently)

Direct logistic regression was performed to assess the association between the number of factors and the likelihood that adolescents would report post-pandemic emigration plans (Table 2). The model contained two independent measures (smoking and alcohol consumption), after controlling for the

associations of gender and four COVID-19 variables (Fear of COVID-19 and Depression, Anxiety and Stress Scale), and post-pandemic emigration plans as dependent variable. The full model was statistically significant, $\chi^2 (7, N = 169) = 22.196, p < .01$). The model as a whole explained 17% of variance in post-pandemic emigration plans. The strongest predictor of reporting a post-pandemic emigration plans was alcohol consumption, recording an odds ratio of 2.26. This indicated that adolescents who reported alcohol consumption were over 2 times more likely to report a post-pandemic emigration plans than those who did not report alcohol consumption, controlling for all other factors in the model.

Table 2. Binary logistic regression model estimating likelihood of reporting post-pandemic emigration plans and Multiple regression model estimating likelihood of reporting post-pandemic study abroad intention.

	Post-pandemic emigration plans			Post-pandemic study abroad intention
	OR	95% C.I. for EXP(B)		
		Lower	Upper	
Smoking ¹	1.310	0.624	2.748	0.070
Alcohol consumption ¹	2.263*	1.104	4.638	0.164**
Fear of COVID-19	0.907*	0.829	0.992	-0.113
Depression	1.023	0.923	1.135	0.117
Stress	1.078	0.952	1.221	0.117
Anxiety	0.982	0.857	1.126	0.045
Gender ¹	1.743	0.836	3.637	0.133*

Notes: **p < .01 *p < .05, ¹Non-smoking adolescents, Non-alcohol-consuming adolescents, Boys as reference groups

Multiple regression was used to assess the associations of two independent measures (smoking and alcohol consumption) and post-pandemic study abroad intention, after controlling for the associations of four COVID-19 variables (Fear of COVID-19 and Depression, Anxiety and Stress Scale) and gender. The total variance explained by the model as whole was 12%, $F (7, 261) = 6.088, p < .001$. In the final model, only two of control measures were statistically significant, with alcohol consumption measure recording a higher beta value ($beta = .16, p < .01$, Table 2) than gender ($beta = .13, p < .05$, Table 2). Higher level of post-pandemic study abroad intention was found among girls and adolescents who reported alcohol consumption.

6. Discussion and conclusions

A gender dimension to migration intentions, aspirations was confirmed (Marsiglia, Wu, Han et al., 2021). Accordingly, the results of this study showed girls' higher level of study abroad intention and a larger percentage of girls also reported post-pandemic emigration plans. The present findings support pre-pandemic findings of emigration intentions among Slovak adolescents, girls scored higher in the push factor of education as well as other explored push factors as relationships, career and finance, language competencies, and experiences compared to boys (Hajduch, 2020).

Pre-migration substance use patterns, better understanding of pre-migration factors, such as use of alcohol, tobacco in country of origin could provide important research background of migration process (Salas-Wright, Schwartz, Cohen et al., 2020, Lee, Martins, & Lee, 2015, Almeida, Johnson, Matsumoto et al., 2012). Higher level of post-pandemic study abroad intention was found among girls and adolescents who reported alcohol consumption. Interestingly, from the studied health related behaviors in relation to post-pandemic emigration plans, it was also found that adolescents who reported alcohol consumption were over 2 times more likely to report post-pandemic emigration plans than those who did not report alcohol consumption in this study. This study contributes to the previous findings focused on the migration intentions and alcohol use (Marsiglia, Wu, Han et al., 2021), on the understanding pre-departure migration – health associations (Gushulak & MacPherson, 2011), and the results of this study support the hypothesis of self-selection of young people likely to use alcohol into pre/migrant group (Borges, G., Breslau, J., Orozco et al., 2011).

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USING MULTIPLE STRATEGIES TO ADDRESS NEUROMYTHS IN PRESERVICE TEACHERS

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Abstract

Neuromyths, popular misconceptions about brain development, are shown by research to be common in preservice teachers. This is concerning, because an accurate understanding of brain development enhances teachers' understanding of how their students learn. Accordingly, researchers designed a study to address prevalent neuromyths and their alleviation. Eight preservice teachers were provided with information on neuromyths, along with accurate brain development information, in a unit situated within an educational psychology course at a University in the Southeastern United States. Researchers sought to determine which neuromyths were present in the preservice teachers, and whether the unit would alleviate those neuromyths. The unit included inviting a neuroscientist into the preservice classroom to share accurate knowledge about brain development at different stages throughout K-12 schooling. Preservice teachers were asked to reflect about "What did you learn that surprised you? How will you use the information from today to understand students?" following the presentation by the neuroscientist. Preservice teachers also watched a video, attended a preservice teacher's presentation, and read relevant articles and book chapters. Preservice teachers were given a pre-test, post-test, and an end-of-semester test which included ten neuromyths and 20 general brain knowledge items. Data were analyzed to determine to what degree neuromyths were alleviated right after the brain development unit ended (during week 6 of a 16-week semester) and to what degree the information was retained by the end of the semester. Because of the small sample size, data were analyzed qualitatively. Pre-, post- and end-of-semester-assessment results were compared. Responses to the discussion post were used to provide consistency and depth to results from the post-assessment. An examination of which neuromyth beliefs were lessened and which were persistent revealed that the neuromyths concerning left brain/right brain and the belief that caffeine increases alertness were commonly held yet mostly alleviated. Preservice teachers expressed surprise in class discussions about these neuromyths because they had been heard and believed by many. The belief that children are less attentive after consuming sugary drinks and/or snacks was revealed in class discussions to be based on preservice teachers' anecdotal observations, and was shown to be a persistent neuromyth. The distinction between individuals preferring to learn in a particular style and lack of research supporting the belief that individuals learned better when they received information in a particular style caused some confusion, as seen in the results. It was determined that more clarity was needed on this topic.

Keywords: *Educational psychology, teacher education, neuromyths, brain development.*

1. Introduction

Neuromyths can be distortions or misinterpretations of proven hypotheses reported in the media (Pasquinelli, 2012). The first use of the term neuromyth has been attributed to the neurosurgeon Alan Crockard, who coined it in the 1980s when he referred to unscientific ideas about the brain in medical culture (Crockard, 1996 as cited in Howard-Jones, 2014), and the term became more popular after mention by the Organization for Economic Co-operation and Development [OECD (2002)]. Neuromyths appeal to the general public, including preservice teachers, because they reinforce intuitive beliefs and observations (Howard-Jones, 2014; Pasquinelli, 2012; Purdy & Morrison, 2009) According to Pasquinelli (2012), "the persistence of neuromyths is sustained by specific cultural conditions, such as the circulation of pieces of information about the brain and the appetite for brain news, but has its roots in deeper cognitive intuitions." (p.89). It may be difficult for people who lack neuroscientific expertise to recognize misconceptions about brain research in the popular media (Beck, 2010). For example, Carter et al. (2020)

searched for sources of information for 15 neuromyth and 17 general brain knowledge statements. Depending on the belief, participants relied on general knowledge, academic staff, school staff, and popular media. Tardif et al. (2015) also found the media, readings, and teacher training courses to be a source of neuromyths. Conversely, Karakus, et al. (2014) found that most respondents identified the source of neuromyths as based on their own experience, or did not remember the source.

Coch (2018) stressed the importance of accurate knowledge of brain development in preservice teachers, specifically noting the importance of recognizing how social economic status is related to brain development as well as how an understanding of brain plasticity leads to a growth mindset. Coch (2018) additionally stated “Neuroscience can contribute to the development of at least two of these four components of pedagogical content knowledge in preservice teachers: what teachers know about their subject matter and their students’ learning” (p. 312). Without access to accurate brain development information, preservice teachers rely on their own ideas gleaned from various resources, which can be detrimental to their teaching practices (Howard-Jones et al., 2009). Knowledge of brain development cannot be used to the benefit of students if neuromyths are prevalent; in fact, resources may be misallocated in support of programs based on neuromyths (Pasquinelli 2012; Sylvan & Christodoulou, 2010). Gardner (2019) himself has noted that, regarding the theory of multiple intelligences, “I have gone to great pains to emphasize that even if the theory is plausible, no educational recommendations follow directly from it” (p. 3).

Several studies in the recent past have documented the existence of neuromyths in preservice and inservice teachers. For example, in an early study, Howard-Jones et al., (2009) investigated the brain development and neuromyth knowledge of preservice teachers in the UK, and found that the preservice teachers’ ideas reflected popular neuromyths concerning the influence of environment and genetics on student success. Following this investigation, Dekker et al. (2012) devised an instrument to look for evidence of neuromyths and brain development knowledge in teachers in the UK and Netherlands. Teachers’ beliefs reflected those found by Howard-Jones et al., (2009), leading Dekker et al. to conclude that teachers find it difficult to identify pseudo-science. Other researchers subsequently used either the instrument from Howard-Jones et al. (2009) or the instrument from Dekker et al. (2012), with similar findings (e.g. Deligiannidi & Howard-Jones, 2015; Dundar & Gunduz, 2016; Ferrero et al., 2016; Gleichgerrcht et al., 2015; Hughes et al., 2020; Karakus et al., 2014). However, studies have shown that collaborations and interdisciplinary communication between science and education can reduce misconceptions, lead to meaningful, productive theories and result in more efficient teaching and learning strategies (Dekker et al., 2012; Hughes et al., 2020; Pasquinelli, 2012; Pickering & Howard-Jones, 2007; Sigman et al., 2014).

Given the prevalence of neuromyths in past studies, and recommendations for the collaboration between science and education, researchers in this study collaborated to provide a neuroscience unit to preservice teachers. Researchers asked the questions, What neuromyths are present in second-year preservice teachers, and are any of the neuromyths present able to be alleviated by the neuroscience unit short-term and long-term? Which neuromyths are more resilient? Preservice teachers were provided with information on neuromyths, along with accurate brain development information, in a unit situated within an educational psychology course. The unit consisted of collaboration between an educator and a neuroscientist, as recommended by Coch et al. (2009). Neuromyths were made transparent to preservice teachers, as seen in Grospietsch and Mayer (2018), and refuted throughout the unit in a similar way as seen in McMahon et al. (2019).

2. Methods

For this study, the sample consisted of eight secondary preservice teachers in their second year of undergraduate teacher education, enrolled in an adolescent development and psychology course at a Southeastern university in the United States. Preservice teachers included two Black and two White males, as well as one Black and three White females. Researchers collaborated to provide accurate brain development information to preservice teachers with a unit that included inviting a neuroscientist into the preservice classroom to share accurate knowledge about brain development at different stages throughout K-12 schooling. In addition, preservice teachers watched a video, attended a preservice teacher’s presentation, read two articles, and read relevant chapters in their textbooks.

2.1. Data collection and analysis

Preservice teachers were given a pre-test, post-test, and end-of-semester test. In addition, preservice teachers were asked to reflect about “What did you learn that surprised you? How will you use the information from today to understand students?” following the presentation by the neuroscientist. The pre-, post-, and end-of-semester survey of 30 questions was developed from the instruments used by

Howard-Jones et al. (2009) and Dekker et al. (2012), with additions from Kim and Sankey (2018) and Blanchette Sarrasin et al. (2019), and changes to wording of some questions recommended by Macdonald et al. (2017). Several questions deemed vague or controversial, based on new research, were removed from the original Dekker et al. (2012) survey. Responses allowed were Agree, Disagree, or Don't Know. Twenty of the items in the survey were general assertions about the brain and ten of the items were neuromyths. Data were analyzed to determine to what degree neuromyths were eliminated right after the brain development unit ended (during week 6 of a 16-week semester) and to what degree the information was retained by the end of the semester. Because of the small sample size, data were analyzed qualitatively. Pre-, post- and end-of-semester-assessment results were compared. Responses to the discussion post were used to provide consistency and depth to results from the post-assessment (Kratwohl, 2009).

2.2. Brain development unit

Following administration of the pre-inventory assessment, which occurred during week four of the course, preservice teachers read the shaded portions of Schultz (2009) and discussed what they found interesting or new information. The following week, a guest speaker, one of the authors who is a neuroscientist, visited the classroom and presented a 45-minute interactive lecture to preservice teachers. After the guest speaker left, preservice teachers completed their reflection questions as mentioned above, then read and discussed pp. 1-2 of Howard-Jones (2014).

Preservice teachers were assigned chapters about brain development and cognitive development in their textbook (Durwin & Reese-Weber, 2018) to read for the following week. Discussion about those readings asked preservice teachers to identify material from the readings that was related to the neuroscientist's lecture. Preservice teachers then watched a TED video on brain development in adolescence and identified commonalities and new information (Blakemore, 2012). A preservice teacher gave a presentation about how hunger is a problem for students, which addressed the item about missing breakfast being detrimental to students' learning. Preservice teachers were then assigned the rest of the Howard-Jones (2014) article to read and discuss. The brain inventory was administered as a post-assessment at the end of the unit, and again as an end-of-semester assessment to gauge what information had been retained long-term.

3. Findings

Ten neuromyths were included in the Inventory (see Table 1). On the pre-test, 100% of preservice teachers agreed with the myth that "Individuals learn better when they receive information in their preferred learning style (e.g. auditory, visual, kinesthetic)", and 75% agreed with the myth "Some of us are "left-brained" and some are "right-brained" and this helps explain differences in how we learn". For the neuromyth "Children are less attentive after consuming sugary drinks and/or snacks", 37.5% agreed, and 25% indicated they did not know. One neuromyth was worded to be true: "Regular drinking of caffeinated drinks reduces alertness" which 25% marked as true while 75% marked as don't know.

Table 1. Assessment results.

Neuromyth (T true or F false)	Percent correct pre-test	Percent correct post-test	Percent correct end-of-semester
Children must acquire their native language before a second language is learned. If they do not do so neither language will be fully acquired (F)	62.5	87.5	50
We only use 10% of our brain (F)	62.5	100	100
Some of us are "left-brained" and some are "right-brained" and this helps explain differences in how we learn (F)	25	87.5	87.5
There are critical periods in childhood after which certain things can no longer be learned (F)	62.5	75	75
Individuals learn better when they receive information in their preferred learning style (e.g. auditory, visual, kinesthetic) (F)	0	75	62.5
Children are less attentive after consuming sugary drinks and/or snacks (F)	37.5	75	50
Regular drinking of caffeinated drinks reduces alertness (T)	25	75	87.5
Extended rehearsal of some mental processes can change the shape and structure of some parts of the brain (T)	62.5	75	62.5
Individual learners show preferences for the mode in which they receive information (e.g. visual, auditory, kinesthetic) (T)	100	87.5	100
Learning problems associated with developmental differences in the brain function cannot be remediated by education (F)	50	75	75

Preservice teachers mentioned content related to four questions from the survey when they wrote their reflections after the neuroscience lecture. Three preservice teachers made comments about left brain/right brain related to questions six and seven (6. The left and right hemispheres of the brain work together and 7. Some of us are “left-brained” and some are “right-brained” and this helps explain differences in how we learn). Circadian rhythms were mentioned by one preservice teacher, related to question 19 [Circadian rhythms (“body clock”) shift during adolescence causing students to be tired during the first lessons of the school day]. Of the three preservice teachers who mentioned left brain/right brain, one agreed with question six and two marked Don’t Know on the pre-test. All three agreed with the statement (which was true) on the post-test. For question seven, all three agreed with the statement on the pre-test and disagreed with the statement (which was false) on the post-test. These responses were in line with the comments made in the reflection, as seen in the comment by one preservice teacher, ‘I had definitely heard the wrong information about "left brain" vs "right brain" and it was interesting to learn that it was not true.’ The preservice teacher who mentioned circadian rhythms agreed with the true statement in question 19 on both the pre- and post-test. In the reflection, this preservice teacher commented’ “I will use the information we learned about circadian rhythms to understand why they are so tired in the morning and barely focus in the earlier classes”.

4. Discussion

An examination of which neuromyth beliefs were lessened and which were persistent revealed that the neuromyths concerning left brain/right brain and that caffeine increases alertness were commonly held yet mostly alleviated. The left brain/right brain neuromyth was mentioned in the lecture by the neuroscientist, in the article by Howard-Jones (2014), and in the textbook (Durwin & Reese-Weber, 2018), while the caffeine neuromyth was addressed solely in the lecture by the neuroscientist. The neuromyth that we only use 10% of our brain was not commonly held and was completely alleviated. This myth was addressed in four ways – in the neuroscientist’s lecture, in the Durwin and Reese-Weber (2018) textbook, and in both the Howard-Jones (2014) and Schultz (2009) articles. It is hypothesized that the left brain/right brain and the 10% of our brain neuromyths were alleviated in part because of multiple strategies addressing these myths, while the caffeine neuromyth was alleviated because it was the most personal to the preservice teachers who comprised the sample.

The belief that children are less attentive after consuming sugary drinks and/or snacks, which was addressed in the Howard-Jones (2014) reading, was revealed in class discussions to be based on preservice teachers’ anecdotal observations and was found to be persistent at the end of the semester. Another persistent neuromyth was the belief that children must acquire their native language before a second language is learned, which was addressed in the neuroscientist’s lecture and in the reading by Scholtz (2009). The distinction between individuals preferring to learn in a particular style and research showing that individuals learned better when they received information in a particular style caused some confusion, as seen in the results. This topic was addressed in the textbook (Durwin & Reese-Weber, 2018) and in the Howard-Jones (2014) article. It was determined that more clarity was needed on this topic. The three other neuromyths were addressed by one or two strategies, and showed no or small decreases in beliefs.

Limitations of the study include the small sample size, and the uneven addressing of neuromyths. Future research will seek to more deeply address prevalent neuromyths, as well as expanding the unit to prepare preservice teachers to critically evaluate the research claims and educational resources they may encounter in their future careers.

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WHAT A TEACHER SAYS AND WHAT A STUDENT UNDERSTANDS

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Abstract

Based on the view that the difficulties students experience in learning mathematics are in part due to a lack of a shared precise language, and the recent emphasis on the importance of language in the development of mathematical proficiency through newly formed reform practices around the world, we analyzed student work to determine what language was used that potentially led to common misconceptions. The sample consisted of 69 first-semester freshmen at a University in the Midwest United States. Data were analyzed qualitatively, with the three authors discussing student work and language use until 100% agreement was found. Focusing on rational expressions, polynomials, and number systems; we found major misconceptions related to negative sign, simplifying rational expressions, multiplying binomials, and conceptualizing fractions. We analyzed students' explanations and reasoning to determine the potential misuse of language for each misconception. In this paper, we illustrate examples of misconceptions, present evidence for imprecise and incoherent language use that potentially supported the development of each misconception, and recommend coherent and precise language in all grades, K-12, to develop both procedural and conceptual understanding, which will be beneficial to students as they advance from high school into college.

Keywords: *Algebra, misconceptions, mathematical language, mathematics learning.*

1. Introduction

High school students in the United States recently overwhelmingly scored below college-readiness levels in mathematics, according to the National Assessment of Educational Progress (NAEP, 2019). Results showed that less than 25% of students performed proficiently, even though 77% of the lowest performing students reported taking advanced mathematics courses in high school. This leads to higher levels of students taking developmental mathematics courses in two-year colleges (59%) and four-year colleges (33%), with an average student taking two to three successive courses. At least half of those students do not complete all of their required developmental math courses, and only about 20% of students who complete all of their developmental math courses successfully complete college level math courses (Brock et al., 2016). These struggles with mathematical success have been attributed to the procedural nature of mathematics instruction in high schools (Zenati, 2019) rather than a conceptual development.

Difficulties students experience in learning mathematics concepts are in part due to a lack of a shared precise language, despite the recent emphasis on the importance of language in the development of mathematical proficiency in newly formed reform practices. In fact, mathematical discourse was identified as one of six salient practices present in reform mathematics studies from around the world in the past decade (Morrissey et al., 2022). In the United States, reform math is encapsulated by the Common Core State Standards for Mathematics (CCSSM, 2010), which advocates for precise mathematical language as one of the core standards.

Given the importance of precise language use, coupled with the high percentage of college students who are not mathematically college-ready, Popovic et al. (2022) recommended investigating "how treatment of a concept in a restricted context in high school CCSSM-aligned textbook may lead to a potential conflict and difficulty of concept development in the broader context, later in the college" (p. 863). This recommendation led us to analyze student work to determine what language was used that potentially led to common misconceptions.

2. Literature review

The types of misconceptions that students encounter in mathematics, particularly in Algebra, have long been investigated by many researchers (e.g., An, 2004; Barcellos, 2005; Fuchs & Menil, 2009; Jurkovic, 2001, Holmes et al., 2013; Powell & Nelson 2020), given the importance of reviewing student errors and misconceptions for an improved student conceptual understanding (Durkin 2009; Grobe & Renkle, 2007; NCTM, 2007). In addition to identifying the types of misconceptions that arise across grade levels and mathematical content areas, some studies explored the underlying causes for these misconceptions. Researchers reported that misconceptions arise as a result of the imprecise, inaccurate, and inconsistent use of mathematical language (e.g., Baidoo, 2019; Jaffar & Dindyal, 2011; Lager, 2006; Popovic et al., 2022; Powell & Nelson, 2020). In other words, imprecise mathematical language leads to ambiguity which hinders students' understanding and concept development (Jaffar & Dindyal, 2011; Lager, 2006).

Rational number concepts and algebraic fractions have been one of the topics in which misconceptions arise across all levels, i.e., elementary, secondary, and post-secondary (Barcellos, 2005; Baidoo, 2019; DeWolf et al., 2016; Gabriel et al., 2013; McAllister & Beaver, 2012; Powell & Nelson, 2020; Vamvakoussi & Vosniadou, 2004). For example, understanding that there are infinitely many numbers between any two real numbers is difficult for students to comprehend (Vamvakoussi & Vosniadou, 2004); or distribution of minus sign over rational expressions and invalid form of cancellation in rational expressions are problematic for students (Barcellos, 2005). In this respect, researchers suggested that educators at all levels (i.e., elementary, secondary, postsecondary) should provide precise and consistent mathematical language in the rational number concepts and algebraic fractions. We focused on undergraduate students because previous research indicates many postsecondary students continue to struggle with rational number concepts. This previous research (e.g., DeWolf et al., 2016; Gabriel et al., 2013; McAllister & Beaver, 2012) identified error patterns, and reported diversity of errors and the persistent difficulties with rational numbers and expressions that university students demonstrate. Differently from the previous research, in addition to identifying the error patterns, we investigated the underlying imprecise language that potentially led to such misconceptions and errors.

3. Methodology

Sample consisted of first-semester freshmen students at a University in the Midwest United States. The students were enrolled in the remedial mathematics course, Preparation for Calculus, based on their mathematics placement exam score. During the first class, students were asked to complete the pre-assessment test consisting of 14 items. Each problem asked students to circle one of the answer choices and to explain their reasoning. The answer choices were based on the common errors students make in algebra. Students were given 45 minutes to complete the test. The instructor ensured students that the purpose of the test was to determine their current knowledge with respect to the concepts assessed. To motivate students to do their best to answer each question, the instructor informed students that one point would be awarded for each problem for which a student circled the answer and provided an explanation, regardless of the correctness of the answer. Hence, the students could earn 14 points that would be counted as extra credit points in the exams category. A total of 69 student work was collected.

Data were analyzed qualitatively. The focus was on identifying language students use to explain their reasoning, and determining how the language used might lead to student inappropriate understanding of fractions, rational expressions and the negative sign. The three authors discussed a selected sample of ten students' work until they reached a 100% agreement in interpreting student reasoning based on their explanations.

4. Results

Figure 1 includes the problems posed to the students. Questions 1, 5, 9, and 10 assessed students' understanding of fractions and rational expressions, while questions 2, 7, and 10 assessed students' understanding of the negative sign.

Figure 1. Pre-Assessment Problems 1, 2, 5, 7, 9 and 10.

Question 1: Which of the equalities below you think is true for all real values of $a \neq 0, b \neq 0, x$ and y ? (Circle **one** equality)

$$\frac{x}{a} + \frac{y}{b} = \frac{x+y}{a+b} \qquad \frac{x}{a} + \frac{y}{b} = \frac{xb+ya}{ab} \qquad \frac{x}{a} + \frac{y}{b} = \frac{x+y}{ab}$$

Explain your choice.

Question 2: Which of the equalities below you think is true for all real values of $a, b,$ and c ? (Circle **one** equality)

$$a - (c - b) = a - c - b \qquad a - (c - b) = a - c + b$$

Explain your choice.

Question 5: Which of the equalities below you think is true for all real values of $a, b,$ and c ? (Circle **one** equality)

$$\frac{b+ax}{a} = b+x \qquad \frac{b+ax}{a} = \frac{b}{a} + x$$

Explain your choice.

Question 7: Circle the numbers below that you think can be assigned to $-b,$ where b is a real number?

$$1 \quad -1 \quad 2 \quad -2 \quad \frac{2}{3} \quad -\frac{2}{3} \quad 2.66 \quad -2.66 \quad \pi \quad -\pi$$

Explain your choice.

Question 9: Do you think that $\frac{x(x-1)(x-2)}{x-1} = x(x-2)$ true for all real values of x ? (Circle **one** answer)

YES NO

Explain your choice.

Question 10: Which of the equalities below you think is true for all real values of $a \neq 0, b \neq 0, x$ and y ? (You may circle more than one answer)

$$\frac{x+5}{x-1} = \frac{-x-5}{x-1} \qquad \frac{x+5}{x-1} = \frac{-x-5}{-x+1} \qquad \frac{x+5}{x-1} = \frac{x+5}{-x+1}$$

Explain your choice.

Table 1 shows the number and percentages of the correct and incorrect answers for each question. Two students have not provided answers to each of the questions 7 and 10.

Table 1. Pre-Assessment Problems 1, 2, 5, 7, 9 and 10.

Question	1	2	5	7	9	10
Correct	47 (68%)	60 (87%)	33 (48%)	10 (14%)	18 (26%)	19 (28%)
Incorrect	22 (32%)	9 (13%)	36 (52%)	57 (83%)	51 (74%)	48 (71%)

4.1. Misconceptions about fractions

Forty-seven (68%) of the students responded correctly to the first question. However, a qualitative analysis of their explanations showed that only five students justified their answer choice by referring to the least common denominator and equivalent fractions. A half of the students stated that they achieved the correct answer because they “do the same to the numerator and the denominator,” “multiply top and bottom number by the other fractions’ denominator” or “multiply fraction x/a by b and fraction y/b by a .” One-third of the students explained their correct answer choices by “do the cross multiplication.” Finally, a few students substituted specific values for $x, y, a,$ and b to check which of the equalities is true, and one student guessed. Students who selected the first answer explained that they “add across the top and the bottom numbers” or “add across the numerator and the denominator number.” Finally, the students who selected the third answer explained that you need a common denominator in order to add the numerators. Students who answered Question 5 correctly (33 or 48%) explained their answer choice in one of the following ways; “you have to divide each individual value by a ” or “if I multiply both sides by a you get the same answer $b+ax$.” All students who answered the question incorrectly said that “you can cancel the same value in the numerator and the denominator.” A few students based their answers, whether correct or incorrect (claimed both are true equalities), by substituting one combination of specific values for $a, b,$ and x . Only 18 (26%) of the students correctly answered Question 9, explaining that the two expressions are not equal if $x=1,$ because the expression on the right side of the equal sign would be undefined. Remaining 51 (74%) students believed that the two

expressions are equal because you cancel $x-1$ in the numerator and the denominator. For Question 10, 31 (45%) students selected the second answer, explaining that “you distribute a negative to each number (value) in the fraction,” 11 (16%) students believed you can “distribute a negative to the numerator only,” while three students stated that all three answers are practically the same. The students who chose both the first and the third explained that “dividing one negative numerator or denominator gives a negative value” or “you can apply the negative to either the denominator or the numerator” and similar. Only one student explained that “the negative sign in front of the fraction means the same as multiplying by a -1 , which is $-1/1$ or $1/(-1)$.”

4.2. Misconceptions about the negative sign

As expected, the majority of the students responded correctly to Question 2. However, their explanations talked about “distributing a negative to the variables in the parentheses,” or that “a negative turns b into a positive.” The students who selected an incorrect answer said that “in addition and subtraction the parentheses don't matter.” Only 10 (14%) students answered Question 9 correctly and circled all listed numbers, stating that “all numbers are real.” Students who did not think all listed numbers could be assigned to $-b$, and explained “only positive numbers can be used because a negative will turn it into a negative number” or “only negative numbers can be used because the “negative” says that b is a negative number.” Other students showed a lack of understanding of real numbers, by selecting the integers only, the integers and decimals, and all numbers except and $-\pi$.

5. Discussion

Similar to the previous literature, we found misconceptions in distribution of minus sign over rational expressions and invalid form of cancellation in rational expressions, as well as an incomplete understanding of fractions which resulted in mistreatment of algebraic fractions. Students' written explanations allowed us to identify some of the potential inconsistent language that might have led to such difficulties.

The qualitative analysis of students' answers to questions 1, 5, 9, and 10 revealed that the majority of the students conceptualize a fraction as *two numbers separated by a fraction bar*, rather than as a number representing a single quantity. Students' use of “top” and “bottom” language in their explanations clearly evidenced their discrete understanding of fractions. Thus, we hypothesize that this may be due to the language commonly used when working with fractions, “ a over b ” rather than “ a divided by b ,” “top” and “bottom” numbers instead of the “numerator” and the “denominator.” While many students were able to select a correct answer, their explanations demonstrated major misconceptions about mathematical concepts other than fractions. For example, students used phrase *cross multiplication* to explain addition of fractions, rather than creating equivalent fractions to the given fractions that have the common denominator. This may be related to learning the “butterfly method” of cross-multiplying fractions to determine which fraction is greater, which is itself problematic (Karp et al., 2015). The main reason for the error students make in question 5 might be that the teachers say “we cancel the common (same) number (value) in the numerator and the denominator” instead of “we divide the numerator and the denominator by the common (same) factor.”

Students' errors in problem 2 and 10 may be caused by talking about “distributing a negative (sign)” rather than distributing a -1 or taking the opposite of the binomial $c-b$. This combination of vocabulary, “distributing” and “negative,” is a further example of students' memorizing content but not having the conceptual understanding to apply it appropriately. As shown in answers in problem 7, the majority of the students believed that the negative sign in expression $-b$ either denotes that “ b is a negative number” and thus selected negative numbers or “ $-b$ has to be a negative number” and thus selected positive numbers as appropriate. Additionally, students demonstrated a lack of understanding of the real numbers. For example, a student selected all numbers except and $-\pi$, explaining that “real numbers encompass numbers that can be defined. Pi goes until infinity so probably not” or choose all positive numbers “because real numbers cannot be negative.”

It is interesting that some of the students referred to the expressions on each side of the equal sign as *equations*. A student explained the correct answer choice by “the second equation is true as they are both the same equation after simplification,” while another student explains the incorrect answer choice by “the variable a cancels out so equation is the same as $b+x$.” This might be related to the common understanding of the equal sign as “do this,” which is mostly communicated in early grades, rather than “equality of the quantities on both sides of the equal sign,” which is necessary for learning concepts in advanced mathematics courses.

Clearly, the lack of a shared precise language fosters misconceptions, based on a lack of conceptual understanding. As Karp et al. (2015) recommended, intentional, consistent, and precise use of

rules, terminology, and notation are needed in order for students to focus on new, complex mathematical ideas.

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DETAINED UNIVERSITY STUDENTS: AN EXPLORATORY SURVEY ON THE ACADEMIC SUCCESS FACTORS

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Abstract

High rates of recidivism and prison overcrowding are urgent critical issues that demand to be explored and managed, possible solutions are then worthy of attention. Correctional education is associated with a reduction of recidivism rates, as well as with other personal benefits, both from individual and social standpoint; it is then necessary to understand which factors promote its success.

The main purposes of this research were to describe the study experience of 28 students from the penitentiary center of the Milano-Bicocca University and to identify some factors of their academic success. A questionnaire has been administered, which includes both ad hoc descriptive questions related to personal and academic experiences and psychometric scales measuring Academic Self-Efficacy, Academic Motivation and Academic Resilience; the original scales have been modified to fit the correctional context. Descriptive results picture an extremely complex situation regarding participants' current and past academic experiences. Despite this complexity, some aspects yielding better academic and social outcomes have been found, especially high social support as well as recent participation in correctional education programs. Regarding the analysis of the psychometric scales, there were just few significant correlations, among which the ones between Academic Resilience and two of the academic outcomes, i.e. Dropout Intentions and Academic Satisfaction. It is then necessary to deepen the exploration of both the theoretical models and the academic success indicators to be used.

The detained university students who participated in this study show some different characteristics from the general inmate population in Italy; this suggests that university study could affect prison experience. It is then important to further explore this type of education and its success factors in order to promote a positive prison experience and the reduction of recidivism.

Keywords: *Recidivism reduction, correctional education, university, academic success.*

1. Introduction

In recent years in Italy, even if crimes are decreasing, recidivism rate is increasing, reaching 62% (Antigone, 2022); this emergency calls for the individuation of possible solutions. Correctional education has shown its efficacy in reducing recidivism (Davis, Bozick, Steele, Saunders e Miles, 2013); considering the low levels of education of the Italian detained population (80.2% of detained people have not an high school diploma - Antigone, 2022) we think this theme is worthy of attention. That's why we decided to explore the experience of university detained students, investigating possible academic success factors.

There are few studies focused on tertiary correctional education and they mostly use qualitative methodologies. It emerges that, beyond the reduction of recidivism, college allows detained people to grow up and develop themselves (Fine et al., 2001) but it also favors Self-Efficacy and Resilience (Spark and Harris, 2005). From a social point of view, attending college can help detained people to rebuild the relationships with their families, for whom their university experience is particularly relevant (Fine et al., 2001); it also helps to build new relationships (Pelletier and Evans, 2019). If these programs are so important what is needed is to understand how they work and what promotes their success.

In recent years researchers have focused on the psychosocial factors that affect academic success, among which Motivation and Self-Efficacy stand out (Robbins, Lauver, Le, Davis, Langley e Carlstrom, 2004), together with other dimensions such as Resilience (Cassidy, 2015). Other factors that we consider interesting referring to the correctional context and that have been identified as academic success factors are Social Support (Schneider and Preckel, 2017) and Educational Background (Richardson, Abraham and Bond, 2012). We did not find any investigation specifically focused on detained students' academic success.

2. Aims

Trying to address the scarcity of literature on tertiary correctional education and especially on its success factors, the study aimed to explore the experience of university detained students, using a sample of 28 detained people enrolled at the University of Milano-Bicocca. We wanted to describe the individual, contextual and relational aspects of their study experience and to investigate the relation between them and academic and social outcomes, in particular exploring the role of Educational Background and Social Support. Finally we aimed to analyze the association between academic outcomes and some of the psychosocial factors proposed by the literature on academic success: Motivation, Self-Efficacy and Resilience.

3. Method

3.1. Questionnaire and measures

Participants filled in a paper questionnaire consisting of 89 close questions. The first part investigates: socio-demographic information, detention characteristics, outside and inside educational background, university experience, outside social networks, social support, academic and social outcomes. Academic outcomes comprehend: a measure of performance (ratio between ECTS actually achieved and the ones expected), n. of interruptions, delay in studies, academic satisfaction and dropout intentions. Social outcomes comprehend: the level of importance of being a student for themselves and for others and the enlargement of their social networks.

The second part of the questionnaire measures the following psychosocial factors :

- Academic Self-Efficacy: 3-items scale inspired by the one proposed by Nielsen et al. (2018); $\alpha = .80$.
- Academic Motivation: 4-items scale inspired by the one proposed by Alivernini e Lucidi (2008); $\alpha = .63$.
- Academic Resilience: 9-items scale inspired by the one proposed by Cassidy (2016); $\alpha = .60$.

3.2. Participants

Among the 40 detained students of the University of Milano-Bicocca, 28 could have been reached and participated in the present study, 14 of them are detained in the Milano-Opera Prison and 13 in the Milano-Bollate Prison, 1 is now living in a therapeutic community. They are all men and they are on average 45 years old ($SD = 10.29$; $ME = 46$), there are just 4 foreign people in the sample.

3.3. Analyses

Both the descriptive and correlational analyses have been carried out using the statistical software SPSS (Version 28). To run the correlation analyses, considering the small sample size and the non-normal distribution of the variables, we used the non parametric test of Spearman's Rho. To investigate the role of the two academic success factors, i.e. Previous Correctional Education and Social Support, we clustered the sample according to the presence/absence of the variable in the former case and the low/high level of the variable in the latter; then we ran the differentiated descriptive analyses.

4. Results

4.1. Individual, contextual and relational aspects of the experience of detained students

Individual aspects: participants are serving long sentences, 10 of them have been sentenced to life imprisonment and the others have, on average, received 14.09 years sentences ($SD = 8.60$; $ME = 10$) and already served 9.86 years ($SD = 8.14$; $ME = 8$); recidivism rate is 32.1%.

Relating to previous education, 53.6% of the participants already had a high school diploma before the arrest, while the others achieved it through correctional education. Outside education has been characterized by various forms of irregularity, among the respondents 17.9% declare to have stopped their education and then started again, 17.9% have changed school and 42.9% have failed at least once. 53.6% of the participants achieved at least one school qualification inside prison and among them 17.9% of the respondents have stopped their education and then started again but no one failed.

On average participants have been enrolled at University for 3.28 years ($SD = 2.7$; $ME = 2$), they consider it difficult (on a 5 points likert scale $M = 4.21$; $SD = 0.69$; $ME = 4$) but they feel quite able to

handle it (M = 3.82; SD = 0.86; ME = 4). They devote no more than half a day to study, just one of them declares to study more than 4 hours.

Contextual aspects: 25% of the participants live in a high security regime (mafia-related prisoners) and 32.1% don't benefit from any type of permission or alternative measure, both conditions that make imprisonment even harder. Relating to current study experience, 85.7% of them declare to study inside their cells and the same amount complain about too much noise that makes it difficult to concentrate.

Relational aspects: participants seem to have good social networks outside prison, all of them mentioned at least someone (parents, brothers/sisters, partner, children, friends or other people) when asked about who is part of it. The most important source of educational, organizational or personal help seems to be the University (85.7%) but participants also rely on other detained students (39.3% mentioned them).

4.2. Academic and social outcomes

Academic outcomes are mixed: performance on average is low (from 0 to 1 M = 0.22; SD = 0.28; ME = 0.13); the average grade is 24.53/30 (SD = 2.23). Among participants, 57.1% have stopped and then resumed their studies and 35.7% are lagging. Participants seem to be quite satisfied with their university experience so far (5 points likert scale, M = 3.41; SD = 1.1; ME = 3.5); 75% have never seriously considered dropping out of university.

Social outcomes are generally positive, since participants generally consider it important to be students (5 points likert scale, M = 4.29; SD = 0.85; ME = 5) and 75% of them feel it is the same for close people; 75% of them consider their social network enlarged after the beginning of university.

4.3. Psychosocial factors and relations with academic outcomes

Results show (Table 1) the average levels of psychosocial factors and the correlations between them and academic outcomes. Academic Motivation is unexpectedly negatively correlated with Grades Average, while higher Resilience is associated with lower Dropout intentions and higher Academic Satisfaction, both aspects that could characterize a positive study experience. All the other correlations were not significant.

Table 1. Psychosocial Variables' Levels and Correlations with Academic Outcomes.

Psychosocial Variables	Levels	Significant correlations with Academic Outcomes
Academic Self-Efficacy (1 to 15 score)	M = 12.13; SD = 2.18	no significant correlations
Academic Motivation (-9 to 9 score)	M = 2.68; SD = 2.71	rs = -.542; p < .05; with Grades Average
Academic Resilience (5 to 45 score)	M = 33.96; SD = 4.12	<ul style="list-style-type: none"> • rs = -.487; p < .01; with Dropout Intentions • rs = .399; p < .05; with Academic Satisfaction

4.4. Role of previous correctional education and social support

The outcomes that appear more influenced by the presence vs. absence of previous correctional education and by the low vs. high level of perceived social support are presented in the following tables (Table 2; Table 3):

Table 2. Academic and Social Outcomes according to Absence/Presence of Previous Correctional Education.

	NO previous correctional education (N = 12)	Previous correctional education (N = 15)
Performance (from 0 to 1)	M = 0.18; SD = 0.27; ME = 0.03	M = 0.26; SD = 0.3; ME = 0.13
Interruptions (n)	6 (50%)	11 (73.3%)
Role importance for others (n)	9 (75%)	11 (73.3%)
Enlargement of social networks (n)	8 (66.7%)	12 (80%)

Table 3. Academic and Social Outcomes according Low/High Perceived Social Support.

	Low support (N = 16)	High support (N = 12)
Performance (from 0 to 1)	M = 0.17; SD = 0.25; ME = 0.06	M = 0.29; SD = 0.32; ME = 0.15
Interruptions (n)	10 (62.5%)	6 (50%)
Role importance for themselves	M = 4.13; SD = 0.89; ME = 4	M = 4.5; SD = 0.8; ME = 5
Role importance for others (n)	10 (62.5%)	11 (91.7%)
Enlargement of social networks (n)	11 (68.8%)	10 (83.3%)

Participants with previous Correctional Education show better performances, more irregular paths and better social outcomes. Participants who perceive to have more Social Support report better performances, more regular paths and better social outcomes.

5. Discussion

Who do we refer to if we talk about University detained students? Analyzing the study experience of 28 prisoners enrolled at the University of Milano-Bicocca, we aimed to describe this particular situation. It emerged that our sample is partially different from the general Italian detained population described by Antigone (2022): they are older, for the most part Italians and they present longer sentences. Participants also entered prison with a higher level of education, in fact half of them already had a high school diploma while the others achieved it through correctional education, this together with the lower recidivism rate is interesting if we think about the relation between education and the reduction of recidivism (Davis et al., 2013).

Studying is not always easy, for example a lot of participants study in their cells and almost everyone complains about the difficulty to concentrate, in addition they do not spend more than half a day studying. These aspects can affect detained students' performance, which is not optimal. Still, participants feel able to cope with University and they are quite satisfied about their results, this could mean that there are aspects they care more about than performance. From a relational perspective, participants describe good social networks and they feel supported, especially from the University; this could be related to the generally positive social outcomes. Social outcomes results are consistent with the literature about the importance of University experience for detained students' families (Fine et al., 2001) and the enlargement of social networks that it favours (Pellettier and Evans, 2019).

Looking for possible factors of academic success we carried out correlation analyses between some psychosocial factors and academic outcomes but results were not completely satisfactory. The only variable that seems to be related with a better university experience is Academic Resilience, associated with lower Dropout Intentions and higher Academic Satisfaction. This data is consistent with the literature about the importance of resilience for detained students (Sparks and Harris, 2005). The unexpected negative relation between Academic Motivation and Grades Average, together with the great amount of non-significant correlations could suggest two main observations: (i) we may need to elaborate more adequate scales to measure psychosocial academic success among detained people and (ii) we should reflect on which academic success' indicators really reflect the motivations of detained students.

Having participated in Correctional Education and perceiving more Social Support seem to be associated with better academic and, above all, social outcomes. This could suggest that previous correctional education could offer a good academic preparation but also positively affect the social impact of university. Social support seems to favor academic outcomes, consistently with the literature on academic success factors (Richardson, Abraham and Bond, 2012) and the social ones, stressing the importance of this aspect for detained students.

6. Conclusion and future directions

Current study has investigated the topic of university studies in prison through the exploration of the study experience of 28 detained university students. Participants' educational levels are higher and recidivism rate is lower than the general detained population, they also claim to have good social networks and to feel supported, in addition social outcomes are generally positive. It is possible that these aspects are

related to the impact of university studies, as the literature suggests, but to verify it we need a larger sample in order to test these hypotheses.

Study conditions are not optimal and this could affect the performances and we think it is important that university detained students are put in the proper study conditions (eg. comfortable and silent spaces). University staff, since it is considered the main source of support, should monitor and improve these aspects.

There were few significant correlations between psychosocial factors and academic outcomes and just one of them was coherent with the literature on academic success. This is in part due to the small sample but it could also mean that existing models are not adequate for correctional context, both in terms of predictors and indicators. An aspect that could be better used both as an indicator or predictor is Academic Satisfaction, since it does not seem to be linked to performance but it is related to Academic Resilience. Other two dimensions that seem to have a role in the experience of detained university students are Previous Correctional Education and Social Support, this underlines the importance of promoting the participation of detained people in educational programs and building supportive relationships in and out of prison.

This research has many methodological limitations, first of all the small sample size, together with the fact that the original psychosocial scales have been modified. The explorative and descriptive approach did not allow the models to be tested but it provided the basis for further reflection. Using larger samples and different methodologies, qualitative ones included, we need to design theoretical models able to grasp the peculiarities of correctional education; it will be then possible to understand what promotes its success and which benefits these programs could bring to detained people but also to the entire society in terms of reduction of recidivism.

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SENSITIVITY AS A FIDELITY INDICATOR OF UNPLUGGED IN RELATION TO ALCOHOL USE

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Abstract

Objective: Substance use prevention program Unplugged was implemented in Slovak primary schools during the school year 2017/2018. For its effectiveness evaluation, not only its results, but also the fidelity is important. One of the key dimensions of fidelity is sensitivity – assessment of the target group to the intervention. The aim of this study was to examine the impact of sensitivity on alcohol use during the last 30 days among schoolchildren as well as the moderation effect of gender. Method: The study was a cluster randomized controlled trial with data collection immediately before the Unplugged implementation as well as right after. Solomon four group design as research design was used in this study, it means that half of the experimental group is assigned to a pre-test. Sensitivity was measured through the modified scale Youth Experience Survey 2.0 with the following subscales: intrapersonal skills; interpersonal skills; novelty seeking; integration with authority; integration with peers; social exclusion; negative influences. *Two-stage* logistic regression was applied, adjusted for gender and condition (pretest/non-pretest). Moderation effect of gender was also explored. The study involved 399 schoolchildren (45.11% boys; pretest group n=211; non-pretest group n=188). Results: In the first stage, the main effects were observed. In relation to alcohol use during the last 30 days, only few indicators of sensitivity were statistically significant: social exclusion; integration with authority and integration with peers. A higher number of schoolchildren in the experimental group without pre-test reported alcohol consumption during the last 30 days compared with schoolchildren in the group with pre-test. The model explained 13.4% of variance of the dependent variable and correctly classified 78.4% of cases. In the second stage, the interaction effects of sensitivity indicators with gender were observed. In the final model, only statistically significant interaction effects were retained. It was confirmed that relationship between integration with authority and alcohol use depends on gender. Conclusion: It was found that integration with peers increases the likelihood of alcohol use, and conversely, integration with authority reduces the likelihood of alcohol use. Moreover, schoolchildren who reported alcohol consumption reported also high social exclusion during the Unplugged. It was also found that girls with alcohol consumption reported lower level of integration with authority although girls without alcohol consumption reported higher level of integration with authority when compared to boys.

Keywords: *Unplugged, fidelity, alcohol use.*

1. Introduction

It has been found that learning, skill development and a positive group experience tend to be the key aspects of a positive behavioural change (O'Leary-Barrett, Phil & Conrod, 2017, p. 47). Sensitivity as an assessment of the target group to the intervention stands then naturally an important component when assessing the implementation quality of a school-based drug use prevention program. During lessons when prevention program is implemented schoolchildren can actively engage in a role-play, solve problems requiring group cooperation, discuss expectations about substance use or engage in values clarification (Hansen, Fleming & Scheier, 2019). Sensitivity or schoolchildren's engagement is a very broad concept which includes, for example, motivation to participate in the intervention, willingness to participate in individual activities, perception of the attractiveness of learning materials and also perceptions of the program's features and teacher's expertise (Hansen, Fleming & Scheier, 2019).

In this study, attention was paid only to what experiences schoolchildren reported after completing the Unplugged program (Vigna-Taglianti, Galanti, Burkhart et al., 2014).

2. Design

This study was a randomized control trial using a Solomon four-group design.

3. Objective

To examine the impact of sensitivity on alcohol use during the last 30 days among schoolchildren as well as a moderation effect of gender.

4. Methods

4.1. Sample and procedure

The evaluation of the program Unplugged was conducted within an experimental design. This study is a cluster randomized controlled trial with data collection conducted immediately after program implementation. The selection of the schools was also performed with the aim of obtaining the most representative sample for the region and representative town size. The study involved 399 schoolchildren (45.11% boys; pretest group $n = 211$; non-pretest group $n = 188$) from 12 experimental schools.

4.2. Measures

Alcohol use

Alcohol use was measured by single item measure: “*How often (if ever) have you drunk alcohol during the last 30 days?*” The item was rated on a 4-point scale: 1 = not at all; 4 = 5 or more times (Hibell et al., 2011). For the purpose of this study, item was dichotomized (0 = not used, 1 = used / 23.1%).

Sensitivity

A modified version of the scale Youth Experience Survey 2.0 (YES 2.0, Hansen & Larson, 2005, Štefaňáková, 2020.) with next subscales:

- intrapersonal skills: 11 items measuring emotional regulation, cognitive skills and problem solving; $C\alpha = 0.894$
- interpersonal skills: 9 items measuring group process skills and prosocial norms; $C\alpha = 0.868$
- social exclusion: 5 items measuring social exclusion and ridicule; $C\alpha = 0.797$
- novelty seeking: 8 items measuring identity exploration, goal setting; $C\alpha = 0.860$
- integration with authority: 4 items measuring relationships and communication with teacher and parents; $C\alpha = 0.853$
- integration with peers: 5 items measuring diverse peer relationships; $C\alpha = 0.751$
- negative influences: 3 items measuring substance use; $C\alpha = 0.862$

The items were answered on a scale that provided four response options (1 = Not at all; 4 = Yes, definitely). Higher values in each dimension indicated a higher number of experiences.

4.3. Statistical analyses

Descriptive analysis of independent variables was calculated and differences between groups were tested by using t-tests. Logistic regression was carried out and the analysis was adjusted for gender and condition (pre-test/non-pretest). Moderation effect of gender was also explored. All analyses were carried out using SPSS 25.0.

5. Results

Firstly, descriptive statistics was calculated and mean values for intra and interpersonal skills, novelty seeking, integration with authority, integration with peers, social exclusion and negative influences of Unplugged among adolescents are presented (Table 1). A t-test revealed significant gender differences in the variables social exclusion and negative influences. Boys reported significantly higher level of social exclusion and negative influences (Table 2).

Next a binary logistic regression was carried out. In the first step of binary logistic regression, the main effects were observed. In relation to alcohol use during the last 30 days, only few indicators of sensitivity were statistically significant. These effects were social exclusion; integration with authority, and integration with peers (Table 3). Moreover, a higher number of schoolchildren in the experimental group without a pre-test reported alcohol consumption during the last 30 days compared to schoolchildren in the group with a pre-test (Table 3). The model explained 13.4% of variance of the dependent variable and correctly classified 78.4% of cases. In the second step, the interaction effects of sensitivity indicators with gender were observed. In the final model, only statistically significant interaction effects were retained. It was found that the relationship between integration with authority and alcohol use depends on gender. It was also found that girls with alcohol consumption reported lower level of integration with authority, although girls without alcohol consumption reported a higher level of integration with authority when compared to boys (Table 3, Figure 1).

Table 1. Descriptive characteristics of explored variables.

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Intrapersonal skills	299	33	11	44	24.58	7.09
Interpersonal skills	316	27	9	36	20.96	5.71
Social exclusion	322	15	5	20	8.11	3.24
Novelty seeking	315	24	8	32	18.62	4.98
Integration with authority	320	12	4	16	8.79	3.32
Integration with peers	315	15	5	20	11.04	3.65
Negative influences	326	9	3	12	3.88	1.82

Table 2. Descriptive characteristics of explored variables by gender.

		N	Mean	SD	t
Intrapersonal skills	Boys	243	23.24	6.27	ns
	Girls	266	23.00	6.28	
Interpersonal skills	Boys	271	19.13	4.71	ns
	Girls	277	19.48	4.58	
Social exclusion	Boys	276	8.60	3.56	3.65***
	Girls	288	7.61	2.85	
Novelty seeking	Boys	256	18.69	5.55	ns
	Girls	273	18.49	4.84	
Integration with authority	Boys	271	8.93	3.12	ns
	Girls	291	8.97	3.44	
Integration with peers	Boys	273	11.08	3.46	ns
	Girls	289	11.33	3.44	
Negative influences	Boys	282	4.38	2.28	5.26***
	Girls	299	3.56	1.42	

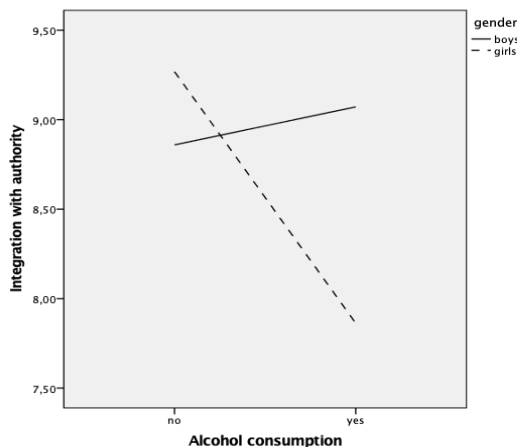
Notes: *** $p < .001$

Table 3. Binary logistic regression models estimating likelihood of reporting alcohol consumption among schoolchildren.

	Sig.	Exp(B)	95% C.I.for EXP(B)		Sig.	Exp(B)	95% C.I.for EXP(B)	
			Lower	Upper			Lower	Upper
Gender ¹	0.650	0.886	0.524	1.496	0.090	3.844	0.812	18.186
Pre/Post-test ²	0.029	1.768	1.061	2.947	0.029	1.777	1.061	2.977
Intrapersonal skills	0.326	0.963	0.894	1.038	0.448	0.971	0.9	1.047
Interpersonal skills	0.052	0.916	0.839	1.001	0.035	0.908	0.831	0.993
Social exclusion	0.017	1.131	1.023	1.252	0.027	1.122	1.013	1.242
Novelty seeking	0.264	1.046	0.967	1.132	0.296	1.043	0.964	1.129
Integration with authority	0.020	0.881	0.793	0.98	0.726	0.974	0.844	1.126
Integration with peers	0.001	1.203	1.081	1.339	0.001	1.197	1.075	1.332
Negative influences	0.786	1.023	0.869	1.204	0.869	1.014	0.86	1.195
Integration with authority X Gender					0.048	0.844	0.714	0.999

Notes: ¹Boys as reference group, ²The group with pre-test as reference group

Figure 1. Moderation effect of gender in the relationship between integration with authority and alcohol consumption among schoolchildren.



6. Discussion and conclusions

This study explored sensitivity and focused on the experiences which the schoolchildren reported after completing the Unplugged program. Positive experiences with Unplugged were assessed by using five subscales (intrapersonal skills, interpersonal skills, novelty seeking, integration with peers, integration with authority) of the modified version of the scale YES 2.0 (Hansen & Larson, 2005). An average mean scores were recorded in the subscales of positive experiences. Negative experiences were measured by two subscales (social exclusion, negative influences), however, the obtain scores were generally very low. In terms of gender differences boys tended to report a higher level of negative experiences when compared to girls.

Immediately after the Unplugged implementation, it was found that integration with peers and social exclusion increased the likelihood of alcohol use, and conversely, integration with authority reduced the likelihood of alcohol use. Moderation effect of gender was also confirmed in the relationship between alcohol use and integration with authority.

Our findings are in line with studies confirming the importance of schoolchildren's engagement in relationships with regard to substance use and alcohol use in particular (Bast et al., 2019; Hansen, Fleming & Scheier, 2019). Engagement can be improved by teachers through paying attention to students when they have something to say, making the program enjoyable to participants, encouraging students to share opinions, stimulate attentiveness, and help students to think broadly about implications of drug prevention as it affects their lives (Hansen, Fleming & Scheier, 2019). The chosen research design (Solomon four groups design) confirms the anticipated impact of pre-test in verifying the impact of Unplugged which is in line with previous findings (Köksal, 2013).

The main limitation of this research is in self-reported data. As a result schoolchildren's reports on their own substance use may be biased by provision of socially acceptable answers.

Acknowledgements

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SEMIOTIC BASIS OF PEDAGOGICAL COMMUNICATION

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Abstract

The study examines pedagogical communication as a semiotic and postmodernist category. Its essence is the concepts "text and discourse", as well as "discourse analysis" as their application. Their basis is the power in and the ways of its use in a social institution like the school. The scientific text has a primarily conceptual character, in the direction of power practices in school realized through language and its social connotations. The purpose of the study is to understand the post-modernist modifications of school texts and speech practices, as well as the possibility of manipulation they bring to the teacher-student relationship.

Keywords: *Text, discourse, discourse analysis, pedagogical communication, postmodernism.*

1. Introduction

Pedagogical communication at school in the 21st century undergoes changes related to the knowledge and use of concepts such as "text and discourse". The latter are semiotic categories as sign systems that can be interpreted in different ways, but always in the direction of the power they contain. Power carries within itself certain rules encoded in the contexts of use of the texts in school and modifies them.

The subject of the study in this case are the semiotic categories and concepts "discourse and text" as the basis of pedagogical communication. The aim of the study is to understand the post-modernist modifications of school texts and speech practices, as well as the possibility of manipulation they bring to the teacher-student relationship. The future of pedagogical communication is in accordance with the social uses of language related to new messages for the pedagogical community in school, which must be understood as a scientific phenomenon and process.

Overview Pedagogical communication as a semiotic category is a type of discursive practice. The latter is related to the creation, production, transformation and interpretation of texts. In this sense, the main semiotic relation in pedagogical communication is the relation: "text and discourse". Both categories are post-modern, insofar as they are mostly tied to the problem of power, which changes the meaning of "pedagogical communication" itself, its message as a message, and the positions of the teacher and the student as addressee and addressee in this process.

2. Discourse

The concept of "discourse" is a concept with excessive volume, which in recent years has taken over the scientific community, becoming a leading cognitive category. The history of the term "discourse" is evidence of the updating of ancient concepts through a new context of use. Discourse goes a long way from its generic essence of "word", "speech" borrowed from Latin and French sources (*discursus argumentum*), to a modification of any kind and order, burdened with ideological, political and economic characteristics. Today, discourse is shedding its original verbal character to give way to a social one. The discourse reflects a certain speech behavior of social participants who reshape it in their own image and likeness. Discourse is evidence not only of the power of speech, but also of its weakness to be manipulative, dictating norms and rules of behavior. Each professional community creates its own discourses through which it legitimizes itself in the public space. The pedagogical community is no exception.

For the American linguist Zellig S. Harris (1952), discourse is comparable to the phrase and, in contrast, consists of several utterances. Émile Benveniste (1973) draws attention to the explicit position of the speaker in the utterance. Van Dijk, T. A. (1977) defines discourse as a "communicative event" between a speaker and a listener that takes place in a specific time and space with verbal and non-verbal means.

John Austin in the 60's of the 20th century with the theory of "performatives" and John Searle's "typing" of the speech act are also credited with identifying it as a scientific category. Postmodern readings of discourse primarily associate it with power in the works of Michel Foucault and Pierre Bourdieu. For Foucault, discourse is included in a political and economic mode of use, given the New Age's edifying institutions and subjugation of the human body as politically docile and economically expedient. For Bourdieu, discourse is: a "practical logic", where the body itself carries its social history.

Discourse is a typically semiotic category that is subject to multiple interpretations, but its main characteristic of being a sign system is preserved. The "text and discourse" relationship is joined by the "context" category, inasmuch as the innovative moment in any discourse is the ways of its use in different situations, so that at some point the context becomes more important than the text itself.

Pedagogical discourse, in turn, has specific characteristics that express its uniqueness:

- Status-role characteristics of the participants, such as students and teachers;
- Communicative goal related to the socialization of the learner, which predetermines it;
- Prototypical place of communication as a heterogeneous type of school,
- A key concept such as training and education;
- Values of a moral, aesthetic and any other nature accompanying the mastery of knowledge and skills at school (Karasik, 2002).

Pedagogical discourse also acquires new postmodern characteristics that contradict the traditional vision created up to that point. The roles of teacher and students, or at least the positions of the teacher, change. The school becomes a quintessentially social institution, burdened and burdened by power in its desire to solve the problem of human difference. Training ceases to be the main concept and is replaced by "education", where the most important point is certificates and grades. Values and especially norms become extremely subjective and are of a different order in the minds of teachers and students. It is difficult to predict the changes that will redefine the very concept of pedagogical discourse, insofar as it is part of the social and cultural one in society. However, the most decisive change is in the pedagogical texts and their interpretation. Without the knowledge of these texts and the "communicative situation" that sets them, it is difficult to talk about pedagogical communication of the future.

3. Text

Text is a basic means of communication, implemented as a link between linguistic signs in written or spoken form. (lat. *textum* - connection) Its distinguishing feature is the relation "part and whole", insofar as the whole organizes and subordinates the parts to express a certain meaning. A basic concept in text theory is "text structure" (from the Latin *structura* - interrelationship). The most famous approach to the structure of the text is the "linguistic" one, which belongs to Van Dijk from 1997. The author defines a "general structure" of the text and relates it to the functional components such as introduction, exposition and conclusion. (Van Dijk, 1997) The structure of the text also has several main characteristics: "connectedness, systematicity, modality and hierarchy". As a "linguistic category," the text is interpreted differently according to the authors and schools they represent. The text for structuralists - Ferdinand de Saussure, Louis Hjelmslev, René Girard can be thought of as a system where the number of meaning plans is limited and the text itself is a closed system. In the analytical concept of the text - Jackie Derrida, Roland Barthes, Jacques Lacan, Julia Kristeva, the text is a process of production and continuous production of meanings and their number is unlimited. As an open system, the text corresponds continuously with other texts, and this process is known as "polyphonism" (M. Bakhtin) or "intertextuality" (J. Kristeva). One of the most interesting ideas is about the intersections of "symbolism and textuality" of the Moscow-Tartu Semiotic School. The school considers "the text as a collection of signs and the text as a sign; the text as a constituent of culture and culture as a text; the text as already produced meaning and the text as a process of continuous meaning-building" (Dacheva, 2001).

The entire effort of postmodernism is directed at the "text" itself.

The postmodern reading of texts leads us to semiotic or structuralist ideas rather than purely literary ones. They deal above all with the context, with cultural and ideological meanings of the text and analyze its readability from the point of view of the codes and conventions that construct it.

Iser's phenomenological approach to reading allows us to think the birth of fiction in the act of reading, where it reproduces itself with its ways of use.. ie. "why the same literary text can mean different things to different people and different times" (Iser, 2004).

The concept of "intertextuality", introduced in 1967 by Julia Krasteva, changed the attitude towards literature, insofar as it expresses the postmodern age as a way of thinking. Krasteva's idea corresponds to the ideas of Jacques Derrida, for whom "everything is a text - society, culture, literature". For Culler, there is a model that includes five ways in which a text can enter into a relationship with other texts (Culler, 2003).

- Text actually taken from life and reality;
- The general cultural text that complements the first text;
- Conventions of the genre ie cultural plausibility;
- A natural attitude towards the artificial, so that the text can protect its own authority;
- Complex intertextuality.

For M. Bakhtin, the dialogue between texts is a meeting of personalities who express themselves through them. "The text as a kind of monad reflects in itself all the texts within the limits of a given meaning sphere..." Relations between the texts and within the text are dialogic. Their character is non-linguistic. (Bakhtin, 1986).

The focus on language as a phenomenon will also change pedagogical knowledge, regardless of whether it uses literary or non-literary texts. The pedagogical community will have to comply with the discursive practices of Postmodernism if it wants to be timely in its messages. His achievement is the statement that the way we speak is not only the way we think, but also the way we live. The teaching community will need to be attentive to all texts in school and the culture they carry within them.

4. The text-discourse relationship. Discourse analysis

"Discourse analysis" (discursive) is "a set of methods and techniques for the interpretation of heterogeneous texts or statements as products of speech activity, carried out in specific socio-political and cultural-historical conditions" (Pedagogic Speech, 1998). It is associated with the study of features of language communities based on the spoken speech and written texts they produce. Discourse analysis uses the transcription of oral speech, including certain features that are not available in written texts, and conceptual analysis as the main methods. The latter relies on decoding the meaning of words, phrases, texts and works. "Discursive analysis" received a boost in its development with the creation of "linguistic pragmatics" as a science in the 70s of the 20th century. She sets herself the task of answering the questions: "Who is speaking, to whom and why?"

The importance of discursive analysis is in the pragmatization of texts, the relationship between speech and language, as well as the role of participants in speech production and activity.

Various variants of discourse analysis are successfully used in the scientific space. In 1970, Michael Holliday brought out the relationship between the grammatical system and the social connotations of language. The most popular is critical discourse analysis, developed by Norman Fairclough (1995), who focuses his research effort on the intertextuality of discourse and its possibility to correspond with many others. In this way, discourse itself comes to be seen as a type of social practice. In Fairclough's three-part model, there is a text, the discursive practice that uses it as a text, and the social practice related to its primary purpose and potential to change society. Fairclough develops the conceptual apparatus of "critical discourse analysis", including intertextuality, interdiscursiveness, hegemony, ideology, etc. related to the primary purpose of discourse to be a form of social struggle. (Jorgenson & Phillips, 2008). In his books, Ten Van Dyck talks primarily about the possibility for those in power to set the strategies of the discourse and determine the conditions of its occurrence. This social motive again directs the discourse and discourse analysis to the social practice and its modification. Among the theories, the Viennese school of "discursive sociolinguistics" of R. Wodak (1989) stands out, which examines institutional communication and its barriers, including at school. For the famous Russian semiotician Yu. Stepanov, discourse is a "language within a language" or rather "an alternative world", which has its own grammar, its own lexicon and is necessarily connected to social circumstances. (Stepanov, 1979).

For pedagogy, discourse analysis can have several manifestations:

- Study of pedagogical discourse as self-identical, i.e. "conversational" as pedagogical based on participants and topics of discussion;
- Study of the pedagogical discourse as part of the discourses of society, where its multifaceted intercultural nature is manifested;
- Research of power relations of the pedagogical discourse in the context of the school as an institution and the possibility of using this discourse as a social practice.

5. Conclusion

Discourse, text and discursive analysis as their application are new semiotic and postmodernist categories. The educational community will have to turn its attention to their knowledge and use insofar as they directly or indirectly influence language and speech practices in school. They are also evidence of the entry of power into the professional language of the pedagogical community, which dictates its rules and requirements about when and how a teacher and a student should talk at school. The government also

creates conditions for the manipulation of language practices in school, similar to the media, where suggestions are more important than the truth. It is the task of teachers to mobilize their efforts and professional conscience in order not to be officials or servants of the authorities, but to perform their services for humane causes that do not change in pedagogy.

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IMPLEMENTATION OF PRE-BOARD INHOUSE REVIEW AND MANAGEMENT PRACTICES OF THE ACADEMIC HEADS AS CORRELATES OF LET PERFORMANCES

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Abstract

This study generally aims to determine if the implementation of pre-board in house review and the management practices of the academic heads could play an important role in the Licensure Examination for Teachers (LET) performances from AY 2017-2019. The survey used the purposive convenience sampling to get the respondents sample and its proportion. The respondents of the study were the one hundred ninety-seven (197) LET takers from AY 2017 – 2019, ten (10) academic heads and forty (40) faculty members engaged in pre-board in house review of the selected State Universities and Colleges (SUC's) in CALABARZON. The respondents were asked to rate the extent of implementation of the pre-board in house review and the extent of management practices of the academic heads of the College of Education in the conduct of the pre-board in house review as correlates to LET performances.

Research result revealed that the three groups of respondents perceived the implementation of the pre-board in house review in terms of all aspects as very highly implemented. Likewise, they also perceived that the management practices of the academic heads in the conduct of the pre-board in house review in terms of all aspects were very much practiced; however, there is a weak correlation of the Implementation of the pre-board in house review and the management practices of the academic heads to the Licensure Examination for Teachers. The findings imply that the implementation of the pre-board in house review and the management practices of the academic heads in the conduct of the pre-board in house review could be strengthened and enhanced to influence positively the result of the Licensure Examination for Teachers. An e-policy intervention program for the conduct of the pre-board in house review and management practices is hereby recommended.

Keywords: *Pre-board inhouse review, management practices, LET performances.*

1. Introduction

In recent decade, various strategies and innovations were incorporated by the academic heads in the curriculum, management, and operations in their respective offices to ensure quality outcomes and better school performances particularly in state board examinations. Improvement in the instructional practices, admission policies, retention policies, physical plan and facilities, curricular offerings, research, and pre-board inhouse reviews and examinations were implemented by the academic heads in different higher education institutions as a response to the national and international standards and levelling requirements of the government. Management practices of the academic heads greatly influence the operations and performances of their respective colleges in meeting their respective goals and objectives and to add in the University standings. The success of the faculty, students' performances and the college operations as a whole are dependent on the leadership and behavior of the deans particularly on his/her management practices. (Sharma, 2016)

The movement of the Higher Education Institution to ASEAN Qualification Reference Framework from Philippine Qualification Framework of Educational Institution in the Philippines also sets the standards to a more competing and higher level. The passage of Republic Act 10968 or the Philippine Qualification Framework in 2018 sets levels of educational qualifications and standards for qualification outcomes. It serves as a quality assured national system for the development, recognition and award of qualifications that mandated government agencies particularly the Commission on Higher Education (CHED) for higher education institutions to meet the goals sets by the said law such as to ensure that training and educational institutions comply with specific standard and are responsible for achieving corresponding learning outcomes (Republic Act 10968, 2018). On the other point of view, the

ASEAN Qualification Reference Framework which is a common reference framework that enables comparison of education qualifications across participating ASEAN Member States has the following objectives which include support recognition of qualifications, encourage the development of qualifications frameworks that can facilitate lifelong learning, encourage the development of national approaches to validating learning gained outside formal education, promote and encourage education and learner mobility, support worker mobility, improve understanding of qualifications systems, and promote higher quality qualifications systems. This framework sets a reference for member states the qualifications they must have in their National Qualifications Frameworks which includes good practice for quality assurance including recognitions of professionals.

Consequently, Teacher Education Institutions (TEIs) in the Philippines establish their brand of educational quality through their graduates' performance in the Licensure Examination for Teachers (LET). The LET is also a crucial criterion of the Commission on Higher Education (CHED) in granting Center of Development (COD) and Center of Excellence (COE) status to the curricular programs of TEIs. Furthermore, local and international accrediting agencies consider the institution's licensure examination performance as a key performance indicator for quality assurance. (Amanonce and Maramag, 2020)

For the past three years since 2017 which is composed of six (6) LET administrations (March 2017-September 2019), the average national passing percentage is only 23.20% for elementary level and 35.9 % for the Secondary level. These are clear indications that teacher education institutions are not producing equipped teachers. Many schools have developed and implemented elaborate school improvement plans; however, there is a realization that these efforts often fall short of attaining the expected results. (www.prc.gov.ph)

Most of the teacher education institutions develop programs such as accreditation, qualifying examinations, retention programs, strict admission policy and pre-board inhouse review and examinations to increase the passing percentage of their LET performances. (Ladia et. al, 2018, Amanonce and Maramag, 2020)

The role of the academic heads in managing any academic endeavor and programs to enhance the outcome of the goals of the college such as the conduct of the preboard inhouse review and examinations are very much important in comparison to other functions and duties they performed. The researcher strongly believed that the academic head's practices or way of managing the college activities like pre-board inhouse review can influence the performance of the college including the LET.

However, among the literature and studies reviewed by the researcher regarding the conduct of pre-board inhouse review, none of it states the significant relationship of the management practices of the academic heads of the College of Education in the implementation of the pre-board inhouse review and the performance in the Licensure Examination for Teachers. In this respect that caused the researcher to explore and determine the management practices of the academic heads in the College of Education in the conduct of the pre-board inhouse review as well as its implementation since the researcher serves as one of the lecturers and facilitators in the pre-board inhouse review and a provider of pre-board examinations questions.

2. Method

In this study, the researcher used a non-experimental Descriptive Correlational Design which helped the researcher examine the relationship between the implementation of the pre-board inhouse review and management practices of the academic heads in the College of education in selected State Universities and Colleges (SUC's) in Region 4A-CALABARZON as correlates of LET performances from 2017-2019. A correlational design is suitable in this study because it is applicable in educational research to examine correlations and predictive associations (Mertens, 2014).

The correlational approach is the best method to examine the relationship between variables and to permit the prediction of future outcomes from present knowledge (Stangor, 2011). With the correlational research design, there is a single group of participants (e.g., teachers) among whom the criterion and predictor variables are measured to examine the relationship between them (Beauvais, Stewart, DeNisco, & Beauvais, 2014; Boddy, 2014). Secondly, in a correlational design, both variables are continuous variables (i.e., ratio or interval). The correlational design allowed the researcher to highlight a specific population for interpretation without the risk of significant numerical differences in the data collected. Moreover, a Descriptive Research Design will also be another option to be used in this study. The purpose of descriptive research is to describe in detail the characteristics and features of the subjects in question in a nonexperimental environment. In a Descriptive Research Design, a researcher might conduct surveys to collect data and use descriptive statistics to describe the variables and subjects in question. However, inferential statistics are also a requirement in a Descriptive Research Design (Shaughnessy et al., 2012). In this study, the researcher described the management practices of the

academic heads in the College of Education and the implementation of pre-board inhouse review as perceived by the academic heads themselves the faculty members engaged in the said review and the pre-board inhouse review participants and LET takers from 2017 - 2019 in the respective institutions concerned. Then, the researcher assessed the relationship between the implementation of pre-board inhouse review and management practices of the academic heads to the LET performances of the subject institutions from 2017 – 2019.

The researcher used a researcher-made questionnaire-checklist as the main instrument in gathering the needed data of the study. The crafting of the instrument was guided by the theories of BF Skinner Operant Conditioning Theory, the principles of Fidelity of Implementation by Dane and Schneider as a component of the Diffusion of Innovation Theory by E. Roger and the Total Quality Management theory of Deming's Profound System of Knowledge focusing on his PDCA Model. Statements were contextualized to fit to the present study.

With regards to the data gathering procedure, the researcher conducted interview regarding the number of faculty members in the college of education engage in the conduct of the pre-board inhouse review. Only campuses with conducted pre-board inhouse review were considered in this study. For the number of LET taker from 2017 – 2019, the researcher retrieved the data from the official website of the PRC. Then, after the information was identified, the researcher requested from the dean the copies of the list of takers and passers in the 2017 – 2019 LET Examinations as well as and faculty respondents of the study guided by the Philippines Data Privacy Act of 2012.

3. Results and discussion

Extent of Implementation of pre-board inhouse review. Descriptive statistics for each quantitative independent variable revealed that the three groups of respondents perceived the implementation of the pre-board inhouse review in terms of all aspects as very highly implemented. Based on the collected data, results showed that the respondents perceived the implementation of the pre-board inhouse review in terms of Adherence, Scope, Quality, Responsiveness of the Participants, and Evaluation of the Review was very much implemented as revealed by the obtained general composite mean of 4.43 (SD=0.589) for the academic heads, 4.51 (SD=0.704) for the faculty respondents and 4.28 (SD=0.663) for the LET taker respondents and an over-all obtained mean of 4.41 (SD=0.652) which verbally interpreted as very highly implemented. The results showed that there exists a significant difference on the perception of the group of respondents in the implementation of the pre-board inhouse review in terms of scope between the faculty and LET taker respondents $F(2, 244) = 3.12, p < 0.046$ which the p-value is less than the .05 level of significance. This implies that there are significant differences on the views of the respondents concerning the coverage included in the pre-board inhouse review since the p-value is less than 0.05 level of significance.

Extent of Management Practices of the Academic Heads in the Conduct of the Pre-board Inhouse Review. The results revealed that the three groups of respondents perceived the management practices of the academic heads in the conduct of the pre-board inhouse review in terms of all aspects as very much practiced (M=4.42, SD=0.575). This implies that the academic heads very much practiced in the conduct of the review the proper planning, implementing, checking and applying the recommendation in the program. In addition, the three groups of respondents perceived that in terms of all aspects, the management practices of the academic heads in the conduct of pre-board inhouse review in terms of act obtained the highest mean and was verbally interpreted as Very Much Practiced (M= 4.47, SD=0.548). In conclusion, the findings revealed that there were no significant differences that exist on the perception of the three groups of respondents in terms of all aspects regarding the extent of management practices of the academic heads in the conduct of the pre-board inhouse review $F(2,244)=0.98, p > 0.375$.

The findings of the present study have social change implications for practice, theory, and policy. In terms of practice, the study contributes to social change by providing the College of Teacher Education and the academic heads, faculty lecturers/reviewers and Education students on information concerning the best way of implementing the pre-board inhouse review to attain positive result in LET. The low correlation implies that the College of Education could strengthen and intensify the conduct of the review in order to influence the LET performance. In terms of theory, the study has provided a possible development of a framework on the interconnectedness and pathways of the policies on implementing an inhouse review not only in Teacher Education Program but also in other board examination programs and the management practices of the academic heads to attain positive result in board examinations.

Lastly, in terms of policy, the Higher Education Institutions offering Teacher Education program may strengthen and intensify the implementation of the pre-board inhouse review by adopting the recommended e-policy and applying the best practices to ensure positive result in the LET.

4. Recommendations

It is recommended that future studies may explore on the gap between the time the students took their pre-board inhouse review and the actual Licensure Examination for Teachers. The amount of information retained to students from the pre-board inhouse review and the time they take their LET could be a factor that affects the performance of the students in the licensure Examination for Teachers.

Moreover, it is recommended that future researchers may explore on the perception of the non-passers in LET regarding the implementation of the pre-board inhouse review and management practices of the academic heads since their point of views could provide significant information on the improvement and enhancement of the pre-board inhouse review program.

The use of more variables that may affect the implementation of the pre-board inhouse review and management practices are hereby recommended to be the subject of future studies. With the use of more variables in the implementation of the review and the management practices of the academic heads, it will provide more information that could give a vivid picture of its influence to the result of the LET.

Furthermore, there could be an underlying concern that needs to be addressed as to the implementation of the pre-board in house review and the performance of the students in the Licensure Examination for Teachers, hence the need for conducting an in-depth research through qualitative research such as phenomenological approach to explore the lived experiences of the administrators, faculty and students to further understood the existing phenomenon involving the determined no correlation of the pre-board inhouse review and the performance in LET.

Lastly, it is recommended that the College of Teacher Education may consider adopting the proposed e-policy on the implementation of pre-board inhouse review.

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INVESTIGATING THE SOCIAL NETWORKS - SOCIAL SUPPORT AMONG SINGLES AND PARTNERED INDIVIDUALS DURING THE COVID-19 PANDEMIC

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Abstract

The aim of the current study was to compare social networks among single and partnered individuals, while analyzing it in terms of social support against three constructs: 1) significant other, 2) family, 3) friends in a COVID-19 pandemic context. 125 people aged from 18 to 60 ($M=25,5$, $SD=6,63$) took part in the study, 79 people were in relationships and 46 were single. Participants completed the Polish adaptation of *The Multidimensional Scale of Perceived Social Support* (Adamczyk, 2013) in two versions - first with its statements, which should have been addressed based on current impressions and, in the second version, impressions from before the pandemic began. The findings revealed that participants in relationships experienced a higher sense of support from "significant others" compared to singles. The effects applied both before the pandemic ($r_g = -0,37$) and at present ($r_g = -0,33$). In addition, the study revealed the correlation between the choice of the significant person and being in a relationship or being single. Individuals in a romantic relationship most often chose a partner as a special person, while singles mentioned a friend. Cramer's V coefficient indicated a strong relationship: before the pandemic ($V=0.71$) and now ($V=0.77$). Current study confirmed previous research on perceived social support from significant others among singles and people in relationships. In conclusion, people in a romantic relationship seem to experience a higher sense of support from "significant others" compared to singles due to the choice of a partner as a special person.

Keywords: *Social networks, social support, singlehood, romantic relationships, COVID-19.*

1. Introduction

The dynamic development of the Internet has made it not only a communication tool, but the space to establish, maintain interpersonal relationships and fulfill social needs as well (Krejtz, Zajac, 2007). Social media and its network applications have given its users the opportunity to engage in social interactions (Iwanowska, 2016). Considering social media in the context of interpersonal relations, it constitutes a virtual social network, which is the circle of friends with whom a given user is in contact. A social network is a social structure that consists of individual elements („nodes") and their connections („ties"). Nodes can be understood as entities in the network, while ties are the relationships between them (such as friendship or kinship) (Tłuściak-Deliowska, 2014).

Previous research has indicated the relevance of social networks for the mental health of individuals by being the source of a person's 1) integration and 2) social support, and thus providing an individual with a sense of security and belonging to a group (Cobb, 1976). This paper focuses on the second component - social support that can be considered in terms of its sources (f.e. family, friends, other closer people and various social groups (Sęk, Cieślak, 2012)) and categories, which usually include: 1) social integration and support networks, 2) social support received, and 3) perceived social support (Sarason et al., 1990).

Examining social networks from the perspective of having or not having a life partner provides an opportunity to broaden the subject of social networks. However, there are discrepancies in theories; some of them qualify living alone as an isolating factor for the individual (Durkheim, Rossi). They see such individuals as lonely and having limited social circles. Others (f.e. Bengston, Parsons, Bales), view living alone as the way of integrating a person with other people, while the marital relationship may contribute to weakening relationships (Sarkisian, Gerstel, 2015). Studies show that single people on average have more friends (Gillespie et al., 2014) and are more sociable than married people (f.e. Sarkisian, Gerstel, 2015). Putnam (2000) found that marriage does not increase networking with

friends and neighbours. It seems, therefore, that examining people living alone and in a relationship in terms of the element that makes up a social network: social support, may extend previous reports on the relationship between having or not having a partner. Adamczyk (2015) reported that single-life status was associated with greater romantic and family loneliness and less perceived support from family and significant others. In contrast, other research indicates that single people receive more support from their parents (Sarkisian, Gerstel, 2015) and from their siblings than married people (Campbell et al., 1999). Other researchers, however, in their studies have indicated that there is no difference in perceived support by marital status (Campbell, Matthews, 2003).

Exploring social networks, it seems necessary to include the COVID-19 pandemic perspective, because the pandemic and the restrictions imposed have changed many aspects of people's daily functioning (Mamun et al., 2021), thus changing the frequency and quality of communication between them (Ryu et al., 2022). Social isolation may have resulted in reduced accessibility to social support, but on the other hand, the pandemic contributed to more intense virtual contact and the search for intimacy through virtual interactions (Bakiera, Obrebska, 2021). One study indicated that among those who noticed a deterioration in contact during the pandemic, ratings of frequency of contact were associated with feelings of emotional and social loneliness. The authors of the study hypothesized that feelings of loneliness may be related to a lack of sufficient support during deteriorated contacts (Kosowski, Mróz, 2020). What's more, a study in Switzerland found that students who lived alone and had a narrow circle of friends were at higher risk of depressive symptoms. In contrast, students who received a lot of support from friends with whom they kept in touch online experienced less loneliness (Elmer et al., 2020). In addition, students who returned to their family homes for the duration of the pandemic reported better mental well-being compared to students who lived alone (Husky et al. 2020). Lastly, one of the more recent studies showed that the COVID-19 pandemic was associated with a decrease in friendship longevity (Jo, Harrison, Gray, 2021).

Considering the importance of cyberspace in the everyday life of many people, it seems to be extremely important to broaden the research on the existence of social networks. This study attempts that by considering them from the perspective of living alone and living in a relationship, because researchers are constantly engaging in a debate about the relationship between living alone and the nature of social ties. The aim of the current study was to compare social networks among single and partnered individuals, while analyzing it in terms of social support against three constructs: significant other, family, friends in a COVID-19 pandemic context.

2. Method

2.1. Participants

A total of 125 people took part in the study, including 93 women, 30 men and two people who specified their gender in the other category. The age distribution ranged from 18 to 60 years ($M = 25.5$, $SD = 6.63$). Responses regarding education were dominated by the students, which accounted for 41.6% of all responses ($N=52$). Among survey participants, the largest group were those living in a city with a population between 200,000 to 500,000 people (39.2%).

The majority of respondents ($N=79$, 63.3%) declared that they had a life partner, 39 people gave a negative answer (31.2%), while 7 people said they had never been in a relationship. Respondents were also asked about the length of time since they have or have not had a life partner. In the group of those in a relationship, the range of responses was from 2 to 408 months ($M=56.15$, $SD=61.88$). And in the group without a partner, from 2 to 360 months ($M=41.92$, $SD=77.68$). Among the respondents, as many as 44% ($N=55$) were in an informal relationship, while 36.8% ($N=46$) were single.

2.2. Procedure

The survey was conducted using the online tool Google Forms. Participants were obtained by posting information about the study along with a link to the survey on various Facebook groups, some respondents were obtained using the so-called snowball method by directly sending a link to a person with a request to send to as many people as possible.

Respondents were asked to complete Polish adaptation of The Multidimensional Scale of Perceived Social Support (Adamczyk, 2013), which was included in the survey in two versions; the respondents were to refer to the statements guided by their current impressions and, in the second version, impressions from before the pandemic began. Another part of the form included a personal data questionnaire to collect basic sociodemographic data and the choice of a special person.

2.3. Measures

The following tools were used in the study:

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) (Polish adaptation - Adamczyk, 2013) consists of 12 statements to which the respondent relates using a seven-point Likert scale: completely disagree (1), completely agree (7). The MSPSS allows for the assessment of three sources of support: a significant other (e.g., "I have that significant other in my life who is there for me when I am in need") family (e.g., "My family tries very hard to help me") and friends (e.g., "I can count on my friends when my affairs go wrong "). The Cronbach's α index of the Polish adaptation for the total score took a value of 0.89, for the Friends subscale 0.89, Family 0.94, and Significant Other 0.90. In the self-report survey, the reliability of the subscales was $\alpha = 0.93$ for the Friends subscale, $\alpha = 0.91$ for the Family subscale, and $\alpha = 0.95$ for the Significant Other subscale.

The Personal Data Questionnaire was created for the study. It included questions on age, gender, education, place of residence, and a question on having a life partner, relationship status, and length of time in a relationship/living alone. The metric examining social networks included questions about the number and frequency of contact with close people in two options; direct contact and contact via social media.

3. Results

Statistical analysis was carried out using SPSS Statistics 27. Descriptive statistics (mean and standard deviation) of variables analysed are included in Table 1.

In the next step, it was assessed whether there was a significant difference in perceived social support between those with and those without a life partner. Analysis using the Mann-Whitney test showed that there was a significant difference in perceived social support between those with and without a partner on the special person subscale: perceived support before the pandemic ($p < 0.001$, $U = 1138.0$), perceived support now ($p = 0.002$, $U = 1223.5$). Those in a relationship felt a higher sense of support from a special person than those living alone. The strength of the effect was weak: $r_g = -0.37$ (before the pandemic), $r_g = -0.33$ (now).

The responses of respondents regarding a special person at present - people who are in a relationship most often indicate a partner as a special person ($N = 43$), 11 respondents mentioned several people, which include friends, family members or other close people, while in third place is the answer friend ($N = 8$). Among the group of people without a partner/friend, the answer friend dominates ($N = 24$), the second most frequently selected category is no special person ($N = 7$), 6 people pointed to their mother as a special person for them.

The analyses also showed that there was a correlation between having vs. not having a partner/friend and choosing a special person in both the pre-pandemic and current variants ($p < 0.001$). Cramer's V coefficient indicated a strong relationship: pre-pandemic ($V = 0.71$) and current ($V = 0.77$).

Table 1. Descriptive statistic of variables.

Variables	<i>M</i>	<i>SD</i>
Social support - significant other (now)	5.92	1.44
Social support - family (now)	5.33	1.49
Social support - friends (now)	5.55	1.27
Social support - significant other (before the pandemic)	5.59	1.45
Social support - family (before the pandemic)	5.36	1.56
Social support - friends (before the pandemic)	5.48	1.36

4. Discussion

This paper presents a comparison of social networks among people living alone and those in a relationship in terms of social support against three constructs: 1) significant person, 2) family, 3) friends, in the experience of respondents before and during the COVID-19 pandemic. The current study also explored differences in the choice of a special person between those living alone and those in a relationship.

The results of the study indicated that there was a difference in perceived social support (experienced support before the pandemic, as well as during it) between those living alone and those in a relationship, but only in the support received from the "significant person". It turned out that those not in a relationship experienced lower levels of social support from a significant other than those in a relationship. These findings correspond with previous research, the results indicated lower reported levels of perceived social support from a significant other among those living alone compared to those in a relationship (Adamczyk, 2015). The results obtained may be related to the selection as a significant person of a life partner/kid by people in a relationship and answering questions on the subscale,

"significant person" precisely with them in mind. In contrast, a lower sense of perceived support by those who are not in a relationship may be associated with answering questions on the "significant person" subscale with friends in mind, or simply the absence of such a person. These results raise thoughts about the frequency with which people living alone declare the absence of a person in their lives whom they could characterize as particularly important to them.

Analyses also looked at declared social support from family and friends. The study did not confirm significant differences between the groups with regard to perceived support from family, which probably reflects the ambiguity of the studies conducted so far addressed in the theoretical section. On the one hand, these studies indicated that those living alone received more support from their parents than those who were married (Sarkisian, Gerstel, 2015). Similarly, in relationships with siblings - those living alone reported higher levels of support received from siblings than those in relationships (Campbell et al., 1999). On the other hand, other studies found no significant differences between the groups (Campbell, Martin-Matthews, 2003).

The analyses also revealed no significant differences between the study groups in perceived support from friends. These results are puzzling in relation to the research addressed in the theoretical chapter, which indicated that single people were more likely to stay in touch with friends, receive help from them, and offer it, compared to married people (Sarkisian, Gerstel, 2015). The results obtained seem to encourage further consideration of possible reasons for the lack of expected differences between the groups. It is therefore legitimate to look at them from the perspective of the COVID-19 pandemic. Previous studies have shown that the pandemic contributed to isolation and deterioration of contacts with loved ones, and a decline in overall well-being among those living alone was also noted (Husky et al. 2020), which may have had a role in the respondents' perceived social support in the category of "family" and "friends".

Another focus of the study was on the difference in the choice of "special person" between those living alone and those living in a relationship. The analyses showed that there was a correlation between being in a relationship or living alone and the declaration of choosing a particular person. Those in a relationship were most likely to choose a partner, while the category of friend came in second place. People living alone most often cited a friend/friend as a special person, with the second most frequent category being, "no special person. Therefore, it can be assumed that people in a relationship declared a higher level of experienced support from a special person than people living alone due to their choice of a partner or partner as a special person. Such a result prompts thoughts on the qualitative differences between the support received from friends and partners, as well as thoughts on the reasons and consequences of people living alone declaring the lack of a special person in their lives, which could be further developed in future studies.

It also appears that the results obtained regarding experiences before the pandemic began may have been affected by the way the data were collected retrospectively. The researchers were supposed to refer to their experiences before the COVID-19 pandemic, which may have been difficult to recall during the pandemic and may have led to distorted results. Another limitation of the study is that the sample used in the research may have been too small. Perhaps repeating the study some time after the COVID-19 pandemic ended and on the bigger sample would provide answers to the doubts that arose.

The subject of social networks seems to be a very broad topic, containing many elements that make up a social network in an individual's life. Given how social support is important to the mental health of individuals, the results of this study about the greater social support from significant others among those in a relationship than in those living alone raise questions about the potentially greater negative consequences on the well-being of singles, and the potential for preventive and therapeutic interventions. It is possible that the nature of the romantic/sexual relationship plays a significant and specific role in building perceived social support, and that the presence of family or friends is not a sufficient source of it for individuals (perhaps f.e. due to their existing parallel relationships, inability to pay sufficient attention, or the very nature of the relationship). To compensate for the lack of a life partner, it is possible that it is worthwhile to expand the social network of a person living alone and the sources of social support he or she receives. In psychological practice, an example of this might be to encourage patients to participate in support groups or group therapies, which can be a space for support and a sense of community, maybe especially in the time of crisis like worldwide pandemic.

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CONNECTION BETWEEN COGNITIVE BIASES IN MANAGERS AND THE MANAGEMENT STYLE OF THE ORGANIZATION

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Abstract

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. Cognitive distortions are understood as a destructive component of the experiential system of thought (within the framework of Cognitive Experiential Theory). The aim of the research is to identify the relationship between the manager's thinking style (constructive and destructive components of the experiential thinking style) and the team's leadership style (transformational, transactional, Laissez-faire). The research sample consisted of 44 top managers with decision-making authority. The primary findings of our research include the finding that constructive experiential thinking style is related to effective team leadership styles (transformational, contingent reward). A destructive experiential thinking style is related to laissez-faire.

Keywords: *Cognitive experiential theory, full-range leadership theory, the cognitive-experiential leadership model, transformational leadership, cognitive biases.*

1. Introduction

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. We have grasped the issue theoretically by analyzing three theories:

Cognitive Experiential Theory, which deals with styles of thinking - rational (System 2) and experiential (System 1). Experiential is further divided into constructive and destructive (this includes cognitive biases) (Epstein, 1994, 2004);

Full-Range Leadership Theory, which discusses three types of leadership - transformational, transactional and laissez-faire (Bass & Avolio, 1994);

The Cognitive-Experiential Leadership Model (hereafter CELM), this theory links the two above and postulates that thinking style and leadership style are interrelated, and thinking style significantly influences leadership style, with the constructive elements of experiential thinking related to the most effective transformational leadership (Curtis & Wee, 2021).

The **Cognitive-Experiential Leadership Model** simplistically states that "leaders who think better also lead the organization better" (Curtis & Wee, 2021). In summary, CELM theory suggests that both the rational and experiential sides of thinking are important in the work of leaders. The rational system is important in tasks requiring abstract and symbolic thinking. The experiential system is important in tasks requiring the application of interpersonal skills, "reading" social situations, understanding the emotional states of employees, etc. The components of the experiential system consist of constructive and destructive thinking (including cognitive biases). Research has shown that only the components of the constructive experiential system have a positive association with transformational leadership, which has been shown in research to be the most effective leadership style (Cerni et al., 2008). An important component of experiential constructivist thinking is behavioral coping, which is a preference for realistic optimism, action orientation, conscientiousness, and taking action in the face of challenges. Behavioral coping is associated with effective transformational leadership, is related to proactive, action-oriented problem solving, and is associated with low stress levels, allowing leaders to remain calm and use their intelligence in decision making and interactions with subordinates (Curtis & Wee, 2021). The emotional and imaginative components of experiential constructive thinking are related to transformational leadership because transformational leaders use subordinates' emotions to

motivate them to work toward a goal (vision). Curtis & Wee (2021) conducted two studies to identify the relationships between leaders' rational and experiential thinking styles and their leadership styles. Among other things, they found that global constructive thinking was positively correlated with transformational leadership and negatively correlated with laissez-faire leadership. Behavioral coping was positively correlated with transformational leadership, also with transactional leadership, and negatively correlated with laissez-faire. Categorical thinking was correlated with both transformational leadership and laissez-faire, esoteric thinking correlated only with laissez-faire, and naive optimism correlated with both transformational and transactional leadership. As the authors of the study note, an important finding is the replication of the finding of a relationship between behavioral coping and transformational leadership, suggesting the most robust association between thinking styles and transformational leadership.

Tove (2019) examined the relationships between information processing style, conflict management, and transformational leadership. He found that behavioral coping and integrative conflict resolution style predicted perceptions of transformational leadership.

The CELM theory is an interesting theory (especially in the context of its applicability in the practice of occupational psychology), and therefore it is important to expand empirical knowledge in the field. Our research is a pilot study in the field of the socio-cultural conditions in the Slovak Republic. The aim of the research is to identify the link between manager's thinking style and team leadership style.

2. Methods

2.1. Research methods

The Constructive Thinking Inventory (CTI) is a standardized measurement tool designed to measure people's "automatic" experiential constructive and destructive thinking. Consisting of 108 items, it is hierarchically constructed. Items are grouped into 6 scales, containing subscales and one global scale (Balcar, 2004). The questionnaire consists of the following domains: (a) **emotional Coping** (this includes the subscales - self-acceptance, absence of negative overgeneralization, nonsensitivity, absence of dwelling); b) **behavioral coping** (subscales include positive thinking, action orientation, conscientiousness); c) **personal superstitious thinking**; d) **categorical thinking** (subscales included here are polarized thinking, distrust of others, intolerance), e) **esoteric thinking** (ghosts, astrology), f) **naive optimism** (subscales included here are naïve optimism, overoptimism, stereotypical thinking, Pollyanna-ish thinking) (Epstein, 1998).

The Multifactor Leadership Questionnaire (MLQ 5x Short) identifies 3 leadership styles (**transformational**, **transactional** and **laissez faire**). It is a self-assessment inventory consisting of 45 items measured on a 5-point Likert scale (Bass & Avolio, 1994).

2.2. Research sample

The research population consisted of 44 managers with decision-making authority whose decisions had an impact on the leadership team. This was an available, criterion-based sample (the criterion was experience in a leadership position).

In terms of gender, 31 (70.5%) were women, 13 (29.5%) were men. The mean age was 42.05 years (SD 9.44), with respondents ranging in age from 25 to 63 years. The mean length of experience in the current job was 8.42 years (SD 7.26) and the mean length of experience in a managerial position was 9.86 years (SD 8.20).

3. Results¹

3.1. Research question (RQ) 1: Is there a link between experiential constructive thinking style and transformational leadership?

There is a positive moderate-level relationship between global constructive thinking and transformational leadership (.412**). There is no statistically significant relationship between emotional coping and transformational leadership. However, the emotional coping scale consists of several subscales, some of which were significantly related to transformational leadership. Specifically, it was the sub-scale of "absence of dwelling," which moderately correlated with transformational leadership (.320*).

There is no statistically significant relationship between behavioral coping and transformational leadership, except for its subscale "action orientation," which moderately correlated with transformational leadership (.411**).

¹ In this part, we present only significant correlations

3.2. RQ2: Is there a link between experiential destructive (cognitive distortion) thinking style and transformational leadership?

There is a moderate negative relationship ($-.416^{**}$) between personal superstitious thinking and transformational leadership style. Transformational leadership did not correlate with the other scales of destructive experiential thinking, but some subscales were significantly related. Specifically, intolerance (belonging to the categorical thinking scale) correlated with transformational leadership at a moderate negative level ($-.305^*$). Pollyanna thinking (belongs to the naive optimism scale) is also correlated with transformational leadership ($.322^*$).

3.3. RQ3: Is there a link between experiential constructive thinking style and transactional leadership?

There is a moderate positive relationship ($.413^{**}$) between global constructive thinking and transactional leadership. No statistically significant relationship exists between emotional coping (or its subscales) and transactional leadership. There is a statistically significant relationship between behavioral coping and transactional leadership ($.298^*$), and its only subscale is correlated with transactional leadership: action orientation ($.411^{**}$).

3.4. RQ4: Is there a link between experiential destructive (cognitive distortion) thinking style and transactional leadership?

There is no significant relationship between experiential destructive thinking style (or its scales and subscales) and transactional leadership.

3.5. RQ5: Is there a link between experiential constructivist thinking style and laissez-faire?

There is a moderate negative relationship between global constructive thinking and laissez-faire ($-.476^{**}$). There is a statistically significant moderate relationship between emotional coping and laissez-faire ($-.332^*$), and of the scales of emotional coping, "absence of negative overgeneralization" ($-.306^*$) and absence of dwelling ($-.409^{**}$) are correlated with laissez-faire. There is no statistically significant relationship between behavioral coping and laissez-faire, but two subscales of behavioral coping are correlated with laissez-faire, interestingly one in a positive relationship (positive thinking) ($.463^{**}$) and one in a negative relationship (action orientation) ($-.519$).

3.6. RQ6: Is there a link between experiential destructive (cognitive distortion) thinking style and laissez-faire?

A moderate positive relationship exists between personal superstitious thinking and laissez-faire ($.409^{**}$). There is no statistically significant relationship between categorical thinking (nor its subscales), naive optimism (nor its subscales), and laissez-faire. There is a statistically significant weak-level relationship ($.299^*$) between esoteric thinking and laissez-faire.

4. Discussion

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. Cognitive distortions have been understood as part of the Cognitive-Experiential Theory, in which they are part of the so-called destructive thinking style. The aim of the research was to identify the link between a manager's thinking style and team leadership style.

The first two research questions explored the relationship between **transformational** leadership style and constructive and destructive experiential thinking. We found that there was a relationship between constructive experiential thinking and transformational leadership, specifically the emotional coping subscale of "absence of dwelling" and the behavioral coping subscale of 'action orientation'. Non-soothingness means that managers tend not to soothe themselves with thoughts about adverse events, and are able to mentally detach from them, which promotes the ability to lead their team transformationally. More action-oriented managers act more purposefully and effectively, making them more competent to lead their team transformationally.

We then addressed whether there is a relationship between destructive experiential thinking and transformational leadership style. We found a negative relationship between personal superstitious thinking and transformational leadership style. It is typical for people with higher levels of personal superstition to anticipate unfavorable events in advance, thereby protecting themselves against disappointment should they expect a favorable outcome and it does not materialize. It would be difficult to inspire in others a vision of goal achievement, to articulate a positive vision of the future, to try new

approaches, etc., which are characteristic of transformational leadership, if the leader anticipates failure and an unfavorable outcome in advance. Among destructive experiential thinking, "Pollyanna thinking", which is an exaggerated belief that "everyone has a good heart", was positively correlated with transformational leadership; managers with this belief have a higher propensity for transformational leadership. This suggests that a certain amount of over-optimism is part of transformational leadership and although it has both positive and negative aspects, it contributes to transformational leadership which is inherently positive, inspirational, visionary, belief in people, it just needs to reflect the boundaries and real events and conditions in the team.

Analysis of the above suggests that the transformational leader thinks in a constructive experiential way and uses elements of emotional and behavioral coping. The transformational leader leads the team in an inspiring way, creates a supportive atmosphere, encourages the self-actualization of team members, approaches them individually, and focuses on a vision to which he or she motivates others, i.e., uses elements of transformational leadership.

The following research questions tested the relationship between **transactional** leadership and experiential constructive and destructive thinking. We found that there is a relationship between experiential constructive thinking and transactional leadership. Furthermore, the only significant relationship within the subscales was demonstrated with action orientation, which is related to transactional leadership. Transactional leaders do not use emotional coping, which distinguishes them from transformational leaders, in whose actions emotionalization is an important element of leadership. This also agrees with Cerni, Curtis, & Colmar (2014) who suggest that transformational leaders use elements of emotionalization to connect the values of the organization with the individual needs of team members, taking their leadership to the next level. Experiential destructive thinking is not correlated with transactional leadership.

The last set of questions addressed the relationship between **laissez-faire** and constructive and destructive thinking. As we hypothesized, laissez-faire was negatively related to global constructive thinking. The same trend was observed for emotional coping, which laissez-faire leaders possessed to a lesser extent. It is mainly complacency that is related to emotional 'not coping'. Leaders who tend to ruminate on negative overgeneralization have a higher tendency to be laissez-faire. Also, the presence of overgeneralization of negative events contributes to laissez-faire.

Overall, non-leadership was not correlated with behavioral coping. Still, upon closer analysis, we found that it was surprisingly positively related to positive thinking in a moderate relationship and negatively related to action orientation in a strong relationship. This is surprising because we would expect positive thinking (constructive) to be more likely to be associated with the types of leadership analyzed above. This is a mindset that is realistically positive and thus differs from naive optimism, which is unrealistically positive. It seems as if these two subscales do not clearly differentiate between constructive and destructive positive thinking, and other authors should examine the wording of the Slovak items measuring positive thinking and naive optimism to see if they are indeed worded to differentiate between realistic and unrealistic positive thinking. The correlation with action orientation is not surprising; individuals who manage in a laissez-faire style are inherently avoidant, leaving both responsibility and decision-making to others.

Laissez-faire has also been correlated with destructive thinking, specifically personal superstitious thinking and esoteric thinking. Personal superstitious thinking - is related to a cognitive bias in which random phenomena are considered non-random. The analysis shows that the less a leader thinks constructively, the lower the leader's emotional coping and action orientation, the more destructive the leader thinks, the higher the tendency to laissez-faire, which is characterized by a passive approach, the leader leaves both responsibility and decision-making to others, hesitates with active intervention, and is unavailable when it is needed. This suggests that cognitive distortions are indeed related to an ineffective team leadership style.

As Curtis & Wee (2021) note, many studies on the relationship between mindset and leadership of managers arrive at varied results that depend on whether leaders "self-assess" or are judged by subordinates, what research instruments are used, in what socio-cultural settings, etc. the research is conducted, but the consensus across research is mainly on the importance of behavioral coping, which is related to more effective organizational/team management styles. They state that replication of finding a relationship between behavioral coping and transformational leadership suggests the most robust link, confirmed in our study. Our results are consistent with those of Humphreys & Zettel (2002), Cerni et al. (2008), Tove (2019), and Curtis, Wee (2021), which mainly demonstrated a relationship between transformational leadership and constructive experiential thinking.

If we understand experiential thinking as useful and beneficial on the one hand, but also as misleading and inaccurate on the other, we can conclude that the constructive part of experiential thinking is related to transformational leadership and contingent reward, which are constructive and effective

leadership styles. On the other hand, experiential thinking is not only constructive and beneficial, but can also be destructive and misleading, containing various cognitive errors and distortions, and it is this destructive thinking that is related to the non-constructive, passive style of team leadership (*lazier-faire*). Destructive thinking can be seen as a barrier to adequate decisions and judgments. It is particularly dangerous in the top-management profession, where a poor decision can have a significant negative impact on the company's financial or human resources. A person who thinks destructively actively creates an environment of a certain kind, e.g., if he is convinced that people cannot be trusted, it greatly affects not only his own survival and behavior, but also approaches other people, his team, with this "bias", in whom he does not inspire trust, but rather feelings of distrust and insecurity.

7. Limitations of the study

A significant limitation of the study is the size of the research sample. Due to the unrepresentative nature of the sample, our results are only valid to a limited extent, however, we believe that we have conducted research on an interesting research sample (top managers) and the results can serve as some initial insight into the issue in Slovakia.

Other limitations include the problematic psychometric properties of the instruments used, in particular, the positive thinking subscale, which is part of constructive thinking, and the "naive optimism" subscale, which is part of destructive thinking. These subscales did not sufficiently differentiate between constructive and destructive thinking, as evidenced by their high intercorrelation (.851**).

The leadership questionnaire also has some limitations, especially the transactional leadership scale, whose subscales are not correlated with each other; even contingent reward is correlated with transformational leadership. Lowe et al. (1996) arrived at similar problems in a meta-analysis. The authors note that even assuming that transformational leadership and contingent reward are distinct constructs (which they argue is debatable), it may be difficult to formulate the items discriminatively. They note that multicollinearity poses a challenge to the overall model, and highly influences the ambiguity of this instrument's results.

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SOCIAL MEDIA USE IN THE CONTEXT OF PARENTAL ACCEPTANCE AMONG SLOVAK ADOLESCENTS

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Abstract

Background and aims: It is a major challenge for contemporary parents to deal with the omnipresence of social media in their adolescent children's lives. This study focuses on the deeper psychological contexts of problematic social media use, drawing mainly on the empirical evidence on the relationship between parental responsiveness and problematic Internet use. The aim of the study is to verify the correlations between adolescents' propensity to overuse social media and the perceived parental warmth, indifference, hostility, and rejection. **Methods:** The research file consisted of 1,005 Slovak adolescents (73% women, $AM_{age} = 16.99$, $SD_{Age} = 1.24$). The research instruments included PARQ/Parental Acceptance-Rejection Questionnaire (Rohner, 2005) and BSMAS/Bergen Social Media Addiction Scale (Andreassen et al., 2016). **Results:** The results indicated a weak negative correlation between the perceived parental warmth in mothers and fathers and their child's propensity to overuse social media. Conversely, parental hostility, indifference, and rejection showed a positive correlation with excessive social media use. The results are discussed from the viewpoint of gender differences as well. **Conclusions:** The presented findings corroborate the theories of compensatory Internet use (Kardefelt-Winther D., 2014) and basic psychological need compensation research (Deci & Ryan, 2000; Liu et al., 2016; Lukavská et al., 2020). Our findings show the need for interventions to prevent problematic social media use by helping parents to apply optimal parenting styles.

This paper is a part of the VEGA 1/0765/21 Multidimensional self-concept of the digital adolescent generation in Slovakia and its contexts research project.

Keywords: *Social media use, perceived parental responsiveness, adolescence.*

1. Introduction

From the viewpoint of substance and behavioural addiction emergence, adolescence is a sensitive period (Balogh et al., 2013). The prevalence of problematic Internet use (PIU) is higher in adolescents in comparison to the general population (Kuss et al., 2014). The PIU aetiology is complex because it includes personality as well as environmental factors. The number of studies investigating family factors in adolescent PIU is on the rise. The Internet has become an integral part of adolescents' everyday lives. However, due to the combination of their natural innocence and the desire for sensation, adolescents are vulnerable in the interactive, immersive virtual world created by social networks. Adolescence is a transitional period during which children are gradually gathering courage to leave the safety of their home and explore new possibilities. During this period, parents play the key role in encouraging or hampering potentially dangerous activities. According to Soh et al. (2018), peer attachment competes with parent attachment when it comes to risk online activities and potential Internet addiction in adolescents. However, they also noted that parents may have a greater overall influence on adolescents than their peers.

Parenting style is defined as the way parents express their attitudes and expectations with the aim to influence their children's behaviour (Darling & Steinberg, 1993). This theory deals with the affective and behavioural aspects of parenting. Numerous studies have proved the influence of different parenting styles on child development. Applying a typological approach to parenting style, researchers have found that the authoritative parenting style is related to positive psychosocial consequence, while the neglecting and authoritarian parenting styles are related to negative consequences (Garcia & Gracia, 2009). Calafat et al. (2014) used a two-dimensional concept of parental behaviour consisting of emotional responsiveness (warmth, acceptance, engagement) and strictness (control, requirements, demands, harshness), and their research showed that highly responsive (indulgent and authoritative) parenting styles

were more protective of adolescents' substance abuse than the less responsive (authoritarian and neglecting) styles. This approach focuses on the dimensions of parental warmth and control. Lee and Chae (2007) found that parental warmth encouraged adolescents to use the Internet for educational purposes more frequently and made their online behaviour more positive. It appears that a good parent-child relationship relates to a lower PIU risk. Casalo and Escario (2019) found a negative correlation between perceived parental care and Internet overuse in Spanish adolescents aged 14 to 18 years. In US adolescents aged 12 to 17, a negative correlation between PIU and good parent-child relationship was also found (Bleakley et al., 2016). Chinese high school students who reported good relationship with their fathers showed a lower PIU tendency as well (Dong et al., 2019). Chinese adolescents aged 11 to 18 with the PIU tendency reported a lower family environment quality than those who did not have PIU (Shi et al., 2017). Shanghai adolescents aged 11 to 20 reporting worse relationships with their mothers or fathers showed higher PIU scores (Xu et al., 2014). A weak negative correlation between parent-child relationship and PIU was found in 13 years old (Shek et al., 2018) and 16 years old (Shek et al., 2019) Hong Kong adolescents as well. The only study focused on collecting data from the parents instead of their children uncovered a moderately negative correlation between PIU and parental care, but also moderately positive correlation between PIU and excessive parental care (Siomos et al., 2012). Chinese adolescents with clinically diagnosed PIU reported lower paternal and maternal emotional warmth and higher rate of rejection in comparison to the control group (Xiuqin et al., 2010).

Geurts et al. (2022) suggested that what parents do (media-specific parenting) is less important than how they do it (general parenting). Specialised literature (Maccoby & Martin, 1983; Steinberg et al., 1992) specifies three basic dimensions of general parenting: responsiveness (parental warmth, acceptance, and support), demandingness (parental supervision, rules, structure, discipline), and allowing autonomy (encouraging children to develop independence in terms of thinking, interests, and ideas). Parenting characterised by high scores in these three dimensions is considered positive since it creates optimal emotional climate for children's healthy development (Darling & Steinberg, 1993). Positive parenting promotes the satisfaction of the three basic psychological needs for optimal development and well-being in adolescents: competence, autonomy, and cohesion (self-determination theory). If these needs are not met at adolescents' homes, adolescents will seek to have their needs met in other social contexts (Deci & Ryan, 2000). The theory of compensatory satisfaction (Liu et al., 2016) and the model of compensatory Internet use (Kardefelt-Winther, 2014) both suggest that adolescents can develop an Internet addiction if they use this medium as the compensatory social environment. Consistent with this reasoning, multiple studies have showed that PIU negatively correlates with positive parenting aspects such as emotional warmth, empathy, and support (Li et al., 2018), while it correlates positively with parental overprotectiveness, rejection, and strict punishments (Li et al., 2020). Further studies have indicated that highly responsive parenting combined with demandingness serves as a protective factor (Dogan et al., 2015; Lukavská et al., 2020; Moazedian et al., 2014). On the other hand, parenting styles neglecting the three basic dimensions represent a PIU risk factor (Dogan et al., 2015; Lukavská et al., 2020; Siomos et al., 2012; Tao et al., 2007). If problematic social media use (PSMU) is understood as integral part of PIU, these findings may indicate that general parenting is associated with PSMU as well.

Many experts draw on the Internet addiction theory (Andreassen et al., 2016; Kuss & Griffiths, 2011; Montag et al., 2014; Müller et al., 2016; van Rooij et al., 2017; Young, 2009) and consider social networking sites (SNS) addiction a form of behavioural addiction: "being overly concerned about SNSs, to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being" (Andreassen & Pallesen, 2014, p. 4054). As the debate about the existence/non-existence of SNS addiction or its distinctive concepts is not currently closed, and due to our goals and research design, this paper will operate the term "social media overuse" instead of addiction.

Based on the available theory and the existing research findings, we expect the tendency to social media overuse to show a negative correlation with parental acceptance and warmth, and a positive correlation with parental indifference, hostility, and rejection.

2. Methods

The research file consisted of 1,005 Slovak adolescents aged 15 to 20 years, 73% of whom are females. It was a combination of cluster sampling (because of multiple random collection sites) with voluntary sampling (because people in these sites responded to an online survey). The online questionnaire link was distributed via official representatives to secondary schools across Slovakia. The online form included:

The Bergen Social Media Addiction Scale (BSMAS) derived from the original Bergen Facebook Addiction Scale (BFAS). The word "Facebook" has been replaced by more general "social media" to

assess the addiction in general (Andreassen et al., 2016). The scale measures six factors: salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. Each of them is captured by a single item on a 5-point Likert type scale (1 = very rarely; 5 = very often). The points are added up, and the total score ranging from 6 to 30 points is interpreted as follows: the higher the score, the riskier social network use. According to the authors of the Slovak version of this instrument (Izrael et al., 2019), its internal consistency is $\alpha = .94$. In the presented sample, the instrument showed satisfactory reliability ($\alpha = .78$).

Parental Acceptance – Rejection Questionnaire Short Version (PARQ/S). This is a shortened version of the original 60-item PARQ. It is a self-reporting questionnaire designed for children and adolescents focused on their current perception of parental acceptance/rejection (Rohner, 2005). Each parent is scored separately. This instrument consists of 24 items and 4 subscales: warmth (8 items), hostility (6 items), indifference (6 items), and undifferentiated rejection (4 items). For each item, the respondent comments on a 4-point scale (1 = almost never; 4 = almost always). The subscale items are added up to calculate the rough score. The internal reliability in all scales was satisfactory (Cronbach's alpha = .79 to .94).

3. Results

Table 1. Relationship (Spearman correlation) between the SNS overuse tendency and parental acceptance/rejection factors ($N=1,005$).

	PQM_W	PQM_H	PQM_I	PQM_R	PQF_W	PQF_H	PQF_I	PQF_R
BSMAS	-.17***	.27***	.22***	.24***	-.16***	.24***	.22***	.22***

Note: BSMAS = Bergen Social Media Addiction Scale, PQM_W = PARQ_mother_warmth, PQM_H = mother_hostility, PQM_I = mother_indifference, PQM_R = mother_rejection, PQF_W = PARQ_father_warmth, PQF_H = father_hostility, PQF_I = father_indifference, PQF_R = father_rejection, *** $p < .001$

4. Discussion and conclusion

According to Lukavská et al. (2020), parental responsiveness (warmth) appears to be a more consistent predictor of PIU than strictness (control). Therefore, we reached for Rohner's concept of parental acceptance/rejection. Right the initial bivariate analysis identified weak, but systematic (because statistically significant) relationships between the main variables of both scales. First, there are negative associations between the tendency to excessive use of networks and the perceived parental warmth of the mother and father. Contrariwise, with a growing score in perceived parental hostility, indifference and rejection, the adolescent's Bergen scale score also grows, i.e. his tendency to overuse social networks increases.

These results are consistent with research findings of the negative association between PIU and aspects of positive parenting, including parental emotional warmth, empathy, and support (Li et al., 2018) and a positive association with parental rejection and harsh punishment (Li et al., 2020). Many other studies have reached similar findings (Casalo & Escario, 2019; Bleakley et al., 2016; Dogan et al., 2015; Dong et al., 2019; Lukavská et al., 2020; Moazedian et al., 2014; Xiuqin et al., 2010). Overall, they thus support the compensatory gratification theory (Liu et al., 2016) and the compensatory model of Internet use (Kardefelt-Winther, 2014) regardless of cultural context. The gender comparison showed that adolescent girls are more susceptible to the influence of social networks ($d_{COH} = .36$), to whom even more attention needs to be paid in this sense. The result corresponds with other authors (Andreassen et al., 2016; Stănculescu, 2022). As the results of the initial correlation analysis showed, it will make sense to identify other variables that affect the detected systematic associations through subsequent multivariate analyzes (regression, mediation, etc.).

We recognise the use of self-assessment scales and some necessary compromises in the method of data collection to be the limits of our study, somewhat reducing its generalizability to the Slovak adolescent population. However, these findings expand the spectrum of empirical knowledge of mutual relations between aspects of parental approach and the use of information technologies in adolescence and sharpens the focus from the more general topic of problematic Internet use to the more specific use of virtual social networks. We can also advise the results when creating programs to support parenting skills development.

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VOCATIONAL SCHOOL DROPOUTS' PERSPECTIVE OF DROPOUT RISK AND PROTECTIVE FACTORS

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Abstract

Early leaving from vocational education is both an individual and societal problem that has been the focus of researchers' attention for over a decade, and a previous metanalytic review (Böhn, & Deutscher, 2022) indicates that former research has mainly focused on dropout drivers within the individual and less on the learning environment in the workplace, with the proportion of qualitative research being relatively limited. The aim of this study was to gain insight into the risk and protective factors of dropping out from vocational training by vocational school dropouts' perspective. This study followed a qualitative and descriptive research design stemming from semi-structured personal interviews with 12 adolescents (8 males and 4 females) who have left initial vocational training before achieving a formal qualification in Estonia. Deductive qualitative content analysis was used to analyze the data gathered through transcribed interviews. Dropping out from vocational schools was associated with multiple specific risk factors based on a dynamic framework model (Böhn, & Deutscher, 2022), while there was a clear focus on learner, learning activities, learning supportive networks and flexible career choice as protective factors and less focus has been placed on the workplace environment and contextual factors from the perspective of dropouts' own reflections.

Keywords: *Early leaving from vocational education, dropout risk factors, dropout protective factors, qualitative study.*

1. Introduction

Vocational education and training (VET) is a part of ensuring a flexible and skilled workforce who is capable of making changes according to the labor market (Spotlight on VET Estonia, 2017). This aim is disrupted by the challenge of premature termination of contract by the students in VET (Böhn & Deutscher, 2022). Early school leaving from vocational education has been a widely discussed problem in Europe for a few decades (Schmitsek, 2022).

High dropout rates in turn lead to higher unemployment, poverty and poorer health and are therefore costly for the society as a whole (e.g. Böhn & Deutscher, 2022; Głokowska et al, 2007; Psifidou et al, 2021; Rumberger, 2011; Salva et al, 2019).

While much research focuses on the apprentice's perspective and factors related to them, environmental and workplace/ vocational school related factors are less researched (Böhn & Deutscher, 2022). The decision to terminate the contract with the vocational school before graduation is a long-term process (Böhn & Deutscher, 2022). This decision is the result of a long-term process where the apprentice has intention to terminate the contract with the vocational school and where intention turns into action and the apprentice leaves school early (Beekhoven & Dekkers, 2005; Samuel & Burger, 2020). Research suggests that the critical time in this process is the transitional year from one education level to another where the students at risk can be more vulnerable to risk factors (Elffers, 2012).

The aim of this study was to gain insights into the risk and protective factors of dropping out from vocational training by vocational school dropouts' perspective. The research question was addressed: What are, according to young people who have interrupted vocational training, the risk and protective factors for dropping out of vocational schools?

2. Methods

2.1. Study design and sample

The study follows a qualitative research design. The sample was based on the information that one Estonian vocational college was able to provide on the students who had studied there for a year but not graduated. Out of the potential 122 participants, 12 were included in the research. All of the participants had dropout experience from vocational education. The sample consisted of male (n=8) and female (n=4) participants who were in between the age of 18-23 years and had studied at the vocational schools for 1-3 years.

2.2. Data collection

The questions were presented to the participants during semi-structured interviews. The measure focuses on participants subjective experience and perceptions which have to do with risk and protective factors for dropout that are connected to school, home, the self, and peers (for example: *What circumstances related to the school have influenced your interruption of your studies at the vocational school? What circumstances in relation to the school influence it to prevent the interruption of studies from the vocational school?*).

All the participants were contacted individually by the second researcher. After an informed consent process the participants agreed to the semi-structured interviews and a meeting was set up at a neutral place. Confidentiality of the findings and protection of their identities were explained to the participants upon agreements and before the interview. Despite the sensitivity of the topic, mutual trust was established. The semi-structured interviews lasted between 25-45 minutes. The interviews were audio-recorded and transcribed.

2.3. Data analysis

Findings were analyzed with deductive content analysis based on conceptual models of dropout categories as the core of qualitative meta-analysis Böhn & Deutscher (2022) differentiating learning/working condition factors, professional factors, school factors, learner factors, activity factors, and context factors. The data gathered through transcribed interviews in the evaluation of keywords, meanings, and themes during the data analysis: data was segregated, grouped and re-linked in order to find categories and subcategories for the risk and protective factors of vocational education dropout. To strengthen the study investigator triangulation was used.

3. Results

3.1. Risk factors

The first category consists of descriptions of overall good learning conditions with workplace learning at a practical site and work-based learning, but the combination of the learning and working condition in the case of simultaneous employment was described as a risk factor of dropout by the respondents in the case of a lack of adequate training personnel at the VET schools.

Based on the data analysis, the professional factors of dropping out of vocational education were divided into two subcategories: (1) career choice decision-making process – dropouts described their wrong career choice as the main risk factor of dropping out, whereby there the expectation that their interests may change during training period was mentioned; and (2) support for career choice – the career choice process without the support from families and/or personal career counselling at vocational school was perceived as a risk factor for dropping out from vocational training by the respondents.

The analysis shows that school factors influence the decision to leave VET school. Namely, poor academic performance as falling behind with assignments, bad grades and failing exams was perceived as risk factor of dropping out by respondents; and relations with teachers and peers were perceived as conflictual and rejecting with signs of teacher-targeted and peer-targeted bullying behavior.

The research results elicit numerous learner factors influencing dropout from vocational learning with following subcategories: (1) demographic – marital status, parentage and having children; (2) parental – parents' low income and socio-economic status; missing of parental financial support; parental divorce/death. (3) personal – low self-efficacy regarding school and self-confidence; low language and mathematical skills; (physical) health problems; misconduct, absenteeism, drug use and abuse; low learning motivation, whereas the last mentioned was the overriding factor.

The category of activity factors consisted of descriptions of risk factors in two areas: (1) workplace learning tasks at a practical site were complicated to combine with the vocational training process in terms of time and distance; and (2) social interaction in the student dormitory was overloaded psychically and psychologically hindering the professional studies process.

Two kind of context factors of dropping out from vocational training were mentioned by respondents of the study: (1) distance from home as restrictive framework conditions for vocational training, and (2) alternatives to VET training as a permanent job or occupation with higher wage or alternative career pathway training/military service.

3.2. Protective factors

Individual pathway to combine practical training at the workplace with work-based training at a vocational school was perceived as a protective factor integrating learning and workplace conditions by respondents.

The evaluations of the subjects divided into three kinds of protective factors in relation to professional career choice: (1) dropping out was viewed as a successful strategy to adjust to a wrong career choice by choosing a more fitting training program/career path/occupation reflecting a deliberate and conscious career decision-making process; (2) second protective factor was connected with support – emotional and motivational support from family members (especially from mothers) for vocational studies, and career guidance and financial support as study grants from vocational institutional level; and (3) third protective factor for dropping out of vocational training was connected with the peers' and friends' support to strengthen personal professional identity.

Analysis of the results showed that school-related protective factors were opposite to school-related risk factors for dropping out of vocational studies: successful academic studies and positive teachers' and peers' attitudes and relationships.

At the individual level, participants of the study strongly emphasized self-efficacy, self-confidence, self-discipline, and intrinsic learning motivation as protective factors for dropping out of vocational studies.

In relation to contextual protective factors, one was emphasized – future aspirations: to find another training curriculum during vocational studies, to decide to enroll in vocational school full-time, to go to university or enlist in military service.

4. Conclusions

A comprehensive and structured overview as meta-synthesis about the reasons for dropping out from VET within a dynamic framework model was based mainly on retrospective qualitative and quantitative research (Böhn & Deutscher, 2022) with focus on learner factors. External risk and protective factors and their influence should be considered more to gain more detailed insight to dropout from vocational education.

This study focused on young peoples' viewpoint who have experienced dropping out from vocational training to gain insights into the risk and protection factors for dropout of vocational training.

Based on our results, we conclude that, from the vocational training dropouts' points of view, the possible risks for dropouts are diverse and heterogenous, but with specific emphases. It was revealed that dropouts describe multiple learners personal (connected with low motivation, lack of self-regulating skills, behavior problems) and professional risk factors (problems in the career choice process, lack of support for career choice), followed by school (academical problems, problems related to relationships with teachers and peers), context factors (distance from home, alternatives to VET training), and activity factors of the training process (process interruptions of the practical training at the workplace, social interaction disorders in the student dormitory) with less focus on learning/working condition factors.

Dropout youth emphasize the influence of learners' personal (high motivation, competent self-regulating skills), and professional factors (flexible path of the career choice process, support for career choice) as dropout prevention tools in vocational education, followed by school (academic success, positive relationships with/attitudes toward teachers and peers) and context protection factors (alternatives to the VET training) with less focus to learning/working condition (balance between the proportion of practical training at the workplace and work-based training at a vocational school) without focusing on activity factors of the training process.

Drawing on dropouts' views on dropout risk and protective factors, the main commonality is that they represent a conglomerate of reasons where the learner goes through a decision-making process within the framework of vocational education, where different options are considered in relation to the career choice and finally the decision to leave training early is made (Aarkrog et al., 2018). Previous research claims that the decision-making process is influenced by various time-varying factors that can have a stronger or weaker effect depending on the amount of supporting protective factors of dropout in vocational education (Samuel & Burger, 2020).

At the individual level, from VET dropouts' point of view, dropping out can be a successful strategy to adjust to an unsuitable career choice by choosing a more fitting educational pathway or career. On the other hand, dropping out from vocational training causes academic failure, increases both the risk of demotivation and the need to re-orient vocational career choices. Therefore, the opportunity to create an individual educational pathway is needed by the students at-risk of dropout from vocational education (Schmitsek, 2022). The participants of this study described their willingness to continue their education on another training program which agrees with Schmitsek (2022) whose research claims that second chance education is an effective protective factor and method to keep the at-risk group in education. However, the support is most effective when it is personalised and takes the student's profile into account (Psifidou et al, 2021).

The participants with VET dropping out experiences in the current study pointed to the need and existence of individualized career guidance support at the VET institution level that helps them build resilience (Schmid & Haukedal, 2022) to the risk factors that they are facing. Guidance and counselling can be aimed at students as prevention for those who haven't chosen their training programme yet, as intervention for those at risk of dropping out or to assist in bringing the former students back to vocational education with support in finding the suitable program (Psifidou et al., 2021).

Intervention at the individual level connected with individual study plans, second-chance programs, a combination of education, employment, counselling, and social services as possible focus of prevention programmes can meet different needs and conditions of the target group of risk of dropping out from vocational education (Psifidou et al., 2021; Schmitsek, 2022). Since the decision to leave vocational education early is influenced by factors even before entering the vocational education system, career counselling and support should be provided earlier as well (Krötz & Deutscher, 2022), but focusing on VET dropout risk and protections factors form dynamic framework model it seems particularly fruitful to have a multi-side focus integrating learners' factors, training quality and conditions and also context factors with emphasis to activity factors connecting both the working process and social interaction context in vocational schools with larger community.

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THE IMPACT OF PERCEIVED SOCIAL SUPPORT ON WORK ENGAGEMENT: THE MEDIATING ROLE OF WORKPLACE LONELINESS

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Abstract

The current study aims to examine the effect of perceived social support on work engagement and the mediating role of workplace loneliness. Workplace loneliness is the feeling that one's social needs are not being met at work (Ozcelik & Barsade, 2018). Research on workplace loneliness and perceived social support or employee engagement are very scarce. Social relationships are very important in people's lives, and we have to be aware that we spend most of our time in the workplace. Therefore, if we fail to bear such relationships, we will be apt to feel loneliness. Previous studies (Jung, Song, & Yoon, 2021) showed that workplace loneliness negatively affects job performance, role conflict, and role ambiguity (Senturan, Çetin, & Demiralay, 2017). Moreover, Öge and colleagues (2018) noted that workplace loneliness and work engagement had a negative relationship. The study is based on a cross-sectional design, with data being collected from a convenience sample of 178 participants (48 males, 130 females), aged between 21 and 53 years old ($M=30.88$, $SD=9.00$) through the following structured questionnaires: Loneliness at Work Scale (Wright, Burt, & Strongman, 2006), The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) and The Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003). Results showed that workplace loneliness and work engagement had a negative relationship ($r=-.570$, $p<.01$). Similarly, workplace loneliness also negatively correlated with perceived social support ($r=-.729$, $p<.01$). Also, workplace loneliness was found to be a strong mediator between perceived social support and work engagement. The paper shows that, by increasing the level of social support, leaders could have a strong positive effect on employees' levels of work engagement. Moreover, (reduced) workplace loneliness acts as one of the most important factors in fostering employee work engagement. Practical implications of the recent study are discussed as well as some directions for future research in the area. Future studies can improve the explanatory power of the proposed model by adding new variables that could further explain the link between perceived social support and work engagement such as work alienation, organizational commitment, or organizational citizenship behaviour.

Keywords: *Perceived social support, work engagement, workplace loneliness, mediation.*

1. Introduction

The last decade, especially the last two to three years, brought a series of social transformations at all levels, with a high impact on the workplace and job-related activities (Guo, 2020). Some of those transformations lead to significant modifications of social relations and interpersonal dynamics (work from home, hybrid, on-site – with a low number of colleagues), which lead to the spread of workplace loneliness. Moreover, the emergence of virtual teams and technology (Teams, Webex, Zoom, etc.) made employees in a position in which they have no need of leaving their place, making interactions between members of the organization difficult to maintain.

Being defined as a common negative emotion in the workplace (Guo, 2020), workplace loneliness usually manifests as a sorrow-like emotion resulting from the lack of interpersonal communication among employees in the work setting (Wright, 2005). Later, Wright and colleagues (2006), included also the individuals' sense of lack of membership and emotional deprivation of the organization. Emotional deprivation is linked with the fact that employees' attachment needs are not satisfied due to poor quality and quantity of interpersonal relationships. Loss of the sense of membership is related to the disconnection from organizational relations and a sense of alienation from the other members of the respective organization (Wright et al., 2006). Previous studies showed that workplace loneliness has a negative impact on both employees and the organizational level (Ozcelik & Barsade,

2018; Peng et al., 2017). Ernst and Cacioppo (1998), pointed out that loneliness has been associated with a series of effects such as depression, hostility, withdrawal, and even alienation. In organizational studies similar effects (anxiety, anger, depression, over-sensitivity) were observed at the individual level, plus a variety of effects at the organizational level such as job satisfaction, turnover intention, attachment, and commitment (Peplau & Perlman, 1982; Wright, 2005).

Work engagement is usually defined as an independent, persistent, pervasive, positive, and fulfilling work-related affective–cognitive and motivational–psychological state (Schaufeli et al., 2002). This definition is in line with a series of studies that operationalize work engagement as being a motivational–psychological state with three dimensions: vigor, dedication, and absorption (Bakker & Demerouti, 2008; Salanova & Schaufeli, 2008).

The first dimension, vigor, Vigor represents the energy levels and mental resilience of employees, together with the willingness to invest effort in the workplace and persistence when facing difficult tasks or demanding deadlines (González-Romá et al., 2006). The second dimension of work engagement, Dedication, is a measure of the employee’s involvement in his/her work, and psychological identification with it, along with strong feelings of significance, enthusiasm, inspiration, pride, and challenge. The third characteristic of engagement is called absorption, which describes an employee’s immersion, high level of concentration, and engagement in work such that he/she loses track of time and has difficulties detaching from work (González-Romá et al., 2006).

The core dimensions of work engagement, namely vigor, and dedication (González-Romá et al., 2006), are considered to be the opposite of exhaustion and cynicism, the well-known dimensions of burnout. Moreover, a series of studies (Salanova, Agut, & Peiro, 2005) have shown that work engagement correlates with both task performance and contextual, extra-role performance (Bakker, Demerouti, & Verbeke, 2004). Other studies (Schaufeli & Bakker, 2004; Hakanen, Bakker, & Schaufeli, 2006; Bakker & Demerouti, 2008) mentioned that a high level of work engagement also correlates with a reduced level of employee turnover and intention to quit.

A large number of studies were focused on studying the possible predictors of work engagement due to its clear importance on both individual and organizational outcomes. Among those, particular attention was paid to perceived social support and all of its forms – perceived organizational support, perceived supervisor support, perceived coworker support, and less to the multidimensional perceived social support (family, friends, and relevant others). The studies (Ng & Sorensen, 2008; Simosi, 2012) showed that perceived organizational support, perceived supervisor support, and perceived coworker support are positively related to both job satisfaction and affective commitment. However, some studies (Inoue et al., 2013; Simbula, 2010) showed weak or no effect of those types of perceived support on work engagement.

Following the literature review findings, we propose the following research questions (Figure 1):

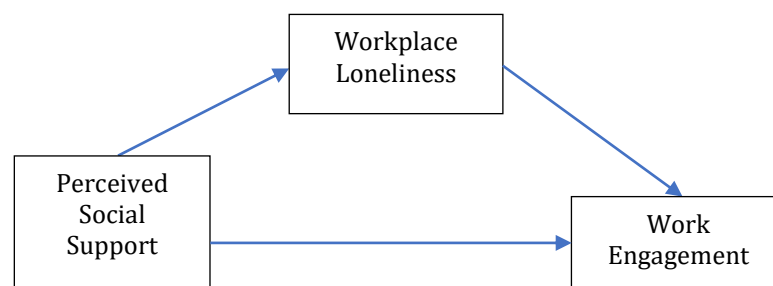
RQ1: What relations can be observed between perceived social support and work engagement?

RQ2: What relations can be observed between perceived social support and workplace loneliness?

RQ3: What relations can be observed between workplace loneliness and work engagement?

RQ4: Does workplace loneliness mediate the relation between perceived social support and work engagement?

Figure 1. Conceptual framework



2. Methods

The sample consisted of 178 participants (48 males, and 130 females). The age range of the participants was between 21 and 53 years old ($M=30.88$, $SD=9.00$). For data collection, a purposive convenience sampling technique was used. A self-reported data collection technique was employed. Before completion, the purpose of the study was briefly explained to the participants and informed consent was obtained. All participants were ensured about the confidentiality of the data and that it would be only used for research purposes. They were invited to fill in a set of questionnaires compiling the following measures: Loneliness at Work Scale (Wright, Burt, & Strongman, 2006), The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988), and The Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003).

Loneliness at Work Scale (Wright, Burt, & Strongman, 2006) is a questionnaire that comprises 16 items structured on 2 dimensions: emotional deprivation and social companionship. Each item consisted of a 5-point Likert Scale with different statements that inquire the extent to which the respondent agrees or disagrees. A response of 1 indicated strongly disagree and 5 indicated strongly agree. The internal consistency coefficient of the composite score was $\alpha=.933$.

The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) consists of 12 items, covering three dimensions: significant others, family, and friends. The answers are distributed on a seven-options Likert scale from 1 (Very strongly disagree) to 7 (Very strongly agree). The internal consistency coefficient (Cronbach's Alpha) was $\alpha=.919$.

The Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003) is a 17 items scale distributed on 3 dimensions: vigor, dedication, and absorption. The answers are spread on a 7-point Likert Scale from 0 (never) to 6 (every day). The internal consistency coefficient of the composite score was $\alpha=.949$.

3. Results

After collection, the data were analyzed using SPSS 26.0 version software. The analysis of Skewness and Kurtosis coefficients showed a normal distribution of data, therefore, to answer the proposed RQ, the Pearson correlation was used.

Means, standard deviations, and bivariate correlations for all the study variables are presented in Table 1. As can be observed, a series of significant positive and negative correlations were identified.

Specifically, to answer our first research question (RQ1: What relations can be observed between perceived social support and work engagement?) the Pearson correlation between the respective variables was computed. The results showed a significant positive correlation ($r=.461$, $p<.01$) between perceived social support and work engagement, meaning that, the higher the level of the perceived social support coming from family, friends, or relevant others, the higher the work engagement of employees in terms of vigor, dedication, and absorption.

The answer to the second research question (RQ2: What relations can be observed between perceived social support and workplace loneliness?) was obtained using the Pearson correlation coefficient. The results revealed a strong negative correlation between perceived social support and workplace loneliness ($r=-.570$, $p<.01$). Therefore, the higher the level of perceived social support coming from family, friends, or relevant others, the lower the workplace loneliness in terms of emotional deprivation or social companionship.

Regarding the third research question (RQ3: What relations can be observed between workplace loneliness and work engagement?), the Pearson correlation showed similar results ($r=-.729$, $p<.01$), the selected variables showing a strong negative correlation. Thus, a high level of workplace loneliness is related to a low level of work engagement.

Table 1. Descriptive statistics and inter-correlations of the study variable.

	Mean	SD	1	2	3
1 Loneliness at work	34.05	13.28	-		
2 Work engagement	67.96	18.02	-.570**	-	
3 Social support	70.37	13.99	-.729**	.461**	-

n=178, **p<0.01

In order to answer our last research question (RQ4: Does workplace loneliness mediate the relation between perceived social support and work engagement?) and to test the mediation model (Preacher & Hayes, 2004), the PROCESS macro for SPSS version 3.5 was used. The model contains perceived social support as a predictor, workplace loneliness as a mediator, and work engagement as an

outcome variable (see Figure 1). The process shows that a change in the predictor variable (perceived social support) leads to a change in the mediator (workplace loneliness) and that change leads to a change in the outcome variable (work engagement). The statistical results related to this mediation process highlight the mediation effect on work engagement: perceived social support -> workplace loneliness -> work engagement (Table 2).

Table 2. Regression results for the first process of mediation.

Model	Coeff.	SE	t	p	CI(lower)	CI(upper)
Without mediator						
PSS -> WE (c)	.5939	.1311	4.5301	.0000	.3328	.8549
With mediator						
PSS -> WL (a)	-.6928	.0745	-9.2971	.0000	-.8412	-.5444
WL -> WE (b)	-.6783	.1874	-3.6188	.0005	-1.0517	-.3049
PSS -> WE (c')	.1240	.1780	.6963	.4884	-.2307	.4786

In Step 1 of the mediation model, the regression of the perceived social support of work engagement, ignoring the mediator, is significant, $F(1,176) = 20.52$, $p < .001$, $R^2 = .21$, $b = .59$, $t(176) = 4.53$, $p < .001$. Step 2 shows that the regression of the perceived social support on the mediator, workplace loneliness, is also significant, $F(1,176) = 86.43$, $p < .001$, $R^2 = .53$, $b = -.69$, $t(176) = -9.29$, $p < .001$. Step 3 of the mediation process shows that the mediator, workplace loneliness, controlling for perceived social support is significant, $F(2,175) = 18.44$, $R^2 = .32$, $p < .001$, $b = -.67$, $t(175) = -3.61$, $p < .001$. Step 4 of the analysis reveals that controlling for the mediator, workplace loneliness, perceived social support score is a less significant predictor of work engagement, $b = .12$, $t(175) = .69$, $p > .005$ than in the previous case.

As suggested by Baron and Kenny (1986), the Aroian version of the Sobel test was conducted, and it was found that workplace loneliness mediates the relation between perceived social support and work engagement ($z = 3.35$, $p = .000$). The same results were obtained for the Goodman version of the Sobel test ($z = 3.39$, $p = .000$).

4. Conclusions

The current study aims to examine the effect of perceived social support on work engagement and the mediating role of workplace loneliness. Results showed that workplace loneliness is a strong mediator in the relationship between perceived social support and work engagement. Therefore, scholars and practitioners should pay attention to the organizational impact of workplace loneliness and implement measures to reduce it. As Peplau and Perlman (1982) or Wright (2005) mentioned, workplace loneliness negatively influences job satisfaction, organizational attachment, and commitment.

Despite the valuable findings of this study, it is not without limitations. One of the main weaknesses of this study was the use of a cross-sectional design, which does not allow for an assessment of the cause-effect relation. Also, another limitation, common to many studies, is related to the fact the questionnaires were self-reported, and the tendency is to investigate and report attitudes, rather than behaviors. Another issue to be considered when evaluating the results is the small sample, which makes the results difficult to generalize. Future studies should investigate along with workplace loneliness, work alienation, and its role in different organizational outcomes.

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THE RELATIONSHIP BETWEEN THE NEED FOR COGNITIVE CLOSURE, EMOTIVE CONTROL AND CONFLICT RESOLUTION STRATEGIES AMONG ADOLESCENTS

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Abstract

Interpersonal interactions may be characterized by various kinds of conflicts, disagreements, disapprovals, and confrontations. Many studies show that interpersonal conflicts are very often one of the most prominent sources of distress. Due to possible negative consequences on social relations and personal well-being, it is important to explore factors that contribute to the lack of assertiveness and destructive conflict outcomes. The goal of this research is to explore the relationship between the need for cognitive closure, emotional regulation, and conflict resolution strategies. The sample consists of 504 young people in Italy (aged 18 – 35), and they responded to a questionnaire distributed online, containing several scales (Need for cognitive closure, Emotional regulation, and conflict management styles (accommodating, avoiding, collaborating, competing, and compromising).

Multiple regression analyses confirmed the relevant role that the need for closure can have in conflict management, especially in interaction with emotional regulation. It was found that individuals with high NCC and low emotional regulation use to a higher level competing style in conflict management. In addition, it emerged that individuals with low NCC and high emotional regulation use more compromising style, whereas those with low NCC and low emotional regulation use less compromising style. Last but not least, we found that the individuals with low NCC and low emotional regulation use less collaborating style in conflict management.

Keywords: *Conflict resolution strategies, need for cognitive closure, emotive control.*

1. Introduction

Interpersonal conflict is defined as “a process in which one party perceives that its interests are being opposed or negatively affected by another party” (Wall & Callister, 1995, p. 517) or as “a phenomenon that occurs between interdependent parties as they experience negative emotional reactions to perceived disagreements and interference with the attainment of their goals” (Barki & Hartwick, 2001, p. 198). Interpersonal conflicts are one of the most prominent sources of distress (Bolger, DeLongis, Kessler, & Schilling, 1989). The *Dual concern model* (Blake & Mouton, 1964) distinguished five styles of conflict management strategies: (1) accommodating conflict style (also labeled “yielding” or “smoothing”) is a tendency to give in to the other’s concerns while giving up one’s own needs and interests; high concern for people and low concern for productivity; (2) avoiding (inaction” or “withdrawing”) refers to evading interactions with the opponent (low concern for both, people and productivity); (3) collaborating style (“integrating” or “problem solving”) is characterized by a willingness to exchange information openly, to address differences constructively, and to make every effort to pursue a solution that will be mutually acceptable; high concern for both people and productivity; (4) competing (“dominating”, “forcing” or “contending”) is characterized by the use of forceful tactics such as threats, an unwillingness to move from one’s initial position, and a focus on defeating the opponents; low concern for people and high concern for productivity; (5) compromising (represents a moderate efforts to pursue an outcome that is mutually acceptable, mutual "give and take" until a middle course is found; moderated concern for both people and productivity).

Several studies confirmed that the choice of conflict management strategies is predicted by emotional regulation (Laslo-Roth & Schwarzwald, 2016; Montes et al., 2012). Emotional regulation refers primarily to attempts by an individual to manage the generation, experience, or expression of disruptive emotions (Gross, 1999), and it may have implications for social interactions and well-being (e.g., Berg, Skinner, & Ko, 2009).

This study hypothesizes that the choice of conflict management strategies may be predicted also by a motivational factor, such as the need for cognitive closure (NCC). NCC is defined as a desire for a definite answer to a question, any firm answer, rather than uncertainty, confusion, or ambiguity (Kruglanski, 1989). It can vary across individuals and situations. NCC may influence the way a person thinks or feels, and it is often associated with simplified and accelerated processing of information (e.g., Dijksterhuis, van Knippenberg, Kruglanski, & Schaper, 1996). People with high levels of NCC may display greater cognitive impatience, rigidity, impulsiveness, and reduced information processing (Kruglanski & Webster, 1996). Some studies have already confirmed a significant relationship between NCC and conflict management strategies. For example, it was found that a high NCC reduces the tendency to compromise in negotiation, and increases the tendency to act in an aggressive, competitive way (De Dreu, Koole, & Oldersma, 1999). It was also found that individuals with low NCC, who are more tolerant of opposing opinions, are more receptive to compromise (Shan, Kruglanski, & Thompson, 1998). However, the relationship between NCC and conflict management strategies has not been studied through the prism of emotional regulation.

2. Objectives

This study aims to examine the relationships between NCC, emotional control, and conflict management strategies. We hypothesized that emotional control may moderate the relationship between NCC and conflict management strategies. We expect that the participants with high NCC will prefer the conflict management styles that allow a fast closure in conflicting situations (e.g., accommodating, avoiding, and competing) especially when they have low emotional control.

3. Methods

3.1. Participants

This study involved 504 young people (62.5% females) from Italy. The participants' age varied from 18 to 35 ($M=21.67$, $SD=3.70$). Data were collected through a Google form. Students attending the course in social psychology were asked to respond and send the link to the questionnaire to their friends using the "snowball method". The research was approved by the Ethical Research Committee.

3.2. Measures

The Dutch Test of Conflict Handling - DUTCH (21 items; Janssen & van de Vliert, 1996) measures five conflict management strategies: accommodating, problem-solving, compromising, avoiding, and forcing. Responses were given on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We calculated five indexes of conflict-handling styles.

Emotional regulation scale (10 items from the Multidimensional Social Competence Scale - MSCS; Trevisan, Tafreshi, Slaney, Yager, & Iarocci, 2018). Responses were given on a 4-point scale (0 = *strongly disagree* - 3 = *strongly agree*). The Principal Axis factor analysis showed a mono-factorial solution. An index of emotional regulation was created after reversing negative items ($\alpha = .80$). Higher scores indicate a higher level of emotional regulation.

The Revised Need for Cognitive Closure scale: (Rev NfCS), Pierro & Kruglanski, 2005). This 14-item scale measures NCC as a unitary construct trait. The participants were asked to rate the extent by which they agreed with statements on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree) (e.g., When I find myself facing various potentially valid alternatives; I decide in favour of one of them quickly and without hesitation). An index of NCC was created with higher scores indicating higher NCC (Cronbach $\alpha = .85$).

The Need for Closure Scale--short version (14 items; Roets & Van Hiel, 2011). This measure is based on the Need for Closure Scale (Webster & Kruglanski, 1994). Items are rated on a 6-point rating scale (1 = strongly disagree to 6 = strongly agree). Ex.: I don't like uncertain situations; I dislike questions that could be answered in many different ways. An index of NCC was created with higher scores indicating higher NCC (Cronbach $\alpha = .87$). The correlation between the two indexes of NCC is .57 and thus we calculated an average index of the need for closure.

4. Results

We checked for ceiling or floor effects by looking at the values of skewness and kurtosis for each variable of interest. All the variables presented acceptable values of both indices (no lesser than -2 or greater than 2 ; see George & Mallery, 2010). Then we calculated the correlations between the variables (Table 1). The analysis showed that the need for closure is associated positively with

accommodating, avoiding, and competing styles of conflict management, and negatively with emotional regulation. Emotional regulation is associated negatively with gender (females perceive lower emotional regulation), and positively with age, with collaborating, and with compromising styles of conflict management.

We ran five regression models using the statistical software SPSS 27. We considered as the criterion variables the conflict management styles, and we included as the predictors the need for cognitive closure, emotion regulations, the interaction between them and socio-demographic variables (gender and age). All the predictors and the outcome variables were standardized before the analysis. The results of the regression analyses are reported in Table 2.

In the first analysis, we considered collaborating (problem-solving) style in conflict management as a criterion variable. This model explained a significant portion of the variance ($R^2_{adj} = .14$, $F = 27.75$, $p < .001$). There was a significant and positive effect of emotional regulation ($\beta = .38$, $p < .001$), and an effect of interaction between emotional regulation and NCC ($\beta = -.08$, $p < .05$). Individuals who have high levels of emotional regulation use more collaborating style in conflict management. We conducted a simple slope using SPSS to analyse the effect of interaction. We found a significant correlation between NCC and collaborating style only for the individuals with lower emotional regulation ($\beta = .14$, $p < .01$). As you can see from Figure 1, the participants with low NCC and low emotional control use the less collaborating style in conflict management.

In the second analysis, the competing style was considered as a criterion. This model explained a small portion of the variance ($R^2_{adj} = .03$, $F = 4.13$, $p < .001$). We found a positive effect of NCC ($\beta = .13$, $p < .005$), a negative effect of emotional regulation ($\beta = -.10$, $p < .04$), and an effect of interaction between emotional regulation and NCC ($\beta = -.11$, $p < .02$). From the simple slope analysis emerged a significant correlation between NCC and competing style only for the individuals with low emotional control ($\beta = .26$, $p < .001$). We found that the individuals who have high NCC use more competing style in conflict management if they have low emotional regulation (Figure 2).

In the third analysis, we used the compromising style as a criterion. This model explained a significant portion of the variance ($R^2_{adj} = .16$, $F = 19.5$, $p < .001$). Here emerged a significant and positive effect of emotional regulation ($\beta = .37$, $p < .001$), of gender ($\beta = .14$, $p < .002$), and an effect of interaction between emotional regulation and NCC ($\beta = -.18$, $p < .001$). Females and individuals who have high levels of emotional regulation use more compromising style in conflict management. From the simple slope analysis emerged a significant negative correlation between NCC and compromising style for the individuals with high emotional regulation ($\beta = -.11$, $p < .04$) and a positive correlation for the individuals with low emotional control ($\beta = .19$, $p < .001$). We can see that the individuals with low NCC and high emotional regulation use more compromising style, whereas those with low NCC and low emotional control use less compromising style (Figure 3).

In the following analysis, we used accommodating style as a criterion. It explained a small portion of the variance ($R^2_{adj} = .02$, $F = 2.5$, $p < .03$). Here emerged only a significant effect of NCC ($\beta = .12$, $p < .009$), and of age ($\beta = .09$, $p < .04$). Individuals with a higher level of NCC and those who are a bit older use more this style of conflict management.

In the last regression, the avoiding style was used as a criterion variable. This model also explained a small portion of the variance ($R^2_{adj} = .05$, $F = 6.06$, $p < .001$). Here emerged a significant effect of NCC ($\beta = .21$, $p < .001$), and of emotional regulation ($\beta = .11$, $p < .02$). Individuals who have higher NCC and higher emotional regulation use more this style of conflict regulation. However, we did not find a significant effect of interaction between these two variables.

5. Discussion / conclusions

We hypothesized that the participants with high NCC prefer the conflict management styles that allow a fast closure in conflicting situations (e.g., accommodating, avoiding, and competing) especially when they have low emotional control. Our results confirmed the relevant role that the need for closure can have in conflict management, especially in interaction with emotional regulation. It emerged that individuals with high NCC and low emotional control use more competing styles in conflict management. In addition, it emerged that the individuals with low NCC and high emotional regulation use more compromising styles, whereas those with low NCC and low emotional control use less compromising styles. Last but not least, we found that the individuals with low NCC and low emotional control use less collaborating styles in conflict management. However, we have not found an interaction effect between NCC and emotional regulation for accommodating and avoiding styles. We think that there could be additional factors that may interact with NCC and emotional regulation that should be taken into consideration in future studies.

Table 1. Correlations between the variables.

	1)	2)	3)	4)	5)	6)	7)	8)
1) NCC	-							
2) Emotional regulation	-.15	-						
3) Gender	-.01	-.15**	-					
4) Age	.05	.11*	-.18	-				
5) Accommodating	.13*	.04	.01	.09	-			
6) Avoiding	.22**	.09	.05	.03	.35**	-		
7) Collaborating	.01	.36**	.15*	-.02	.21**	.22**	-	
8) Competing	.16**	-.11	.01	-.01	-.11	.03	.23**	-
9) Compromising	-.02	.35**	.08	.05	.35**	.35**	.58**	.17**

Table 2. Results of Multiple Regression Analysis for conflict management styles.

	Collaborating		Competing		Compromising		Accommodating		Avoiding	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
NCC	.07	ns	.13	.005	.03	ns	.12	.009	.21	.001
Emotional regulation	.38	.001	-.10	.04	.37	.001	.04	ns	.11	.02
Gender	.05	ns	-.01	ns	.14	.002	.03	ns	.07	ns
Age	.01	ns	-.02	ns	.04	ns	.09	.04	.01	ns
NCC x Emotional regulation	-.08	.05	-.11	.02	-.18	.001	-.04	ns	.07	ns

Figure 1. Collaborating style of conflict management in relation to NCC and emotional regulation.

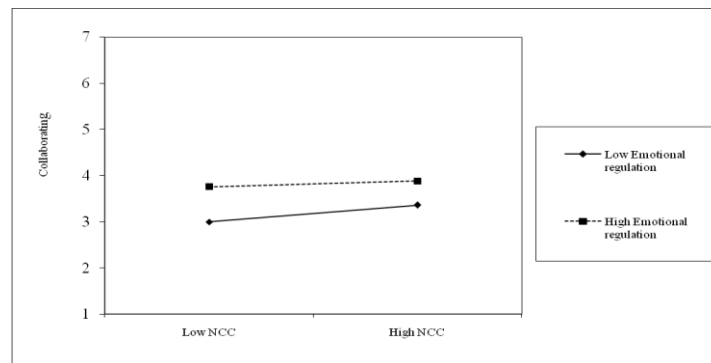


Figure 2. Competing style of conflict management in relation to NCC and emotional regulation.

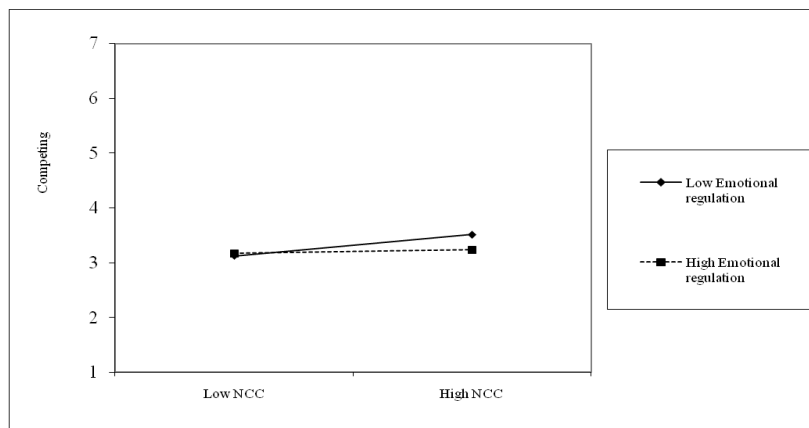
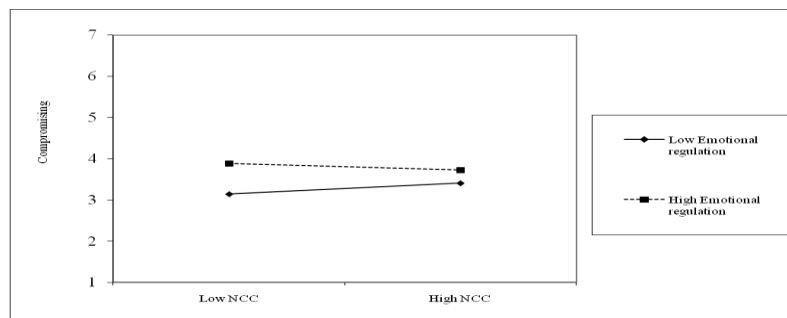


Figure 3. Compromising style of conflict management in relation to NCC and emotional regulation.



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GENERAL AND TECHNOLOGY SELF-EFFICACY AMONG UNIVERSITY STUDENTS - PRELIMINARY FINDINGS

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Abstract

Self-efficacy is an essential part of an individual in various areas of both work and personal life. According to Wood and Bandura (1989), self-efficacy is defined as “beliefs in one’s capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands” (p. 408). A specific area in the study of self-efficacy is the area of computer self-efficacy and the related. Authors Gupta and Bostrom (2019) state that computer self-efficacy is currently “one of the most important constructs in information systems research” (p. 71). The ability to work with computers and improves the individual’s employability in the labour market, and, for this reason, technology self-efficacy is the subject of our research. The aim of the study is to assess the level of general and computer self-efficacy among university students in relation to gender, age, perceived social strata and the time spent at the computer.

The research sample consisted of 171 university students (70.76% females) aged 17-27 years ($M=20.14$, $SD=1.85$) of teaching disciplines (65.5%) and management (34.5%) of the University of Prešov (Slovakia). The data were collected online.

General self-efficacy was measured by the New General Self-efficacy scale (Chen, Gully, Eden, 2011), Technology self-efficacy by Brief Inventory of Self-efficacy (BITS) by Weingold and Weingold (2021). Based on the score obtained in the BITS, the respondents are divided into three groups (novice, advanced and expert), according to their level of computer self-efficacy.

Moderate positive relationships were demonstrated between perceived social class and self-efficacy, between self-efficacy and Novice and Advanced levels of technology self-efficacy. Differences were found between male and female students at the advanced and expert levels of the technology self-efficacy framework. Female students reported lower mean self-efficacy than male students. The research findings are consistent with the Acceptance Model (TAM), gender differences in the level of technology self-efficacy were also supported by previous research findings. Limitations include a homogeneous sample in terms of age and the factor of experience using , which was measured by a single item.

Keywords: *General self-efficacy, technology self-efficacy, university students.*

1. Introduction

For a number of years, the need to increase the interest of high school and university students in careers in mathematics and science has been emphasised. Application on the labour market requires the ability to work with computers and technologies, which will subsequently ensure an adequate job position for the person, even in a non-technical field. While technical skills are important, it is also important to examine self-belief. Self-efficacy is an essential part of an individual in various areas of both work and personal life. According to Wood and Bandura (1989), self-efficacy is defined as “beliefs in one’s capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands” (p. 408). According to Bandura (1997), self-efficacy is understood as an individual’s belief in their own ability to organise and decide on the next course of action needed to resolve a prospective situation. Thus, social cognitive theory and self-efficacy are significantly related to the study of and with beliefs that predict the user’s attitude towards the , which in turn predicts acceptance and actual use (Davis, 1993). Based on the theory, Locke et al. (1984) suggest that people with a higher levels of self-efficacy will be more engaged in using and the associated activities, and will make greater efforts to learn new activities that are associated with the use of .

A specific area of self-efficacy research is the area of computer self-efficacy and the related. Authors Gupta and Bostrom (2019) state that computer self-efficacy is currently “one of the most

important constructs in information systems research” (p. 71). The level of proficiency of university students in using is also an important variable for educators to consider when designing and implementing -rich courses. It is recognised that mastery of any requires effort (Girasoli, Hannafin, 2008). Isman and Celikli (2009) note that many students enter college or work without basic computer skills. Due to this fact, Gist and Mitchell (1992) state that the lack of experience with directly affects the level of technology self-efficacy. In Vekiri and Chronaki’s research (2008), technology self-efficacy was found to be a significant predictor of future academic performance and career path among university students. Based on the above, it is necessary to pay attention to the level of general and technology self-efficacy in the context of gender and other variables.

2. Aim

The aim of the study is to assess the level of general and technology self-efficacy among university students in relation to gender, age, perceived social strata and time spent at the computer.

3. Methods

The Brief Inventory of Self-efficacy (BITS) (Weigold & Weigold, 2021) assesses computer self-efficacy (CSE). The BITS is an 18-item measure with one score each for its three subscales (Novice ($\omega = 0.962$), Advanced ($\omega = 0.775$), and Expert ($\omega = 0.842$), whereas the BITS-SF is a six-item measure with one total score indicating where people fall on the novice to expert continuum, where 1 = not at all confident - 6 = completely confident.

The New General Self-Efficacy Scale (Chen, Gully & Eden, 2001) assesses the extent to which people believe they can achieve their goals, despite difficulties. Using a 5-point rating scale (1= strongly disagree; 3 = neither agree nor disagree; 5 = strongly agree), respondents indicate how much they agree with eight statements, such as “*Even when things are tough, I can perform quite well.*” To calculate the total score for each respondent, the average rating of the items was computed by adding respondents’ responses to each item and dividing this sum by the total number of items (McDonald’s $\omega = 0.906$).

Perceived social strata were measured by a single item: Our society is divided into different social strata - upper, middle, lower. Where would you place yourself on the following 10-degree scale expressing social strata - with ten representing the highest and one representing the lowest social strata?

Computer time was measured by a single item: I spend an average of a day behind the computer... (specify number of hours), where respondents wrote the number of hours.

4. Research sample

The research sample consisted of 171 respondents (70.76% female) aged 17-27 years ($M=20.14$, $SD=1.85$). 64.33% were 1st year B.Sc. students, 24.56% were 2nd year B.Sc. and 11.11% were 3rd year students of B.Sc. of teaching disciplines (65.5%) and management (34.5%) of the University of Prešov (Slovakia). The data were collected online from December 2022 to February 2023.

5. Results

First, we report the descriptive characteristics of the variables of interest. The mean level of perceived social stratum was 5.87 ($SD = 1.429$). The average time spent on the computer in the research sample was 3.398 hours ($SD = 2.051$) per day (minimum = 0 hours, maximum = 12 hours). Other results are presented in Table 1.

Table 1. Descriptive characteristics.

	N	M	SD	Min	Max
Self-efficacy	171	3.817	0.729	1.250	5.000
Novice	171	5.665	0.834	2.667	6.000
Advanced	171	4.005	1.141	1.000	6.000
Expert	171	2.239	1.059	1.000	6.000

As we can see, students perceive themselves as more self-efficacious ($M = 3.817$, $SD = 0.729$). In terms of technology self-efficacy, at the Novice level they are on average completely confident ($M = 5.665$, $SD = 0.384$), at the Advanced level the level is slightly lower ($M = 4.005$, $SD = 1.141$). At the Expert level, they are rather unconfident ($M = 2.239$, $SD = 1.095$).

Further, we were interested in the existence of a relationship between self-efficacy, self-efficacy, and age, time spent at the computer, and perceived social stratum. Pearson's correlation coefficient was used. The results are reported in Table 2.

Table 2. Correlation matrix

Variable	Age	Perceived social strata	Computer time	Self-efficacy	Novice	Advanced
1. Age	—					
2. Perceived social strata	-0.111	—				
3. Computer time	-0.037	-0.012	—			
4. Self-efficacy	-0.173 *	0.334 **	-0.092	—		
5. Novice	-0.051	0.072	0.042	0.327 **	—	
6. Advanced	-0.013	0.129	0.054	0.250 **	0.478 **	—
7. Expert	-0.156 *	0.053	0.100	0.089	0.113	0.590 ***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

A weak negative significant relationship was found between age and self-efficacy ($r = -0.173$, $p < 0.05$) and Expert level in technology self-efficacy ($r = -0.156$, $p < 0.05$). Given the strength of the relationship, we interpret these findings with caution - rather it is a lack of relationship. Moderate positive relationships were demonstrated between perceived social class and self-efficacy ($r = 0.334$, $p < 0.001$) - the more one perceives oneself as a member of a higher social class, the higher the level of self-efficacy, and vice versa. Finally, moderate positive relationships between self-efficacy and levels of Novice ($r = 0.327$, $p < 0.001$) and Advanced ($r = 0.250$, $p < 0.001$) technology self-efficacy were found. The higher the level of self-efficacy a student has, the higher the level of technology self-efficacy at the Novice and Advanced levels and vice versa. There were no relationships between the other variables ($p > 0.05$).

Finally, we compared male and female students in terms of their level of self-efficacy and technology self-efficacy (novice, advanced, expert). We used the Mann - Whitney U-test (due to the unequal representation of males and females in the research sample - which is a logical condition, however, when studying teaching disciplines at university, females are more prevalent). The results are reported in Table 3.

Table 3. Comparison of male and female students in self-efficacy and technology self-efficacy.

	Group	N	M	SD	W	p	Rank-Biserial Correlation
Self-efficacy	men	50	3.763	0.851	2950.500	0.801	-0.025
	women	121	3.840	0.676			
Novice	men	50	5.413	1.133	2837.000	0.411	-0.062
	women	121	5.769	0.651			
Advanced	men	50	4.290	1.180	3619.000	0.044*	0.196
	women	121	3.887	1.107			
Expert	men	50	2.620	1.239	3825.500	0.006**	0.265
	women	121	2.081	0.935			

* $p < .05$, ** $p < .01$

Based on the results, differences were shown between male and female students at the advanced ($W = 3619.000$, $p = 0.044$, Rank-Biserial Correlation = 0.196) and expert ($W = 3825.500$, $p = 0.006$, Rank-Biserial Correlation = 0.265) levels in the technology self-efficacy framework. Female students reported lower mean self-efficacy than male students. There were no differences between male and female students in self-efficacy and novice level technology self-efficacy.

6. Discussion and conclusion

The aim of the study was to assess the level of general and technology self-efficacy among university students in relation to gender, age, perceived social strata and time spent at the computer. Female students reported lower mean technology self-efficacy than male students, which is in line with previous research (Coffin & MacIntyre, 1999; Whitley, 1997). A weak negative significant relationship was found between age and self-efficacy, which is not in accordance with the previous findings of Lim (2001), who demonstrated a significant relationship between age, frequency of computer use in relation to self-efficacy. Our findings may be limited by the homogeneous age group of university students.

General self-efficacy among university students was positively correlated with the level of technology self-efficacy at the Novice and Advanced levels, which consistent with the Acceptance Model (TAM), which describes the extent to which individuals are able to use with minimal effort (Holden, Council, 2011). This means that if a person has a high level of belief (general self-efficacy) in being able to use, their ability to use will also be at a high level (technology self-efficacy). It is also important to consider the experience factor, which was measured by the time an individual spends at the computer each day.

Based on the research results, it was found that, the more one perceives oneself as a member of a higher social class, the higher the level of self-efficacy has, while our research findings can also be supported by previous research in the career literature (Thompson & Dahling, 2012; Thompson & Subich, 2011). Belief in one's own abilities is also an important element in the assessment of perceived social strata.

Limitations of the study are that our research used self-report data that were collected at one point in time and participants were approximately the same age, which may affect the correlation between age and self-efficacy. The experience factor was measured by only a single item, which can be considered as an insufficient validation of experience. Preliminary research findings are part of further research focusing on technology self-efficacy and selected psychological attributes in the STEM field.

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SOCIAL COMPARISON, BODY APPRECIATION AND SOCIAL MEDIA USE: AN EXPLORATIVE STUDY

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Abstract

Introduction and background: According to Festinger's Theory of Social Comparison, individuals, to obtain an accurate assessment of themselves, often compare with those they consider similar. Social media provides a unique context for this phenomenon. However, users often share images that are altered to answer the phenomenon of social desirability. Individuals tend to compare themselves on social media with people more competent and popular, resulting in reduced well-being, self-esteem, self-perception, mental health, emotional adjustment, and body appreciation.

Objective: The current study aimed to verify the relationship between social comparison, body appreciation, and social media use in a sample of higher education teachers and students. Considering the role played by teachers in the educational context, it is essential to investigate, alongside those of the students, the teachers' perceptions in this regard. This, in fact, would make it possible to intervene on multiple levels to enhance self-acceptance and body appreciation in students.

Method: 699 higher education teachers (Mean age 39y., Female=82.6%) and 200 students (Mean age 22y., Female 60%) of the University of Foggia, Italy, took part in this study, completing the following questionnaires: The Social Media Social Comparison Scale and The Body Appreciation Scale-2. Pearson bivariate correlations were performed to test associations between studied variables. T-test and ANOVA were used to analyze social comparison and body appreciation in relation to the number and type of social media used (Facebook/Instagram) and between groups (Teachers vs. students).

Results: Overall, results showed a negative relationship between higher levels of social media social comparison and body appreciation ($r=-.14$, $p < .01$). Furthermore, the use of 3 or more social media [$F=9.050$, $p < .001$] and the use Instagram, compared to Facebook, appears to be associated with greater use of social media to compare one's abilities and opinions with those of others [$t=-2.759$, $p=.006$].

Conclusions: Results open interesting perspectives on the cognitive schemas that teachers and students construct with respect to body appreciation and social media use and how these may intervene in influencing teaching and learning processes.

Keywords: *Social media, social comparison, body appreciation, body esteem, higher education.*

1. Introduction and background

The theory of Social Comparison draws on the studies of Festinger (1954) who theorized that individuals need to compare themselves with others and this comparison subsequently influences our behavior.

The process of comparison is therefore carried out in the different life contexts that each individual lives and frequents. The environments we pass through every day are the most diverse and, daily, evolve. As early as 1988, before the widespread diffusion of the Internet, Taylor and Brown argued that people have an unrealistic reading of themselves: convincing themselves of their own possibilities in controlling the environment; this conviction leads, therefore, the individual to have a vision of the other as threatening or inferior compared to the idea one has of oneself instead. This theory is topical and it is intuitive to reason on how environments, in the 21st century, are no longer only tangible and concrete but also and often above all virtual. In this context, therefore, it emerges how this perception has also been transferred to social media platforms (Hassim, Hasmadi, Sharipudin, 2020). Indeed, users of the Internet and social platforms are constantly increasing. Self-disclosure, through social media, is a way to connect to others and has allowed the reduction of social distance in pandemics (Gao et al., 2020), leading to an increasing number of users.

According to the Digital 2022 Global Overview Report, there are almost 51 million individuals connected to the Internet and those active on social platforms number about 43 million, an increase of about 5.4% compared to 2021. In the latter case, the figure of onboarding new users (5.4%) is interesting, but this is accompanied by a slight decrease in the time spent online (a decrease of about 5 minutes compared to 2021). Furthermore, the report lists WhatsApp, Facebook and Instagram among the most used social platforms. In Italy, the data concerning the most used platforms, with reference to a sample of Internet users aged between 16 and 64, is confirmed and sees Facebook (78.6%) and Instagram (71.4%) at the top of the list, a trend that is clearly superior to TikTok (28.9%), marking, moreover, an average time of use of the two platforms of 1 hour and 47 minutes of social use per day. It appears, therefore, that large parts of human daily life are conveyed by social spaces. It emerges, however, that while self-narration to others and direct and active relationship with others leads to mental states of a positive nature and well-being, self-narration through excessive use of social networks may lead to lower well-being and the onset of clinical disorders such as anxiety and depression (Liu et al. 2019; Reer et al. 2019). Instagram users share images, photos and videos that, in most cases, possess a positive nature in the narrative, leading, therefore, to a presentation of one's life as satisfying and fulfilling (Hassim, Hasmadi, Sharipudin, 2020). going to affect the individual's psychological well-being (Schmuck, 2019). The use of Facebook, moreover, leads to an 'upward social comparison' (Schmuck, 2019), which can negatively affect well-being and self-esteem. The perception that will result from exposure to these presentations will make the user believe that they live a less rewarding life (Denti et al., 2012). All of this assumes a role in the school and learning context since, as Beasley (2018) points out, the greatest comparison is made with people with whom one identifies most for one or several factors such as age, occupation, appearance. It follows that the peer group and teachers assume a key role in interpreting these dynamics in the learning context. Indeed, Morrison et al. (2004) pointed out that young adolescents tend to have a pronounced social comparison to manifest the need to show their ideal body image.

In light of this, it is interesting to investigate whether and how social media influence the perception of body image in correlation with the use of social networks.

2. Method and objective

The current study aimed to verify the relationship between social comparison, body appreciation, and social media use in a sample of higher education teachers and students.

Considering the role played by teachers in the educational context, it is essential to investigate, alongside those of the students, the teachers' perceptions in this regard. This, in fact, would make it possible to intervene on multiple levels to enhance self-acceptance and body appreciation in students.

Our sample comprised 699 in-training higher education teachers (82.6% female) and 139 students (85.4% female) attending bachelor's degree courses at the University of Foggia, Italy.

The socio-demographic characteristics of the two samples are described in Table 1.

Table 1. Socio-demographic characteristics of the sample.

	Teachers	Students
Age		
Mean (SD)	38.89(8.13)	24.05(7.58)
Age range	21-60y.	19-53y.
Gender		
Female n(%)	562(82.6%)	117 (85.4%)
Male n(%)	118(17.4%)	20 (14.6%)
Educational level		
High Schools	114(16.8%)	106 (76.8%)
Degree or higher	566(83.2%)	31(22.5%)
Number of social media used		
Mean (SD)	1.74(.66)	2.02 (.77)
3 or more n(%)	83(12.2%)	34(24.6%)
Main social media used		
Facebook n(%)	309(45.5%)	11(8%)
Instagram n(%)	370(54.5%)	87(63%)
Tik Tok n(%)	-	40(29%)

Participants complete two self-report questionnaires administered online. They received online information on Italian privacy regulations, gave informed consent, and subsequently took part in the study. The research was conducted following the APA’s ethical principles and code of conduct (American Psychological Association, 2002).

2.1. Measures

The *Social Media Social Comparison of Ability and Opinion* scale (Yang et al., 2018) was used to measure social comparison activities on social media. The scale was composed of 9 items measured on a 5-point Likert scale (1 = Not at all, 5 = Very well). The first five items of form the social media social comparison of ability (SMSC-Ability) subscale (e.g., “On social media, I compare what I have done with others as a way to find out how well I have done something”). The other 4 items formed the social media social comparison of opinion subscale (SMSC-Opinion) (e.g., *On social media, I try to know what others in a similar situation would do*). Cronbach’s alpha in our sample was .72 for SMSC-Ability and .79 for SMSC-Opinion.

The *Body Appreciation Scale-2* (BAS-2; Casale et al., 2021; Tylka & Wood-Barcalow, 2015) was used to measure body appreciation. The scale is composed of 10 items rated on a 5-point scale (1 = Never; 5 = Always). Cronbach’s alpha in our sample was .94.

2.2. Data analyses

Pearson bivariate correlations were performed to test associations between studied variables in the two samples. *Student’s t-test* and ANOVA were used to analyze social comparison and body appreciation in relation to the number and the type of social media used (Facebook/Instagram/TikTok) within and between groups (Teachers vs. students).

3. Results

Results from bivariate correlations are reported in Table 2. A negative relationship between social media social comparison and body appreciation emerged: greater use of social media to compare one’s abilities ($r=-.12, p <.01$) and opinions ($r=-.10, p <.05$) with those of others was associated with lower levels of body appreciation. Greater use of social media to compare one’s opinions with those of others resulted also associated with a higher number of social media used ($r=.17, p <.01$).

Table 2. Bivariate correlations among studied variables.

	1	2	3	4
1.Body appreciation	-			
2.Use of social media to compare one's abilities with those of others	-.124**	-		
3.use of social media to compare one's opinions with those of others	-.079*	.490**	-	
4.Number of social media used	-.022	.048	.168**	_-

Note. ** $p <.01$; * $p <.05$

Analyzing differences within groups emerged that teachers who are using Instagram reported greater use of social media to compare their abilities [(M=2.24, SD=.82); $t(677)=-2.272, p=.023$] and opinions [(M=2.47, SD=.93); $t(677)=-2.259, p=.006$] with those of others than teachers using Facebook [abilities: M=2.10, SD=.75; opinions: M=2.28, SD=.88]. With regard students, instead, they reported greater use of social media to compare their opinions with those of others when using TikTok [(M=3.10, SD=1.02); $F(135)=6.523, p=.002$] and Instagram (M=2.84, SD=.90) in comparison to Facebook (M=1.95, SD=.81).

In addition to this, teachers using 3 or more social media [(M=2.65, SD=.92); $t(678)=-2.825, p=.005$] reported greater use of social media to compare one’s opinions with those of others than teachers using less than three social media (M=2.35, SD=.90). No significant differences were found within the group of students with regard to the use of more than three social media and the studied variables.

When differences between groups were analyzed (teachers vs. students), results showed that students reported greater use of social media to compare one’s opinions and abilities with those of others than teachers, while teachers reported higher levels of body appreciation than students. Results are shown in Table 3.

Table 3. Differences between students and teachers.

	Teachers M(SD)	Students M(SD)	t(df)	p
Use of social media to compare one's opinions with those of others	2.38(.91)	2.84 (.97)	-5.348(816)	.000
Use of social media to compare one's abilities with those of others	2.18(.79)	2.48 (.86)	-4.073(816)	.000
Body appreciation	3.79(.80)	3.50(.85)	3.813(816)	.000

4. Conclusion

The aim of this study was to verify the relationship between social comparison, body appreciation and the use of social media. In particular, the social media considered refer to those most used in the Italian panorama. The Digital 2022 Global Overview report showed, in fact, that the social media most used by connected users are: Facebook and Instagram, the explorative survey was also extended to the social TikTok to verify the exposure and possible relationship of this social with the reference sample as well. The concept of well-being is closely connected to the dynamics relating to the individual dimension of one's self-representation with respect to body image components. This is explicable through social comparison with the individuals with whom one interfaces most (Beasley, 2018). In order to investigate this phenomenon with respect to the academic learning context, it proved useful to investigate the relative representations of teachers and students in higher education.

The explorative survey carried out through the administration of questionnaires (Yang et al., 2018; Casale et al., 2021; Tylka & Wood-Barcalow, 2015) showed that in both teachers and students there is a negative relationship between social comparison through social media and body appreciation: there is, therefore, a greater use of social in the presence of lower levels of body appreciation. Furthermore, those who use social media more to compare their opinions with those of others use more social networks. Analysing the results regarding the comparison within the groups, it emerged that in the teachers' group, the highest level of social comparison is carried out with the greater use of Instagram rather than Facebook, in the students' group it is highlighted that the highest level of social comparison is associated with the use of TikTok and Instagram.

In the comparison between the two groups, the negative relationship between social comparison and social use emerged: the 'student' group showed higher social use and lower body appreciation, the teachers showed lower social use and higher levels of body appreciation.

These results from an explorative survey represent a first step for future studies that aim to verify the relationship between social comparison, body appreciation and social media use with the learning construct. Indeed, components closely related to individual physical well-being, such as self-esteem (Schmuck, 2019), are crucial in the learning process (Cataudella et al., 2021; Jaaffar et al., 2019). Consequently, investigating these dimensions can be useful in providing awareness and tools with respect to individual well-being, which is fundamental for promoting effective learning.

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EXPLORING THE DEVELOPMENT OF A CROSS-CULTURAL FLEXIBILITY SCALE: A PRELIMINARY STUDY

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Abstract

The aim of this study was to preliminarily explore the development of a cross-cultural flexibility scale based on a view of Kolb's experiential learning theory. To design the cross-cultural flexibility scale, we modified the existing measure within the theory called the Adaptive Style Inventory, which was invented to examine how people are adaptable and flexible in a learning situation. This study utilized the idea of theoretical commensuration between the Adaptive Style Inventory and Kolb's learning style model. To achieve the aim, we chose an international graduate school in Japan as a research site. One hundred twenty-six graduate students participated in this study who belonged to the international master's program. We conducted a correlation analysis between six key variables of the cross-cultural flexibility scale and those of the cross-cultural learning style questionnaires. Results of the correlation analysis revealed that each of the six variables of the flexibility scale was positively significantly related with the other of those of the learning style questionnaires respectively. The results suggested that this cross-cultural flexibility scale may potentially become initial foundation for the further development of measurement to analyze people's flexibility in a cross-cultural situation.

Keywords: *Cross-cultural flexibility, scale development, experiential learning theory, international graduate students.*

1. Introduction

Over decades, a great number of cross-cultural skills and abilities for successful adaption to different, cultural environments have been discovered (Bird, Mendenhall, Stevens, & Oddou, 2010; Leiba-O'Sullivan, 1999). Among them, to our best knowledge, flexibility was relatively initially identified and published as one of crucial, effective skills when working abroad (Thomson & English, 1964). Since 1960s, several empirical studies also importantly described cross-cultural flexibility as various skill's names (Yamazaki & Kayes, 2004), including flexibility-rigidity (Stoner, Aram, & Rubin, 1972), interpersonal flexibility (Hawes & Kealey, 1979, 1981), cultural flexibility (Black, 1990), flexibility as a personality trait (Cui & Awa, 1992), flexibility-adaptability (Arthur & Bennett, 1995; Sinangil & Ones, 1997), and cross-cultural flexibility (Lin, Rogge, & Swanson, 2020).

To examine cross-cultural flexibility, different types of measurement of cross-cultural flexibility have been developed and applied according to what kind of human attributes/traits/contextual situations researchers are interested in. For example, the study of Caligiuri and Tarique (2012) used the Cultural Flexibility Scale developed by Black (1990) for expatriate management contexts. As another, Lin et al. (2020) developed the Multidimensional Psychological Flexibility Inventory in relation to Acceptance and Commitment Therapy. However, a cross-cultural flexibility scale for cross-cultural learning situations derived from the experiential learning theory (Kolb, 1984; Kolb & Kolb, 2017) has not been developed, yet. Accordingly, the aim of this study was to explore a design for a cross-cultural flexibility scale based on the experiential learning theory.

2. Kolb's experiential learning theory

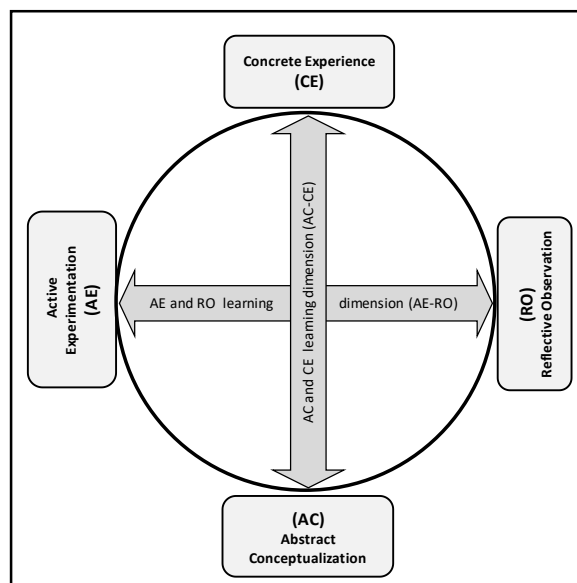
2.1. Learning style model and the adaptive style inventory

By integrating and developing perspectives from influential scholars and researchers in the areas of Psychology, Philosophy, and Education, Kolb (1984, Kolb & Kolb, 2017) generated the experiential learning theory. This theory centered human experience that plays an important role in individual learning processes (Kolb, 1984; Kolb & Kolb, 2017). When people learn, they are required to apply four learning

modes: concrete experience (CE), abstract conceptualization (AC), reflective observation (RO), and active experimentation (AE). The CE mode is dialectically opposite to the AC one, while the RO mode is dialectically contrasted to the AE one. In a learning process, individuals typically tend to more use one learning mode than the other in the same learning dimension that relates to either of the two dimensions. One dimension concerns an abstract-concrete learning variable (AC-CE) and the other one represents an active-reflective one (AE-RO). These two variables are meant to show a learning style component as a relative learning preference. Accordingly, there are six important learning variables encompassed in Kolb's learning model: the four learning modes of CE, AC, RO, and AE mode, and two relative learning preference variables of AC-CE and AE-RO. Figure 1 illustrates Kolb's learning model. In order to assess individual's learning mode and style, the experiential learning theory provided Kolb's Learning Style Inventory (KLSI; Kolb, 1984; Kolb & Kolb, 2017). This study focused on those modes and variables relevant to cross-cultural learning situations. We utilized the cross-cultural learning style questionnaires modifying the KLSI in order to assess how people apply learning modes and variables in cross-cultural learning situations (Yamazaki & Toyama, 2022).

The experiential learning theory further shows us that people develop from the specialized stage to the integrated stage by repeatedly responding to different contextual demands in relation to the four learning-mode situations (Kolb, 1984). It seems to be assumed that people develop when they are adaptable and flexible in multiple learning situations and demands. The Adaptive Style Inventory (ASI; Boyatzis & Kolb, 1993) was invented to evaluate how people adapt to different learning situations. We would be able to see that people are flexible or inflexible to various learning situations. For example, if a person faces a learning situation that require using the mode of concrete experience, he/she may apply the CE mode even though his/her preferred learning style is strongly inclined towards the AC mode. It can be translated such a way that he/she is flexible because properly fitting to the environmental demand. In the same situation, however, if he/she still uses the AC mode that is against the environmental demand, he/she will be evaluated as being inflexible. The ASI measure is a forced choice type that requires people to select one of two options, each of which is conceptually related to one of the four learning modes. The ASI are thereby theoretically commensurate with Kolb's learning style model in the experiential learning theory (Mainemelis, Boyatzis, & Kolb, 2002).

Figure 1. Kolb's learning style model.



2.2. Cross-cultural flexibility scale

In this study, it was assumed that cross-cultural environmental demands are characterized as four learning modes of Kolb's learning theory. To design a cross-cultural flexibility scale, we applied and modified the ASI. The measurement of ASI had a total of 48 questions in eight personalized situations, each of which had six questions (Mainemelis et al., 2002). In this study, we designed the cross-cultural flexibility scale that consisted of 24 questions in four cross-cultural learning situations linked with the four learning modes. Each situation of this cross-cultural flexibility scale also had six questions, each of which requires selecting one of two options. An example of a learning situation is: "When I build a trustful relationship with people who are culturally different from me." Also, an example of a question

with two options to be chosen describes: (1) “I rely on my feeling” and (2) “I try to start to talk to the people.” These two options of the example here are related to the CE mode and the AE one respectively. To check this cross-cultural flexibility scale, the present study relied on the idea of the theoretical commensuration between the ASI and Kolb’s learning style model. Based on the idea, this study sought to investigate how the cross-cultural flexibility scale is conceptually matched with the cross-cultural learning questionnaires (Yamazaki & Toyama, 2022) through analysis of four learning modes and two variables between those two cross-cultural scales.

3. Methods

In order to develop a cross-cultural flexibility scale for this study, we asked international students of a graduate school in Japan to participate in the study. This graduate school was so unique in Japanese higher education system that the school officially applied English language, emphasizing global and international focused fields in a cross-cultural learning environment. One hundred twenty-six graduate students joined in this study, who pursued the specialization in international relations or international management. They were demographically diversified, including 36 countries, 58 females vs. 68 males, and the average age of 30.5 years old (s.d.=4.4). With regard to research ethics, the present study was approved by the university’s department of business administration where the authors belong.

The present study applied a correlation analysis between the cross-cultural flexibility scale and the cross-cultural learning style questionnaires in terms of six learning variables. Since overall learning style examined by those two scales is thought to be theoretically similar, the two relatively preferred learning style variables (i.e., AC-CE and AE-RO) of the cross-cultural flexibility scale should be correlated with those of the cross-cultural learning style questionnaires respectively. Also, the four learning modes of the flexibility scale should be correlated with those of the learning style questionnaires.

4. Results

Table 1 summarized results of the correlation analysis between the cross-cultural flexibility scale and the cross-cultural learning style questionnaires with regard to six key learning variables. Results of the analysis revealed that all relationships between the same two modes of the two scales was significant (CE vs. CE, $p < 0.01$; AC vs. AC, $p < 0.01$; RO vs. RO, $p < 0.01$; AE vs. AE, $p < 0.01$) and those between the same two relatively preferred learning variables were also significant (AC-CE vs. AC-CE, $p < 0.01$; AE-RO vs. AE-RO, $p < 0.01$). Thus, all six variables between those two scales were positively statistically related to each other, indicating that the cross-cultural flexibility scale is closely, theoretically associated with the cross-cultural learning style questionnaires. Thus, the results suggested that the cross-cultural flexibility scale is built as conceptual foundation at an initial stage of scale development.

Table 1. Results of correlation analysis between the two different scales with 126 participants.

		Cross-cultural flexibility variables					
		CE	AC	RO	AE	AC-CE	AE-RO
Cross-cultural learning style variables	CE	0.30**	-0.12	-0.23*	0.00	-0.24**	0.13
	AC	-0.22*	0.34**	-0.04	-0.07	0.31**	-0.02
	RO	-0.13	0.10	0.38**	-0.32**	0.13	-0.42**
	AE	0.07	-0.27**	-0.18*	0.38**	-0.19	0.33**
	AC-CE	-0.29**	0.26**	0.11	-0.04	0.31**	-0.09
	AE-RO	0.11	-0.20*	-0.30**	0.38**	-0.17	0.40**

Note. CE=concrete experience, AC=abstract conceptualization, RO=reflective observation, AE=active experimentation, AC-CE=relatively preferred learning variable of AC vs. CE, and AE-RO= relatively preferred learning variable of AE vs. RO. ** $p < 0.01$, and * $p < 0.05$.

Table 2. Results of correlation analysis of the cross-cultural flexibility scale with 126 participants.

	1	2	3	4	5
1 CE					
2 AC	-0.56**				
3 RO	-0.45**	-0.02			
4 AE	-0.15	-0.38**	-0.42**		
5 AC-CE	-0.90**	0.87**	0.26**	-0.11	
6 AE-RO	0.17	-0.22*	-0.84**	0.85**	-0.22*

Note. CE=concrete experience, AC=abstract conceptualization, RO=reflective observation, AE=active experimentation, AC-CE=relatively preferred learning variable of AC vs. CE, and AE-RO= relatively preferred learning variable of AE vs. RO. ** $p < 0.01$, and * $p < 0.05$.

This study also examined relationships among six key variables within the cross-cultural flexibility scale. As illustrated in Table 2, results supported the theoretical relationships among them: the CE mode was negatively related to the AC mode and the AC-CE variable; the AC mode was positively associated with the AC-CE variable; the RO mode was negatively connected with the AE mode and the AE-RO variable; and finally, the AE mode was positively related to the AE-RO variable. In other words, the cross-cultural flexibility scale seemed to work well in general. Yet, we observed significance of other four relationships: the CE mode and the RO mode; the AC mode and the AE mode; the AC mode and the AE-RO variable; and the RO mode and the AC-CE variable. Those relationships should be independent of each other in theory. One possible explanation may be a learning style tendency of the participants, whose learning style was included towards more abstraction and reflection. Such a learning style tendency might be influential on those results.

5. Conclusions

As a preliminarily study, we explored the development of cross-cultural flexibility scale through a view from Kolb's experiential learning theory. The scale was modified, based on the Adaptive Style Inventory, which is theoretically commensurate with the learning style model. This study relied on the idea. Results of our study indicated that the cross-cultural flexibility scale designed may become the initial foundation for further development. We will offer a methodological implication. The present flexibility scale was designed not by a Likert type scale as a normative form, but by a forced choice type. This type of scale seems more complex for scale reliability and validity. To test a reliability, a future study will be a test-retest examination as one of possible analyses. To investigate validity of the present scale, the next step for this scale development may be to conduct factor analysis as a promising study.

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UKRAINIANS STUDYING IN SLOVAKIA. HOW DO THEY PERCEIVE THE ATTITUDES OF SLOVAKS TOWARDS MIGRANTS?

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Abstract

The war conflict in Ukraine has brought about the migration of Ukrainians to other European countries. This also applies to Slovakia, as a neighbouring country of Ukraine. People come for work, but also for study. However, Slovak society is set negatively towards migrants. The aim of the paper is to observe to what extent a sample of young people studying in Slovakia perceive that Slovaks see migrants as a threat. At the same time, however, we investigated to what extent the given perception of Slovaks is associated with social and personality variables: bullshitting, life orientation, Big Five traits.

The sample consisted of 136 foreign students from Ukraine studying in Slovakia (69% of women, $M_{age}=18.91$, $SD=1.91$). Data were collected in the second half of 2022 through the scale of prejudice among migrants, Bullshitting Frequency Scale, BFI-2 XS, Life orientation test, Scale of habitual subjective well-being. Biological sex and perceived socioeconomic status were observed as control variables. Results were processed in SPSS.20 using descriptive statistics and linear regression.

According to the results, students from Ukraine perceive that Slovaks are most worried about threats to their physical health and safety related to migration. At the same time, the perceived negative attitudes of Ukrainians towards Slovaks were predicted by the bullshitting level ($\beta=.326$; $S.E.=2.599$; $p<.05$) openness to experience ($\beta=-.260$; $S.E.=2.152$; $p<.05$), as well as by their own socioeconomic status ($\beta=-.275$; $S.E.=2.308$; $p<.025$)

The results indicate the importance of subjective embellishment of reality due to the need to show oneself in a better light when subjectively evaluating the attitudes of others. Coping with the migration crisis will also require diverse care in the development of social competence and critical thinking.

Keywords: *Social perception, students from Ukraine in Slovakia, bullshitting, open-mindedness.*

1. Introduction and objectives

The number of foreign students from Ukraine studying in Slovakia has been increasing in recent years. In 2018 there were 1822 students studying at Slovak universities, in 2022 there will be 5393. Their difference compared to other students in Slovakia is also that they can start their higher education at the age of 16, while students in Slovakia start their university studies when they are 18-19 years old. A minimum of research is devoted to foreign students from Ukraine who study in Slovakia. Mičko (2018) examined the reasons for studying in Slovakia, and the vision of a higher standard of living, better quality of education received, as well as the kinship relationships that young Ukrainians have with Slovakia emerged as significant reasons. Bosá et al. (2017) describe problematic situations experienced by students from Ukraine in Slovakia. Most often, it appears that they are considered less cultured, civilized, decent, orderly, and the Eastern European environment is associated with corruption and criminality. These beliefs and preconceptions of Slovaks may reduce their adaptation and quality of life. Fears that they will become victims of fraud and crime because of their age also emerged.

Slovakia is a country that has significantly negative attitudes towards migrants (Bozogáňová, 2020). At the same time, the research showed that Slovaks consider education and job-seeking abilities to be the most important factors for integration of migrants (Bozogáňová & Pethö, 2020) which should result in acceptance and positive attitudes towards foreign students. The aim of the paper is to observe to what extent a sample of young people studying in Slovakia perceive that Slovaks see migrants as a threat. This perception may be a result of experience, but it may also be influenced by cognitive, personality and

social-personality variables of perceiver (Hehman, 2017; Cuddy, Fiske, & Glick, 2008; Operario, Fiske, 2001). Therefore, we investigated to what extent the given perception of Slovaks is associated with social and personality variables: bullshitting, life orientation, subjective habitual well-being and personality traits.

Bullshitting is the producing of pseudo-truthful or otherwise misleading information (Littrell, Risko, Fugelsang, 2020). It can be an exaggeration of perceived accurate information or avoidance of a response that could bring negative consequences. Instrumental functions of bullshitting as a strategy for managing impressions and attitude change across a broad range of social interactions (Petrocelli, 2018)

Explanation of how life orientation (optimism/pessimism) can influence social perception relates to, e.g., a self-fulfilling prophecy, or an expectation of an outcome that shapes our behavior subsequently yielding an effect in anticipated direction of events (Jussim, 2012). Optimism and pessimism is also associated with the style of forming social relationships (Smith et al., 2013). Optimism is associated with warm-dominant interpersonal style, pessimism with hostility-submissive interpersonal style.

Well-being impacts on multiple aspects of life, including cognitive function, health and social relationships (Huppert, 2009). At the same time, our subjective well-being has been found to be influenced not only by close and strong ties (family, close friendships), but the quality of all relationships in our social network (Sandstrom & Dunn, 2014), including those of classmates, teachers, or the wider environment, has an impact on well-being.

The relationship between personality traits and social perceptions partly explains the negative association found between agreeableness and generalized prejudice (Crawford & Brandt, 2019) and positive associations of accuracy of assessment of social motives and personality traits in relation to quality of interpersonal relationship (Huelsenitz, Neel & Human, 2020).

All these personality and social-personality variables may have an impact on the accuracy of social perception. Therefore, we want to test their impact on perceived attitudes of Slovaks towards migrants when the perceivers are foreign students from Ukraine.

2. Methods

Sample and data collection

The sample consisted of 136 foreign students from Ukraine studying in Slovakia (69% of women, $M_{age}=18.91$, $SD=1.91$). Data were collected in the second half of 2022. Data collection took place during the classes via an anonymous online questionnaire. The purpose of the research was adequately explained to the respondents and the anonymity of the answers was guaranteed. All respondents were in their first year of study and had at least 3 months of contact with the Slovak population.

Research variables and questionnaires

- The scale of prejudice among migrants (Golec de Zavala, Guerra, & Simão, 2017).
- Bullshitting Frequency Scale, (Littrell, Risko, & Fugelsang, 2020)
- BFI-2 XS (Soto & John, 2017): five personality traits (Extroversion, Agreeableness, Conscientiousness, Open-mindedness and Negative emotionality)
- Life orientation test (Scheier, Carver, & Bridges, 1994)
- Scale of subjective habitual well-being (Džuka, & Dalbert, 2002)
- Biological sex (man – woman)
- Perceived socioeconomic status was observed as control variables, by single item measure:
In terms of financial resources, you are in a better position compared to other students - Ukrainians: 1: much worse – 10: much better

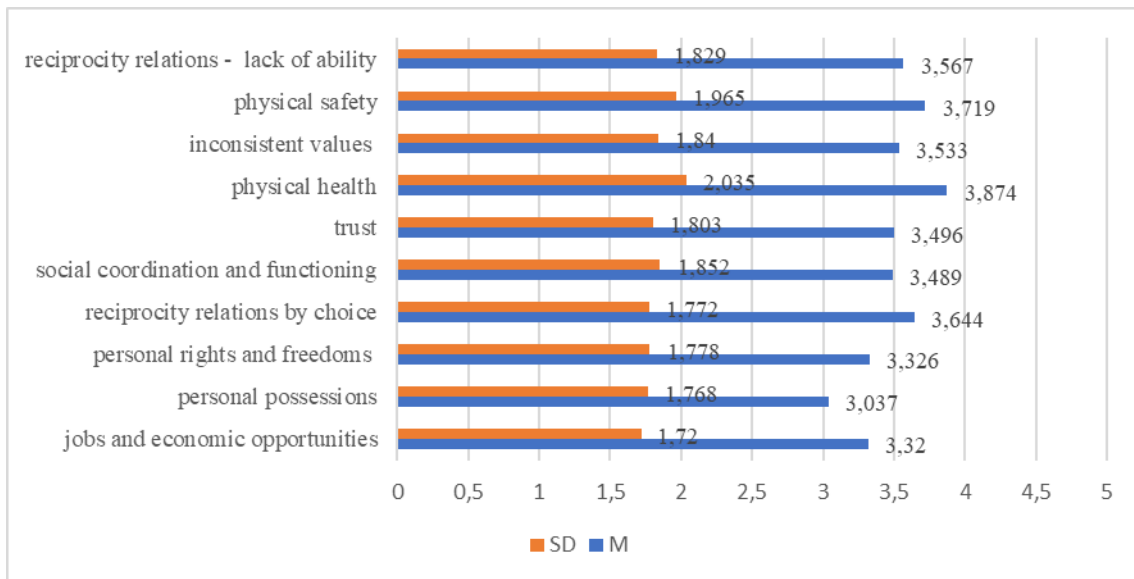
Statistical processing

Data were processed in SPSS.20 using descriptive statistics and linear regression.

3. Results

First, the results of descriptive data, how Ukrainian students perceive the attitudes of Slovaks towards migrants will be presented. Graph 1 shows, that students from Ukraine perceive that Slovaks are most worried about threats to their physical health and safety related to migration, followed by threats to reciprocal relations, inconsistent values, violation of trust, threats to social coordination and functioning, personal rights and freedoms. From the perspective of Ukrainian students, Slovaks feel the least threatened by migrants in terms of economic opportunities and personal property.

Graph 1. Perception of attitudes of Slovaks towards migrants from the point of view of Ukrainian students.



Subsequently, a linear regression was performed to investigate which selected personality variables and controlled variables significantly contribute to explaining the perception of Slovaks toward migrants by students from Ukraine (Table 2). The model was significant ($F=2,210$; $p<0,05$) and explore 27,6 % of variance of dependent variable. Social perception (in the negative direction) was predicted by the bullshitting level ($\beta=.326$; $S.E.=2.599$; $p<.05$) and negatively by openness to experience ($-\beta=.260$; $S.E.=2.152$; $p<.05$), as well as by their own perceived socioeconomic status ($\beta=-.275$; $S.E.=2.308$; $p<.025$).

Table 1. Regression model: variables that contribute to the perception of Slovaks towards migrants (foreign students from Ukraine as a perceivers).

	B	S.E.	β	t	p
Frequency of bullshitting	0.562	0.216	-0.326	-2.599	0.012
Optimism	0.769	0.418	0.250	1.841	0.071
Extroversion	-0.499	0.473	-0.136	-1.055	0.296
Agreeableness	0.513	0.671	0.104	0.765	0.448
Conscientiousness	-0.859	0.601	-0.192	-1.430	0.158
Open-mindedness	1.185	0.551	-0.260	-2.152	0.036
Negative emotionality	0.356	0.560	0.095	0.636	0.527
Habitual subjective well-being	0.438	0.266	0.273	1.645	0.105
socio-economic status	-1.565	0.678	-0.275	2.308	0.025
Sex (being a man)	-0.888	2.841	-0.039	-0.313	0.756

4. Discussion and conclusions

This research concerns social perception, where the perceivers are foreign students from Ukraine living in Slovakia. The aim was to explore to what extent a sample of young people studying in Slovakia perceive that Slovaks see migrants as a threat. According to the results, Slovaks are most worried about threats to their physical health and safety related to migration. From the perspective of Ukrainian students, Slovaks feel the least threatened by migrants in terms of economic opportunities and personal property. These results agree with the current research about negative attitudes of Slovaks towards migrants, (Bozogánová, 2020). Only a marginal number of migrants had lived in Slovakia in the past and foreign students are one of the few groups that Slovaks have experience with.

However, we can also consider that this result is related to the phenomenon of social projection (Robbins, Krueger, 2005), according to which people expect others to be similar to themselves and use their own dispositions or preferences to predict the behavior, traits, or preferences of others. At the same time, the activation of self-protective goals leads to the perception of more negative emotions in relation to groups of people of which we do not consider ourselves to be a part. Ukrainian students in situations where their country and loved ones are threatened may project their own sense of threat onto their perception of others and experience negative emotions in relation to the inhabitants of a foreign country.

(Maner et al., 2005).

Further, the variables involved in the formation of the social perception of the attitudes of Slovaks towards migrants can be discussed. Higher frequency of bullshitting, lower level of open-mindedness and lower socioeconomic status were associated with more negative perceptions of Slovaks' attitudes towards migrants. Those who exaggerate more, whereas this phenomenon is more socially accepted as a lie (Petrocelli, Silverman, & Shang, 2021) perceived the attitudes of Slovaks towards migrants as more negative. The mentioned research also discusses other individual characteristics such as ignorance and dishonesty as mediators of bullshitting. Other research suggests that sufficient self-regulatory resources were a defense against bullshitting (Petrocelli, Watson, & Hirt, 2020).

As foreign students often form a rather closed group in a foreign country, their social perceptions are easily transferred. The trait of open-mindedness is therefore relevant variable, as it has been shown to be a significant predictor of perceived attitudes towards Slovaks, but in a positive direction. The more open-minded the students were, the less they judged Slovaks as those for whom migrants are a threat. In this context, we can consider reflective open-mindedness (Baron, 2019), which represents the tendency to question one's own intuition, to reflect on the meaning and validity of one's own ideas and incoming information. It is in contrast to gullibility, i.e. reflexive open-mindedness (Pennycook et al., 2015), the uncritical acceptance of any information.

These results underline the need to support the adaptation of foreign students from Ukraine in Slovakia and to sensitize the university environment to their needs. Experts in the field of intercultural and intergroup communication, as well as crisis intervention, should be part of the support for students from country affected by military conflict.

Likewise, the results also claim the need to develop critical thinking and self-regulation in education in Slovakia, an area that is still less developed. Although the impact of personality traits as well as personal experiences, traumatic events is extensive, training in cognitive and social competencies provides the necessary range of functional ways of thinking and behaving, suitable for both foreign and Slovak students.

The significance of the results of this research is reduced by the size of the sample, the specifics of online data collection, and possible language deficiencies in the communication of students and researchers. In the same way, the adaptation of students in Slovakia, the level of relations with Slovaks was not monitored. More variables related to social interaction; social skills of students should be taken into account in further research. Repeated measurements would also provide an opportunity to observe the change in social perception in the terms of contact hypotheses.

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SELF-ESTEEM, AGGRESSION AND VIOLENCE: WHAT THE INCONSISTENCIES IN RESULTS TELL US

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Abstract

“So, the question is: are violent people more likely to have low self-esteem or high self-esteem?” (Ostrowsky, 2010). The answer is not as simple as this question implies. What would be considered “common knowledge” is that people who are violent are people with low self-esteem. This logic was challenged in the early 1990s by a series of authors who argue that higher self-esteem is more likely than low self-esteem to be linked to violence and aggression (Baumeister, 1999; Baumeister, R.F., Bushman, B.J., & Campbell, W.K., 2000; Bushman, B.J., Baumeister, R.F., Thomaes, S., Ryu, E., Begeer, S., & West, S.G., 2009). Based on recent publications, it appears that even to modern researchers it remains a controversy. In fact, the whole concept of a violent individual is riddled with contradictions. For example, they are often arrogant but have low self-worth (Ostrowsky, 2010). The literature gives little in terms of help deciding which side to be on. But by considering the intricacies of self-esteem along with aggression, narcissism, and violence and by identifying some of the variables and mediators involved, researchers may be able to design, build, and conduct research on these topics that emits more accurate and valuable results. If future research incorporates the more nuanced dimensions of each variable that they are dealing with, it will lead to stronger evidence overall. The purpose of this theoretical review paper is not to find an answer because, as we will learn, self-esteem can be highly state-dependent, meaning the level of self-esteem can change over time based on social, cultural, and other influences. Instead, this work aims to clarify the research from a perspective that is not biased to either side of the argument.

Keywords: *Self-esteem, self-worth, narcissism, violence, aggression.*

1. Introduction

Self-esteem is something that everyone “has”. Often, people are described as “having too much” or “struggling” with it. We possess this level of *amour-propre*, a self-love, that can exist anywhere on a scale from non-existent to overflowing and is heavily influenced by society (Dent & O’Hagan, 1998). Self-esteem is important to us because it is a representation of the value we see in ourselves, *as compared to the others around us* (Dent & O’Hagan, 1998). Also heavily influenced by society, Baumeister described the “myth of pure evil” as a socially influenced stereotypical view of what evil is – something we “know when we see it” (Baumeister, 1999). However, as with a lot of other “trust your gut” feelings, our reliance of the “myth of pure evil” has faults. One common misconception about the “myth of pure evil” is that people with low self-esteem are more prone to violence and aggression (Bushman, Baumeister, Thomaes, Ryu, Begeer, & West., 2009). This may make sense when one considers the popular psychology of North America in the past thirty years (Brown & Marshall, 2006). Take bullies, for example - both in person and online. As the “myth of pure evil” illustrates, the popular belief was that bullies came from broken, possibly abusive families, influencing the individuals to have low self-worth. They treat others as they were treated themselves. This may be true for some, but most certainly not all. It cannot be said that low self-esteem leads to violence and aggression, because not all people with low self-esteem are violent. Literature suggests that low self-esteem being linked to violence and aggression was not empirically established in the first place, but again, perhaps an outcome of pop-culture psychology (Baumeister, 1999; Baumeister, Bushman, & Campbell, 2000). It is interesting then that one

¹ The University of Regina is situated on the territories of the Nêhiyawak, Anihšīnāpēk, Dakota, Lakota, and Nakoda, and the homeland of the Métis/Michif Nation. The University of Regina is on Treaty 4 lands with a presence in Treaty 6. Today, these lands continue to be the shared Territory of many diverse peoples from near and far, and I am grateful to have the privilege to be one of them.

also associates the cunning, manipulative, bold and self-assured serial killer with violence, aggression, and evil. This description leans towards high self-esteem. High self-esteem is also associated with adaptive behaviours in empirical research, such as being able to climb the corporate ladder, but as this work will illustrate, it has its own dark side (Okada, 2010). It could be associated with aggression and ego defense (Okada, 2010).

So, what is the missing link? Researchers have grappled over this question for years and there has been no conclusion (Amad, Gray, & Snowden, 2021; Baumeister et al., 2000; Brown, & Marshall, 2006; Bushman, 2009; Jordan, & Zeigler-Hill, 2018; Leary, & Baumeister, 2000; Okada, 2010; Ostrowsky, 2010). The purpose of this theoretical review paper is not to find an answer because, as we will learn, self-esteem can be highly state dependent, meaning the level of self-esteem can change over time based on social, cultural, and other influences. Instead, this work aims to clarify the research from a perspective that is not biased to either side of the argument. To accomplish this, variables will be defined, such as “self-esteem”, “narcissism”, “aggression”, and more. The relationship between barometric self-esteem, unstable self-esteem and narcissism will be discussed, followed by a consideration that perhaps, if the answers still elude us, it is the questions one asks that needs to change. Culture and gender influences start to come into play, and a call for further research is made. By considering the mediators of self-esteem’s relationship with violence and aggression, one can better design and distribute effective research on this topic to produce results that answer questions which have been convoluted for decades.

2. Definitions

Self-esteem is people’s tendency to feel positively or negatively about themselves or see themselves as having a value or worth as a human (Jordan & Zeigler-Hill, 2018). Low self-esteem as a cause of violence and aggression, which was briefly touched on, can be *only somewhat* dismissed as a series of publications over the past two decades have illustrated that the link between self-esteem, violence, and aggression is more present in higher, not lower self-esteem (Baumeister et al. 2000, Bushman et al., 2009). High self-esteem has found some levels of support, but it is still complicated. There are many studies which show links between high self-esteem and narcissism, some even showing that different kinds of self-esteem predict different kinds of aggression (Amad et al., 2021). Aggression is defined as a “behavior aimed at harming others physically or psychologically” (Bushman, & Huesmann, 2010). It is differentiated from the term anger “in that anger is oriented at overcoming the target but not necessarily through harm or destruction” (Bushman, & Huesmann, 2010). Aggression is a behaviour that often leads to violence, but not always (Bushman, 2023). Violence, on the other hand, is seen as an extreme form of aggression. Therefore, all violence is aggressive, but not all aggression is violence (Bushman, 2023). What is arguably most significant are the studies that consider unstable self-esteem (Jordan, & Zeigler-Hill, 2018; Baumeister et al., 2000) In order to understand the results of studies such as these, definitions need to be specific. What is narcissism? What is unstable self-esteem?

For this work’s purposes, narcissism is defined as one’s orientation towards being self-aggrandizing, dominant, egocentric, and manipulative (Cisek, Sedikides, Hart, Godwin, Benson, & Liversedge, 2014). Narcissists have an inflated self-view that is often unrealistic, and sometimes very sensitive (Cisek et al., 2014). This sensitivity is referred to by a few names, but most commonly it is called “threatened egotism” (Baumeister et al., 2000) or “unstable self-esteem” (Jordan & Zeigler-Hill, 2018). Self-esteem instability “refers to one’s dispositional tendency to experience fluctuations in context-specific feelings of self-worth” (Jordan & Zeigler-Hill, 2018). According to some researchers, narcissism and unstable self-esteem are the most effective in predicting aggression, which often leads to violence (Baumeister et al., 2000). To understand violence, one needs to comprehend the perpetrator. Often it is only the victim’s perspective that is considered (Baumeister, 1997, Burris, 2022).

3. Unstable self-esteem and narcissism

3.1. Barometric self-esteem

It is important to distinguish the difference between baseline instability and barometric instability in self-esteem. Baseline instability refers to the long-term, gradual changes in one’s trait level self-esteem, which is often referred to as “global” self-esteem (Jordan & Zeigler-Hill, 2018; Brown & Marshall, 2006). Global self-esteem often remains mostly consistent over time (Brown & Marshall, 2006). Barometric instability, or “state” self-esteem is the more erratic, short-term changes that one experiences in reaction to context specific events, such as feeling “sky high” after a promotion, or “down in the dumps” after a breakup (Brown & Marshall, 2006). Sensitivity to barometric, short-term changes is what has been studied as unstable self-esteem (Brown & Marshall, 2006). People who display this fragile self-esteem often experience more anxiety, more depressive symptoms, poorer social adjustment, and

lower life satisfaction (Jordan & Zeigler-Hill, 2018). In addition to this poor psychological functioning, there is reason to believe that sensitivity to barometric instability, or unstable self-esteem, may also lead to violence and aggression - especially amongst those with narcissistic personalities (Baumeister et al., 2000; Jordan & Zeigler-Hill, 2018).

3.2. Narcissism and unstable self-esteem

Individuals with high trait self-esteem are not always narcissists, but most narcissists have high trait self-esteem. Those with high self-esteem do vary in the extent to which their self-esteem is stable or fragile, though (Jordan & Zeigler-Hill, 2018). According to Leary and Baumeister's (2000), Sociometer Theory, individuals with high global (trait) self-esteem are least likely to lower their state of self-esteem, even when confronted with a negative relational evaluation. Sociometer Theory suggests that self-esteem is a "sociometer"; an "internal monitor of the degree to which one is valued or devalued as a relational partner" (Leary and Baumeister, 2000). Stable high self-esteem is not easily changed in the context of a situation, or even over a long period of time. These people do not lower their self-esteem to rejection very easily (Okada, 2010). Interestingly, fragile self-esteem (however high it may be) is sensitive to more frequent and drastic fluctuations and is highly vulnerable to threat. High self-esteem individuals are more self-aggrandizing in their social interaction and display more anger and hostility (Jordan & Zeigler-Hill, 2018). It may be that they are experiencing "wounded pride", and the potential for aggression and violence is greater because of the need to assert and defend their high opinion of themselves (Baumeister et al., 2000).

It would not be fair to say that all narcissists are violent. Studies reflect that a narcissist's aggression was no different than others when there was no insult provocation (Baumeister et al., 2000). Therefore, narcissism does not cause aggression directly, but should instead be considered a "risk factor" (Baumeister et al., 2000). The role of provocation is important because it differentiates narcissists from sadists, authoritarians and other "risk factors" of aggression. When someone challenges the flattering self-perception of a narcissist with unstable self-esteem, they turn aggressive, but only towards the specific person who challenged them (Baumeister et al., 2000). In addition, it is not so much simple vanity as it is the inflated sense of being superior to others (Baumeister et al., 2000). Simple vanity, loving oneself quietly, is quite acceptable. It is the interpersonal manifestations of narcissism that are the ones associated with violence. What this means is that when peoples self-worth is highly sensitive, not only to their own judgement (contingent self-esteem (Jordan & Zeigler-Hill, 2018)) but to others judgement as well, they are more prone to violence and aggression (Baumeister et al., 2000).

Unstable self-esteem is arguably one of the most important links between self-esteem, violence, and aggression that researchers have identified. This sensitivity to change is a part of the "most explosive recipe for violence" (Baumeister et al., 2000). Are researchers trying to find the "recipe for violence", though? Is the goal to typify people to the point of risking labeling them "violent" simply because of personality traits?

4. Change how we ask these questions

4.1. Gender, self-esteem, and aggression

Up until recently (within the past twenty years) research on these topics did not differentiate results based on gender. It is recognized that gender is a socially constructed category - but that is why it is important to include these individual differences in research. Gender dynamics studies surrounding the association between aggression and unstable self-esteem are far and few between (Amad et al., 2021). Yet research in this area does not hold conclusive results. This could explain some of the inconsistencies in all results regarding self-esteem and aggression and could have been remedied by treating anyone other than men with equal importance within research.

Future research in this area should include gender demographics because as our societies are shaped by our gender roles, and our gender roles are in turn shaped by our society, it is simply fair to say that there could be gendered differences in the outcome of a study of this nature. One incredibly important consideration to make when dissecting others' decisions is "how does this person perceive themselves?" because one cannot claim to comprehend if they do not first put their feet in others shoes. Gender differences are important because of the variance in power relations and social norms in different contexts.

4.2. Culture, self-esteem, and aggression

Another variable that is too little studied in this research area is that of culture, and it may not be clear as to why this is important to consider. Although aggression is a "universal feature" (occurs in all cultures, across all peoples) of human social relations, it varies across cultures (Amad et al., 2021).

Anthropological evidence suggests that some societies are more aggressive than others (BCcampus, 2014). A good example of how culture plays an important role in molding aggression is to look at homicide rates across countries. “Rates of intentional homicide per 100,000 are 26.7 for Brazil, 4.9 for the United States...and 0.3 for Japan” (Amad et al., 2021). The reason for this massive fluctuation is convoluted and still debated, but as one may expect, the identification of individualist versus collectivist cultures plays a role (Amad et al., 2021).

Research shows that societies which are more individualistic are also more accepting of aggressive behaviours (Amad et al., 2021; Bergeron & Schneider, 2005; Forbes, Zhang, Doroszewicz, & Haas, 2009). Aggression as an aid to achieving personal goals is widely accepted within individualistic, “western” cultures such as the United States and Canada. Opposite to this, collectivist cultures would consider aggression a disruption of social harmony (Amad et al., 2021). However, most research on this topic is focused only on “western” samples and therefore may be limited in its applications to other cultures and societies (Amad et al., 2021). Further research in this area should always encourage cultural diversity within its target population.

5. A call for further research

It cannot be ignored that people with low self-esteem are also vulnerable to instability (Amad et al., 2021). Some researchers found that women are more susceptible to low global (trait) self-esteem, and this was a stronger predictor of aggression in women than in men (Canning, Andrew, Murphy, Walker, & Snowden, 2017). To only study high, unstable self-esteem would be to ignore the potential reality for a large part of the population. Another issue that needs to be confronted is the measurement of unstable self-esteem. Often, these research designs require a large amount of cooperation, effort and time from the participants which can make collecting such data difficult (Okoda, 2009). Further research should thoroughly define the topics and variables that are being considered. Research should ideally attempt to gather longitudinal data, measuring both state and trait self-esteem. It should also consider gender and cultural individual differences as they may play a part in the understanding of unstable self-esteem, as it is highly state dependent and therefore influenced by external evaluations (Amad et al., 2021).

6. Conclusion

The relationships between self-esteem, violence, and aggression as well as their mediators is convoluted and messy, but with creative and carefully planned research designs, a clearer understanding of the topic is possible. By considering research on the topics of self-esteem, aggression, narcissism, and violence, it becomes clearer the need for further research in this area. If future research incorporates the more nuanced dimensions of each variable that they are dealing with, it will lead to stronger evidence and reader comprehension overall.

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A SUSTAINABLE PERFORMANCE MANAGEMENT SYSTEM IMPLEMENTATION IN A GLOBAL ORGANIZATION: A PARTICIPATORY ACTION RESEARCH

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Abstract

Work performance is among the main success factors for organizations. The performance management process necessary for the design of development and skill improvement plans appears to be crucial. Nowadays, the sustainable management of organizational processes and performance is inseparable from organizational values.

This contribution describes a Participatory Action Research (PAR), carried out within a leading global organization of hardware products and software solutions, aimed at promoting the culture of performance through the co-construction of a new Videndum Performance Management System (VPM) based on competencies aimed at white collars.

The need to adapt the pre-existing VPM to a constantly changing environment, which requires the acquisition of strategic competencies increasingly in line with new business needs, led the client to contact us to receive scientific support in the construction of the new VPM. After setting up a team composed of researchers and co-researchers (i.e., client), the phases necessary for the construction of the new VPM were defined. The first phase involved sharing the existing VPM and proposing a new set of competencies in line with the organizational strategy through constant dialogue between team members. Similarly, the drivers that characterize the identified competencies and the behavioral indicators that make them observable and measurable have been identified. One of the aims of the PAR was to develop a VPM aimed at enhancing excellent performance. To this end, the team developed a five-level ranking scale (i.e., poor, low, good, high, top) with respect to which behavioral indicators were formulated. The second phase involved the empirical verification of the new VPM. To this end, the researchers proposed the online card sorting technique, which involved the organization's HR department. This phase ended with a plenary meeting of the team of researchers and co-researchers in which the VPM was perfected, and the operating manual was shared, useful for staff training on the new VPM.

The co-construction process just outlined led to the identification of nine competencies (e.g., Change agility), each defined by four drivers (e.g., Cope with uncertainty), each of which can be measured through five behavioral indicators (e.g., Embraces uncertainty in a positive way to generate new opportunities) corresponding to the five ranking levels.

The adoption of the new VPM will hopefully make the assessment process more sustainable and enhance excellent performance through more effective feedback and feedforward activities, enhancing the quality of dialogue and comparison between manager and worker in the perspective of personal and organizational development.

Keywords: *Performance management system, business core competencies, feedback, sustainable human resource management, participatory action research.*

1. Introduction

Performance management (PM) is one of the most important practices related to human resources management (HRM), as well as one of the most investigated topics in work and organizational psychology (Schleicher et al., 2019). It is a set of processes, phases, and managerial behaviors that aim to measure and improve the desired performance, designing development plans for employees. Although in the literature there are several PM models differing in complexity, number of phases and terms used to define the phases of the process, it is possible to highlight some common elements to all models. Performance agreement, performance appraisal (PA), and feedback represent the three main phases of the

PM process and are based on the integration of several identified models (Kubiak, 2022). At the beginning of the process, the rater and the ratee agree on the objectives to be achieved, the period (e.g., six months, one year) and the activities necessary to achieve them, as well as the characteristics that characterize a top performance. During the designated period, monitoring phases follow which allow for the modification of objectives and performances if necessary. The PA phase follows. The rater monitors and documents the performance of the ratee, and evaluates the level of achievement of the objectives, identifying strengths and weaknesses in the execution of the work activity. Finally, we enter the delicate phase of feedback with respect to the performance and objectives achieved, in which supervisor and employee design any development plans together. Therefore, a PM system must be aimed at planning, measuring, and communicating, without neglecting the rewarding functions, both extrinsic and intrinsic. The design of a good PM system, as well as continuous monitoring of processes by supervisors are the basis of the success of such systems (Lavigne, 2018). The objectives of the PM can be multiple: strategic, to link the activities of the employees to the organizational objectives; management, to define a series of administrative decisions (e.g., salaries, promotions); development, for the professional growth of people in the organization.

For decades, most of the literature studying PM has tended to focus on its efficacy. In general, some of the most examined variables concern employee participation in the evaluation process, the relevance of the dimensions of the performance evaluated, trust in the manager, the quality of the evaluation process and employee reactions to the evaluation (Murphy & Cleveland, 1995). Iqbal and colleagues (2015) focused on the ratee reactions, both in personal (e.g., ratee satisfaction) and organizational terms (e.g., organizational commitment), and identified three main elements that can elicit positive reactions: purposefulness, not only in terms of administrative purposes, which limited PM practice to mere evaluation, responsibility and judgment functions, but also development, role-definition, and strategic purposes, which are acquiring increasingly primary importance, with respect to the administrative purposes which tend to be secondary; fairness, in terms of procedural, distributive, informational and personal justice; accuracy, because raters are often held accountable for valuation errors (i.e., rater-centric, ratee-centric, relation-centric, and system-centric errors) an effort is needed to reduce such errors and increase valuation accuracy.

A recent review by Justin and Joy (2022) shows that a good PM system is always functional to the growth of the organization and its effectiveness is increased by the active participation of managers in the PM process, by an efficient communication system with constant exchanges of information, and adequate training of the rater. Trust in the manager and feedback are fundamental: even short feedback sessions (e.g., 15 minutes) can lead to improvements in employee behavior. However, it is necessary to build a feedback system tailored to each employee, characterized by active listening, since sometimes some people tend to avoid feedback, as it is perceived as negative and not as an opportunity for development. Feedback that considers both strengths and any critical points tends to be the most accepted by employees. An effective PM system can contribute to make more positive the organization (Dal Corso et al., 2021) in terms of promotion of organizational citizenship behavior, life and work satisfaction, empowerment, work engagement, top performance, work meaningfulness, and reduction of strain and turnover intentions (Dal Corso et al., 2019; Sharma et al., 2022; Van Thielen et al., 2018).

However, there is no one technique or model that is better than another. The effectiveness of a PM system depends on the individual and the environment in which it is used.

2. The organizational context

Videndum Media Solutions (VMS) is a Division of Videndum plc, an international group of companies serving customers in the growing content creation market. VMS is headquartered in Cassola (Vicenza) and hosts around 1000 employees distributed in 14 countries worldwide. The purpose of the Company is to support in capturing and sharing exceptional content by designing, manufacturing and distributing premium photographic and video cameras and smartphones, and provides dedicated solutions to professional and amateur photographers and videographers, independent content creators, vloggers/influencers, gamers, enterprises and professional musicians. VMS success is grounded in the core values that drive every single initiative that the Division undertakes: exceptional performance; leading a fast-changing market; customer focus; transparency, integrity, respect; global capability. These values sustain also all the HR actions and processes such as the Videndum Performance Management System (VPM).

The constantly changing and evolving environment which characterized the last few years required a deeper analysis of the VPM to make it more respondent to new business and organizational needs: identify new strategic competencies that allow an agile approach to face the complexity of the environment; give higher relevance to qualitative aspects of the performance through a more holistic

evaluation oriented towards continuous improvement; clearly identify and value excellent performances to be consistent with the effective contribution to results; and finally empower a company culture based on trust, transparency and continuous feedback with the employee at the centre and driver of the process.

3. Participatory Action Research

Action Research (AR) encompasses a family of approaches with different traditions and philosophical orientations. In general, what unites the different approaches refers to the AR way of intervening within organizations in order to bring about change and to the cyclical and recursive way of knowing in and through relationships, a necessary condition for knowledge can guide the future behavior of organizational actors. It is research that, from an epistemological point of view, is based on the values of democracy and participation, placing the relationship with the other at the center to generate knowledge and opportunities. Finally, it is mostly qualitative research and cooperative reflective action (Kaneklin et al., 2010). In the Participatory Action Research (PAR) (Reason & Bradbury, 2012) the participatory dimension and the strong democratic orientation are even more intense: the researcher becomes a facilitator who makes it possible to support a process of self-development and self-awareness.

This mini paper describes the process of co-building the new VMS VPM using PAR principles. The PAR process had a total duration of 11 months (i.e., March 2022 - January 2023) and was structured in four phases.

The first involved a meeting with the HR department. In this phase, the team of researchers and co-researchers (i.e., clients) – hereinafter the PAR team – was defined, as well as the objectives in terms of PM to be achieved: 1) develop a more holistic evaluation system, oriented towards continuous improvement and which includes, in addition to the objectives, also more qualitative elements; 2) identify strategic competencies in line with new business needs; 3) identify and value excellent performances; 4) build an operating manual with respect to the new VPM useful for personnel training. Furthermore, based on the needs of VMS it was decided to adapt the pre-existing VPM only for white-collar workers.

The second phase envisaged a constant confrontation between researchers and co-researchers (i.e., two-hour meetings once a week for the entire duration of the PAR). The co-researchers identified nine competencies in line with business strategy and based on strategic benchmarks (Sala et al., 2020; World Economic Forum, 2020): mind agility, change agility, entrepreneurship, result focus, social awareness, leadership, teamwork, resilience, and self-awareness. With the aim of making the competencies observable and measurable, the PAR team, following brainstorming and continuous comparison, identified the specific drivers (i.e., set of knowledge, skills, motivation, and self-awareness specific to the VMS organizational context) of each competence and the respective behavioral indicators (i.e., examples of behaviors that can be learned or improved with experience, personal and organizational commitment, through specific development plans). Finally, different levels of mastery of the competence have been identified, necessary for the valorization of excellent performances.

The third phase focused on the empirical verification of the new VPM. To this end, the researchers proposed the online card sorting methodology (Wood & Wood, 2008), which involved VMS'HR department. The objective was to 1) detect the participants' perception of the association between the behavioral indicators outlined for each driver and the corresponding rating level; 2) verify the observability of the competencies through the association between the behavioral indicators outlined and the reference drivers for each competence. It is a methodology useful for evaluating the information architecture of a structure that has a complex content categorization. Furthermore, it allows to obtain relevant information precisely from those who will have to use this organization in the future. For the specific objectives of this activity, closed card sorting was opted for, in which the categories have already been defined and users are asked to choose where they would place the "cards" (i.e., the behavioral indicators). In this case the information structure is already defined, and you only ask to test it.

Finally, in the last phase, in the light of the results of the online card sorting, the PAR team revised the new VPM, addressing the critical issues that emerged (i.e., poor agreement on the attribution of behavioral indicators for the highest-ranking levels). Once the new VPM was completed, we proceeded with the development of an operating manual necessary for subsequent staff training activities.

4. Results

The four phases of the PAR led to the identification of nine competencies, each defined by four drivers, each of which can be measured through five behavioral indicators corresponding to the five ranking levels (i.e., poor, low, good, high, top). Furthermore, the nine competencies identified were grouped into three categories: business, social, and personal (Table 1). Table 2 shows an example of

competence measurable through its four specific drivers. Table 3 shows an example of a driver measurable through its five behavioral indicators.

Table 1. Categories and competencies of the new VPM.

Categories	Competencies
BUSINESS “me & the context” - being able to cope with a rapidly changing world	Mind agility
	Change agility
	Entrepreneurship
	Result focus
SOCIAL “me & the others” - being socially competent and willing to interact, communicate and collaborate constructively	Social awareness
	Leadership
	Teamwork
PERSONAL “me & myself” - development of self-awareness, responsibility, and autonomy	Resilience
	Self-awareness

Table 2. Change agility: definition and drivers.

Competence	Drivers
CHANGE AGILITY Ability to adapt to changes and novelties, facing uncertainties and making the most of them	Comparison with the new
	Seeking change
	Adaptability
	Cope with uncertainty

Table 3. Cope with uncertainty: behavioral indicators and ranking levels.

Driver	Behavioral indicators	Ranking Levels
COPE WITH UNCERTAINTY	Does not appear at ease in the face of ambiguous and unclear situations and tends not to act	Poor
	To cope with uncertain situations, needs the support and encouragement of others	Low
	Acts by making decisions even in contexts of uncertainty and risk	Good
	Embraces uncertainty in a positive way to generate new opportunities	High
	Encourages and guides others to deal positively with moments of uncertainty, allowing them to achieve excellent results	Top

5. Discussion

Overall, the PAR process led to the expected objectives: the promotion of an organizational change through the revision of the VPM and the consequent development of an operating manual on the new VPM. The next phase will provide for the specific training of personnel with respect to the new VPM methods. The involvement of personnel represents an important action since it allows sharing the aims of the PM and the ways in which it is applied, leading to greater satisfaction with the evaluation system. The results achieved are also in line with the objectives of sustainable human resource management (HRM), whose interest in sustainable PM practices is growing (Piwowar-Sulej, 2021). Sustainable HRM highlights the need to maintain and develop the capabilities needed to deliver current and future performance, while operating efficiently, as well as the need to develop human capital in terms of human and social resource development (Kramar, 2022).

We would like to conclude with some co-researchers feedback that well describe the outcomes of the PAR and the value of participation.

“Experiencing the PAR process allowed us to merge the theoretical insights coming from literature and our business and organizational needs, resulting in a new System coherent with our values and strategy and enriched with a more scientific vision and approach” (Irene Carraro).

“The co-building approach allowed us to exchange ideas and new perspectives, supporting us to identify innovative and out-of-the-box solutions, challenging the status quo, with the aim to improve and implement a tailor-made System fully respondent to our needs” (Irene Cibir).

“The new VPM and Standard of behaviour are part of our aim to provide our employees with an engaging and stimulating entrepreneurial environment where they are encouraged to learn and develop every day” (Danilo Greco).

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EXHAUSTION IN ITALIAN FUNERAL DIRECTING SERVICES DURING THE COVID-19 PANDEMIC: THE ROLE OF PSYCHOLOGICAL JOB DEMANDS AND SUPERVISOR SUPPORT

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Abstract

Funeral directing services (FDS) workers deal with the practical and bureaucratic support of the bereaved, i.e., from the management of the funeral ceremony to the handling of the procedures necessary for the transfer and burial of the body. The activities of these professionals expose them to intense emotional stress and long working hours.

During the recent pandemic COVID-19, the exponential increase in the mortality made critical the working conditions of these professionals as a greater number of funerals had to be handled. Few studies to date have examined the psychosocial conditions of FDS during the pandemic (Van Overmeire et al., 2021; Van Overmeire & Bilsen, 2020).

The present study aimed to increase the knowledge about this phenomenon in the Italian context. Following the JD-R theoretical framework (Bakker & Demerouti, 2014), job demands may increase the risk of disengagement or exhaustion, while job resources have a buffering effect, maintaining a good level of commitment and job satisfaction.

The research question was whether psychological job demands, and supervisor support could predict work-related exhaustion in a sample of Italian FDS workers during the pandemic. Differences between groups in age, length of employment, and gender were also considered. A questionnaire was administered via purposive sampling to FDS workers in northern Italy (the area most affected since the beginning of the pandemic); participation was voluntary, participants did not receive any reward, and data protection was ensured in accordance with current EU Regulation (2016/679). The study was approved by the Bioethics Committee of the University of Turin (protocol code no. 0598340). The sample consists of 142 FDS workers, 82.4% men, mean age 41.77 years ($SD = 20.73$), mean length of service 13.14 years ($SD = 11.97$).

The hierarchical regression results showed that psychological job demands were positively related to exhaustion, whereas supervisor support was negatively related to exhaustion; gender and job tenure were included in the model as control variables. Regarding differences between groups, older workers, women, senior workers, and on-call workers had higher scores on psychological job demands; regarding supervisor support, women reported higher scores; no significant differences were found regarding exhaustion.

This study offers new insights into the factors that contribute to the wellbeing of funeral directing service workers, one of the professions most concerned with coping with the impact of the COVID -19 pandemic. It also confirms the importance of supervisor support during difficult times in the workplace.

Keywords: *Funeral directing, Exhaustion, COVID-19, Psychosocial risks, JD-R.*

1. Introduction

Death care work can be very demanding because workers in this field are frequently – if not daily – exposed to the sight of corpses (in varying degrees of decomposition) and the suffering of the bereaved (Cotrim et al., 2020; Grandi et al., 2021; Guidetti et al., 2022; Keith, 1997; Roche et al., 2022). Funeral directing is one of the most important professions in death care, along with crematoria, mortuaries, and cemeteries services. Funeral directing services (FDS) professionals take care of all the bureaucratic procedures required in the event of death, the organization and management of the funeral ceremony and the transfer and burial of the body. All of these tasks can involve long hours and emotional stress (Forsyth & Palmer, 2006). Psychosocial risk factors are indeed important issues for these workers to examine and address in order to maintain their occupational and psychological wellbeing. Previous

studies have shown that working conditions in FDS can have negative effects on psychophysical health, such as anxiety and depression (Cegelka et al., 2020; Goldenhar et al., 2001; Keith, 1997) and can lead to work-related stress (Bailey, 2010; Bartlett & Riches, 2007; Goldenhar et al., 2001; Kroshus et al., 1995) and occupational burnout (Guidetti et al., 2021; Smith et al., 2009; Tetrick et al., 2000). Some protective factors have also been identified as important job resources that can offset critical work conditions, such as social and organizational support (Cegelka et al., 2020; Guidetti et al., 2021; Tetrick et al., 2000).

During the recent pandemic COVID-19, the exponential increase in mortality made the working conditions of these professionals critical, as a greater number of funerals had to be handled. Few studies to date have examined the psychosocial conditions of FDS during the pandemic (Van Overmeire et al., 2021; Van Overmeire & Bilsen, 2020).

The present study aimed to investigate this phenomenon in a sample of Italian FDS employees during the pandemic. According to the Job Demands-Resources (JD-R) theoretical framework (Bakker & Demerouti, 2014), job demands can increase the risk of disengagement or exhaustion, while job resources have a buffering effect and maintain a good level of commitment and job satisfaction.

According to the theoretical framework of JD-R and the literature findings discussed so far, we will examine two hypotheses in this study:

Hypothesis 1 (H1): psychological job demands are significant and positively associated to exhaustion.

Hypothesis 2 (H2): supervisor support is significant and negatively associated to exhaustion.

2. Methods

2.1. Participants and procedure

A cross-sectional design with a self-report questionnaire distributed, via purposive sampling, to FDS employees in northern Italy (the area most affected since the beginning of the pandemic) was used to collect data. Participation was voluntary, participants received no reward, and data protection was ensured in accordance with current EU Regulation (2016/679). The study was approved by the Bioethics Committee of the University of Turin (protocol code no. 0598340). The sample consists of 142 FDS workers, 82.4% men, mean age 41.77 years ($SD = 20.73$), mean length of service 13.14 years ($SD = 11.97$). Regarding marital status, 45.1% were married or cohabiting with a partner and 53.5% reported having children. Among the sample, 74.6% reported having daily contact with bereaved, 64.1% were exposed to the sight of corpses and 36.6% manipulated corpses on a daily basis.

2.2. Measures

The questionnaire contained validated measurement scales that are consistent and reliable according to the literature. It also contained a brief sociodemographic section.

Psychological job demands were measured with eight items from The Job Content Questionnaire—JCQ (Karasek et al., 1998) on a four-point Likert scale (0 = *never*, 3 = *always*); a sample item is “My job requires working very fast”. Cronbach’s alpha in this study was .83.

Supervisor support was considered as a job resource and measured with four items from the Social Support from Supervisor Scale (Caplan et al., 1975) on a four-point Likert scale (0 = *never*, 3 = *always*); a sample item is “How much your supervisor can be relied on when things get tough at work?”. Cronbach’s alpha in this study was .86.

Exhaustion was considered as outcome and measured with five items from the Maslach Burnout Inventory—General Survey (Schaufeli et al., 1996) on a seven-point Likert scale (0 = *never*, 6 = *every day*); a sample item is: “I feel burned out from my work”. Cronbach’s alpha in this study was .89.

2.3. Data analysis

Descriptive statistical analyses (means and standard deviations of the scales, see Table 1) were performed using IBM SPSS 27. Cronbach’s α was calculated to assess the reliability of each scale. Pearson correlations between all variables were calculated. Hierarchical linear regression analysis was also conducted to investigate the role of psychological job demands and supervisor support as predictors of exhaustion. In the regression model, multicollinearity between variables was assessed using the variance inflation factor (VIF): no multicollinearity problem was found ($VIF < 5$). Analysis of variance (t-tests for independent samples and ANOVA) was used to analyze the differences between groups in the means of the variables.

3. Results

As for differences between groups, psychological job demands were slightly below the average scale score ($M = 1.38$, $SD = .31$), with higher scores for women ($M = 13.44$, $SD = 4.97$), $t(33.73) = 2.69$, $p < .001$, Cohen's $D = .62$, older workers, $F(2, 139) = 4.07$, $p = .02$ ($M = 12.15$, $SD = 4.56$), on-call workers ($M = 11.82$, $SD = 4.73$), $t(128.27) = 2.49$, $p = .01$, Cohen's $D = .43$, and workers with higher job tenure, $F(2, 135) = 11.55$, $p < .001$ ($M = 13.46$, $SD = 4.25$).

Self-reported supervisor support was above the average scale score ($M = 1.97$, $SD = .15$), with higher scores for women ($M = 10.33$, $SD = 2.50$), $t(20.82) = 3.96$, $p < .001$, Cohen's $D = .93$.

Self-reported feelings of exhaustion were below the average scale score ($M = 1.99$, $SD = .53$); no significant differences were found.

Correlations were calculated between exhaustion, psychological job demands and supervisor support. All significant correlations were in the expected direction. Pearson coefficients are shown in Table 1. Exhaustion had strong positive correlation with psychological job demands ($p < .01$) and strong negative correlation with supervisor support ($p < .01$).

Table 1. Correlations between the variables ($N = 142$).

Variables	M (SD)	1	2	3
1. Exhaustion	9.94 (7.85)	—	—	—
2. Psychological job demands	11.04 (4.85)	.36**	—	—
3. Supervisor support	7.86 (3.16)	-.33**	-.05	—

Note. * $p < .05$; ** $p < .01$

Hierarchical linear regression analyses (see Table 2) were conducted to investigate whether psychological job demands, and supervisor support could predict exhaustion at work. Exhaustion was considered the dependent variable; gender and job tenure were included in the model as control variables.

Gender and job tenure were introduced as control variables in Step 1, and no significant effects were found on exhaustion. In Step 2 psychological job demands was introduced and was found significantly and positively associated with exhaustion; the variable added to the model was good predictor of the dependent variable since there was a significant change in R^2 coefficient (13% explained variance). Finally, in Step 3 supervisor support was introduced. Among the variables, both psychological job demands ($\beta = .58$, $p < .001$) and supervisor support ($\beta = -.75$, $p < .001$) were – respectively – significantly positively and negatively associated with exhaustion. The further change in R^2 coefficient (8% explained variance) showed that the new variables were also good predictors of exhaustion. The F value showed a significant R^2 change associated with Step 2 and Step 3.

Table 2. Hierarchical multiple regression (exhaustion = dependent variable).

1 ST STEP (CONTROL VARIABLES)	β	t	p
Gender (1 = women)	-.03	-.31	.76
Job tenure	.15	1.65	.10
	$R^2 = .03$		
2 ND STEP (DEMAND)			
Gender (1 = women)	-.11	-1.25	.21
Job tenure	-.02	-.23	.81
Psychological job demands	.40	4.07	< .001
	$R^2 = .13$		
3 RD STEP (RESOURCE)			
Gender (1 = women)	-.00	-.05	.96
Job tenure	.03	.35	.73
Psychological job demands	.34	3.55	< .001
Supervisor support	-.30	-3.35	.001
	$R^2 = .08$		

4. Discussion and conclusion

The aim of the present study was to better understand the role of psychological job demands and supervisor support in the relationship with work-related exhaustion in a sample of Italian FDS during the COVID-19 pandemic. Given the lack of studies in the literature, the results contribute to new knowledge about this occupational field.

The first hypothesis of the study (H1) stated that there was a significant and positive relationship between psychological job demands and exhaustion. As we have seen, H1 was confirmed by the regression analysis, and this result is consistent with previous research on death care (Colombo et al., 2019; Cotrim et al., 2020); as for the specific occupational group, this result is particularly interesting because FDS during the pandemic COVID-19 have not been previously studied in terms of psychological job demands, but only emotional job demands in relation to the occurrence of burnout (Van Overmeire et al., 2021). The second hypothesis of the study (H2) stated a significant and negative relationship between supervisor support and exhaustion and was also confirmed by the analyses. While the role of social and peer support has been examined in death care studies (Cegelka et al., 2020; Guidetti et al., 2021; Tetrick et al., 2000), supervisor support has been neglected with the exception of a recent study by Guidetti et al. (2021). Our findings confirm the role of this job resource as an important psychosocial factor that can help offset the negative effects of death care work and maintain workers' psychological and occupational wellbeing.

This study offers new insights into the factors contributing to the wellbeing of funeral directing service workers, who are among the professions most struggling with the effects of the COVID -19 pandemic. It also confirms the importance of supervisor support during difficult times in the workplace. Nevertheless, some limitations must be pointed out, namely a small sample size and a cross-sectional design that does not allow for causal inferences. Differences with other occupational groups in the funeral sector (e.g., crematoria, mortuaries, cemeteries workers) would also be interesting to investigate in future studies.

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VR-BASED MINDFULNESS INTERVENTION FOR WOMEN RETURNING TO WORK AFTER MATERNITY. DOES VIRTUAL REALITY IMPROVE THEIR EXPERIENCE?

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Abstract

Working mothers deal with various difficulties attaining work-family balance and job satisfaction. Despite the number of women in the labor force, women typically continue to be the primary caregivers of children and this phenomenon makes returning to work a complex issue for women. Maternity leave is subjective to the mothers' work experiences before and after birth, which changes based on different factors (e.g., course of pregnancy, cultural factors, employment contract). Recent studies highlight that 20.1% of women reported having anxiety symptoms during pregnancy or the postpartum period. Given this alarming data, it is important to develop concrete tool to assist women facing emotional stress surrounding maternity leave. A protocol, based on VR-based mindfulness intervention, will be proposed to group of women to understand how this technology can impact the return-to-work experience after maternity leave in reducing stress and anxiety levels.

Inspiring new areas of research have been emerging and among them, one that has stood out is Virtual Reality (VR). VR enables users to experience computer-generated environments within controlled experimental conditions. VR creates an immersive, motivating, and attention-grabbing experiences by engaging several sensory modalities.

Mindfulness can be defined as self-awareness and the focusing on one's experiences in the present moment. This practice leads to multiple psychological benefits such as the enhancement of one's attention regulation, improvements in blood pressure, anxiety, and depression symptoms. Mindfulness can be used to treat a wide range of conditions, from stress management at the work to anxiety and depression, and it has been used in many psychotherapeutic approaches.

VR-BMI has proven to be an effective method to improve one's own psychological and/or physiological status. Many studies have been conducted which examine the effects of VR-BMI in reducing stress and anxiety. Based on previous and promising studies, our interest is to examine the impact of brief guided meditations in the form of paced breathing exercises on the well-being of women returning to work after maternity leave.

The participants will be mothers returned to work after maternity leave who will be administered a training protocol comprising VR-BMI intervention (experimental group) and an audio-based mindfulness intervention without VR (control group). Expanding on the potential of VR demonstrated in previous studies, we would expect to two brief mindfulness interventions, VR-based and guided audio, would induce a greater level of state of mindfulness and a general reduction in stress and anxiety when compared to the control group.

Keywords: *VR-based mindfulness intervention, virtual reality, mindfulness, maternity leave, anxiety.*

1. Introduction

Maternity leave is a period of absence from work granted to new mothers to care for their newborn child. It is a crucial policy that provides time for mothers to bond with their newborns, recover from childbirth, and establish breastfeeding, among other benefits. For many women, returning to work after maternity is a key milestone in their lives. For others, it can be a difficult experience, especially if they have trouble adjusting to a new lifestyle or don't feel prepared for the responsibilities of being a parent. In some cases, women may feel that returning to work after giving birth is an unnecessary

sacrifice (Feinberg et al., 2014; Wiens et al., 2022). Maternity leave is subjective to the mothers' work experiences before and after birth, which changes based on different factors (e.g., course of pregnancy, cultural factors, employment contract). Recent study found that 20.1% of the women reported experiencing anxiety symptoms during pregnancy or the postpartum period (Asaye et al., 2020). These symptoms can include excessive worry or fear, restlessness, irritability, difficulty sleeping, and physical symptoms like sweating or heart palpitations. Anxiety during pregnancy or the postpartum period can have a significant impact on a woman's well-being and may also affect her baby's development (Field et al., 2017).

2. Maternity leave and related issues

There have been some issues with maternity leave in Italy:

- 1) length of maternity leave: According to the International Labour Organization (2020) Italy has a relatively short maternity leave (5 months) compared to other European countries.
- 2) job protection: although mothers are entitled to maternity leave, there have been cases of discrimination against pregnant women and mothers in the workplace (Masser et al., 2007)
- 3) cultural attitudes: There is a cultural expectation in Italy that women are the primary caregivers for children, which can make it difficult for women to balance work and family responsibilities (McCardel et al., 2022)
- 4) access to childcare: Italy has a shortage of affordable, high-quality childcare options, which can make it difficult for mothers returning to work (Del Boca et al., 2015).

Given this alarming data, it is crucial to develop tangible tools that can aid women who are dealing with emotional stress related to maternity leave.

In this paper we explain a protocol, based on VR-based mindfulness intervention, that will be proposed to a group of about women to understand how this technology can impact the return-to-work experience after maternity leave in reducing stress and anxiety levels.

3. Virtual reality and mindfulness

Immersive virtual reality (VR) refers to a type of VR experience that seeks to fully immerse the user in a virtual environment, creating a sense of presence and engagement that can feel remarkably real. Immersive VR typically involves the use of a VR headset, along with specially designed software that creates the virtual environment (Freeman et al., 2017).

This paper aims to propose a mindfulness technique combined to VR, using VR-based mindfulness intervention (VR-BMI). Mindfulness is a technique that has been shown to reduce stress and anxiety and it can be used to reduce the effects of physical and psychological distress (Gong et al., 2023; Goldberg et al., 2020; Marchand, 2012).

VR-BMI are a novel approach to delivering mindfulness-based interventions using immersive technology. Mindfulness interventions are techniques that aim to cultivate present-moment awareness and non-judgmental acceptance of one's experiences and have been found to be effective in improving psychological well-being, reducing symptoms of anxiety and depression, and improving cognitive functioning. Several studies have found that mindfulness-based interventions can improve well-being, reduce symptoms of anxiety also during pregnancy and the perinatal period (Dhillon et al., 2017; Goodman et al., 2014), as well as decrease work-related stress among employees. Indeed, there is evidence to suggest that mindfulness can be effective in reducing work-related stress. For example, a meta-analysis of 22 studies found that mindfulness-based interventions had a small but significant effect on reducing occupational stress and improving well-being among employees (Donald et al., 2019). Another study found that mindfulness-based stress reduction (MBSR) reduced perceived stress and improved sleep quality among healthcare workers (Burton et al., 2017). Moreover, a randomized controlled trial found that an online mindfulness intervention reduced work-related stress and improved well-being among employees compared to a control group (Kreplin et al., 2018).

4. A new protocol of intervention

Research on VR-BMI is still in its early stages, but initial studies suggest that this approach may be effective in promoting mindfulness and reducing symptoms of anxiety and depression (Navarro-Haro et al., 2019). Based on the previous research, there is good reason to believe that mindfulness-based interventions like guided meditations could be effective in improving well-being among women returning

to work after maternity leave. The study aims at investigating the effects of VR-BMI that involve paced breathing exercises on the well-being of women who are returning to work after taking maternity leave.

Our previous studies (Rapisarda, Falco et al., 2022; Rapisarda, Mora et al., 2022), aimed at exploring the personal and professional resources of working mothers and deconstructing irrational beliefs on the role of mother and worker, showed the potential of VR which had positive outcomes. State anxiety was assessed using the STAI-Y questionnaire which was administered before and after each session of the protocol. The results showed that there was a statistically significant decrease in symptoms following both the diaphragmatic breathing session and body scan session. Regarding the quality of return to work after maternity leave following the intervention, more positive perceptions were found related to organizational flexibility and colleague's support. In addition, perceptions of self as a woman capable of coping with personal and organizational challenges seem to mostly prevail (e.g., *At work I feel like a tiger, like a warrior*).

Our objective is to determine whether these interventions can improve overall well-being, reduce stress, and anxiety for this population, who may be experiencing significant challenges during this transitional period. By examining the impact of VR-BMI, we aim to gain insight into the potential benefits of VR-BMI for improving the health and well-being of working mothers.

5. Phases of intervention

To evaluate the preliminary efficacy of VR-BMI intervention on maternity leave, in this study participants will be randomly divided into two groups: the treatment group will receive VR-BMI, the control group will receive an audio-based guidance. Both treatment and control groups received the same core content delivered in distinct formats (VR versus audio).

VR group participants will use an Oculus Go VR headset preloaded with VR software, the audio program will consist of much of the same core content as the VR program, through sound only, without the visual component.

To conduct this research, they will recruit about 30 women after maternity leave and randomly assign them to either the control group (receiving audio-based mindfulness intervention) or the experimental group (receiving mindfulness intervention with VR). Audio guided meditations (e.g., Body Scan Meditation; Breath Awareness Meditation; Loving-Kindness Meditation) will be comparable in length and content to the VR-BMI that will be used in the experimental group:

Body Scan Meditation: a classic mindfulness meditation that involves systematically scanning your body for sensations of tension or relaxation.

Breath Awareness Meditation: this meditation involves bringing attention to your breath to anchor your awareness in the present moment.

Loving-Kindness Meditation (LKM): this meditation involves cultivating feelings of kindness, compassion, and goodwill towards oneself and others.

VR-BMI will provide an immersive 360-degree visuals and ambient sounds to create a more engaging and immersive meditation experience. Based on the current scientific literature, both interventions will last from 20 to 45 minutes (Rodrigues et al., 2018; Fortney et al., 2013). They will be used quantitative measures to assess participants' well-being, stress, anxiety, and related outcomes at different time points, including before and after the intervention and at follow-up periods. They will be collected also qualitative data through interviews or focus groups to gain a deeper understanding of participants' experiences and preferences for each type of intervention.

Based on our promising study (Rapisarda, Mora et al., 2022) and growing body of research on the potential LKM and Mindfulness interventions in general, in the workplace we can expect some potential positive outcomes that could result from the VR-BMI for women returning to work after maternity leave.

Reduced stress and anxiety levels: Mindfulness interventions have been shown to be effective in reducing stress and anxiety levels in various populations, including pregnant women and new mothers. By reducing stress and anxiety levels, women returning to work after maternity leave may be better equipped to manage the demands of their work and home lives (Dhillon et al., 2017; Guardino et al., 2020)

Reduce stress and burnout: Mindfulness interventions have been shown to be effective in reducing burnout and stress among employees. A recent study aimed to investigate whether a mindfulness-based intervention could reduce stress and burnout among intern medical practitioners, and it showed that the intervention group (which received a mindfulness-based training) experienced significant improvements in stress, burnout, and psychological distress compared to the control group, which received no intervention. By reducing stress and burnout, mothers may be better able to cope with the challenges of parenting, which could lead to improved mental health and better outcomes for their

children. Additionally, reducing stress and burnout could help mothers maintain their own well-being, which could have long-term benefits for their physical and mental health. (Ireland et al., 2017).

Promoting work-life balance and well-being: a very recent study examined the impact of a mindfulness intervention on work-life balance and well-being, and how individual preferences may affect these outcomes. The mindfulness intervention group received a mindfulness training program, while the control group received no intervention. The results of the study showed that the mindfulness intervention had a positive impact on work-life balance and well-being, as participants in the intervention group reported greater improvements in these outcomes compared to the control group. Specifically, the mindfulness intervention was associated with increased detachment from work during non-work time, which in turn led to greater improvements in work-life balance and well-being. This last aspect can be particularly important for mothers during and after maternity leave, who may feel pressure to constantly stay connected to work even while they are away. Overall, promoting work-life balance through mindfulness can have various potential benefits for mothers, by improving well-being, enhancing time management, and improving relationships with others (Althammer et al., 2021).

6. Conclusion

Our hypothesis for this study would be find new evidence about whether a VR-BMI can effectively reduce stress and anxiety levels for women returning to work after maternity leave. Specifically, we could expect to see differences between the control group (receiving an audio-based mindfulness intervention) and the experimental group (receiving the VR-based mindfulness intervention) in terms of reductions in stress and anxiety levels, as well as improvements in overall well-being. If the results are consistent with previous studies on mindfulness interventions, we could expect to see significant improvements in well-being outcomes for both the control and experimental groups. However, if the VR-based mindfulness intervention is found to be more effective in reducing stress and anxiety levels compared to the audio-based intervention, this could have important implications for the use of VR technology as a tool for supporting mental health and well-being in various contexts.

The use of new immersive technologies, such as VR, can be a valuable tool in promoting individual and organizational well-being among women returning to work after maternity leave. This technology can provide women with flexibility and convenience in their work schedule, which could help them balance their work and family responsibilities. VR technology can also provide a safe space for women to practice their skills and increase their confidence before returning to work. Overall, a mindfulness-based intervention with VR can provide a novel and effective approach to supporting mental health and well-being of mothers during and after maternity leave. By using VR technology, the intervention might be made more accessible, engaging, and personalized, ultimately leading to better outcomes for participants.

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PERSONAL OPTIMISM, SELF-EFFICACY, AND RESILIENCE AMONG NURSES IN A PRIVATE MEDICAL CENTER AMIDST COVID-19 PANDEMIC

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Abstract

The COVID-19 Pandemic has hardly hit the health sectors and healthcare workers particularly the Nurse front liners in unprecedented ways. It effectively disrupted usual operations due to various imbued changes and restrictions. This study focused on determination of the relationship of Personal Optimism, Self-efficacy and Resilience of Nurses in dealing with the new kind of normal approach and enhanced personal control despite the setbacks. (Martin Seligman, 2006, 2007). Guided by the Martin Seligman's Learned Optimism Theory (1990) and using the Personal Optimism and Self-efficacy Optimism Scale (POSO-E) and Connor-Davidson Resilience Scale 25 (CD-RISC-25) as tools, it was found out that majority of Nurses who responded to the survey has an average level of Personal Optimism, Self-efficacy and Resilience. Also, correlational analysis between personal optimism, self-efficacy and resiliency among nurses of a private medical center indicate moderate to high positive correlation. This implies that there is significant positive relationship between the respondents' personal optimism, self-efficacy and resiliency. The way Nurses treats, deals, and copes with any arising situation has everything to do with the level of hopefulness an individual has or positive outlook. Having such hopefulness stimulates thinking optimistically, leading to creative thinking and resourcefulness, which in effect, promotes persistence. This provides an opportunity for personal development, growth and well-being, which over time can lead to greater resilience when facing difficulties. In this regard, regular debriefing of staff regarding work, conduct of wellness activities such as exercise and meditation as exercise improves level of serotonin, dopamine, and norepinephrine which are the feel-good chemicals in the body. Trainings, programs and seminars on ways to maintain grace under pressure and improve well-being outside of work, counselling, mentoring and coaching for employees who are burnout, promote a work-life balance principle and enhance strategic planning for emergency responses and command system that aims to help nurses before, during, and after any health-related crisis are also some of the other recommendations by the researchers. (Jo Billings, et al 2021)

Keywords: *Personal optimism, self-efficacy, resilience, nurse.*

1. Introduction

The COVID-19 pandemic created profoundly challenging scenarios in the work of the healthcare workers specifically the Nurses. COVID-19 is a new strain of virus that causes common colds, difficulty in breathing and even death was discovered in December 2019 and because of the rapid increase in the number of cases, the outbreak then was declared as a pandemic. Nurses had to quickly respond and continuously deal with the abrupt changes in the healthcare systems, policies and operations. (Natasha Shaukat, et al, 2020). Those Nurses are experiencing the COVID-19 difficulties due to different adjustments in the work schedules and processes, the feeling of discomfort due to the imposition of the new kind of normal and safety protocols such as the mandatory wearing of facemask, face shield and other Personal Protective Equipment (PPE), including the conduct of routine RT-PCR test and the tedious regular disclosure of health conditions.

In the same manner those Nurses are also experiencing stigma because some of them are being discriminated outside the workplace due to their work settings and fear from being exposed, contracting the virus and the duration period of isolation or quarantine. In addition, maintaining a safe physical/social distance which eliminated face to face interaction has an effect on one's social interaction, which is far from their usual pre-pandemic practice. (Tejaswani & Hemantha Herath, 2020) Hence, the COVID-19

pandemic has had a keen impact on the well-being, motivation, optimism, self-efficacy and the resilience of Nurses. (Kimberly Dimino, RN, DNP, CCRN, et al, 2020)

This research study aims to find out the personal optimism, self-efficacy, and resilience among Nurses of World Citi Medical Center in dealing with the new kind of normal approach brought about by the COVID-19 pandemic. How they thrive to adjust with the sudden contemporary shift of work and embark on the continuous changes in the systems. Personal resilience is more important in this situation. In resilience, it helps the individuals to acknowledge and accept the things as well as, happenings around them that are not always the way they want it to be and then finding ways to live and even thrive in spite of the setbacks. It is said that those who lacks resilience get easily overwhelmed and may turn into unhealthy coping mechanism such as substance abuse (Hurkey K, 2020). Optimism is reacting to problems with self-confidence and high personal ability. It is another means of enhancing personal control (Martin Seligman, 2006, 2007). It emphasizes responsibility, hope, and overall positive nature of life (Hoy, hoy, Kurz, 2008:822). Generally, it is believed that a person who has an optimistic outlook during a hardship is deemed stronger when facing a crisis. Optimism ignites our efforts to achieve the goals that we have set for ourselves, and it also improves the quality of our experience. It is also said that optimism increases our happiness and reduces our stress. Less stress also reduces the possibility of mental distress which is a common side effect of striving (Tiayon 2021). On the other hand, self-efficacy is defined as an individual's capacity to do what is necessary to produce and attain specific tasks and performance (Bandura, 1977, 1986, 1997). Research suggests that self-efficacy can improve worker's achievement, foster emotional health and well-being and serve as a valid predictor for motivation (Cherry K, 2020). Awareness of the struggles of the front liners or the medical professionals such as Nurses was widely known as they deal directly to the patients who are infected with the virus. Nurses, along with other medical professionals suffer the most during the COVID-19 pandemic as aside from them having high-risk of exposure to virus, the transmission of virus to their family and loved ones have also a high probability rate.

This study is theoretically anchored in Martin Seligman's Learned Optimism Theory (1990). Learned optimism implies the potential to view the world positively. Learned optimism is a notion from positive psychology's founder Martin Seligman which says that we can encourage a positive outlook in life. He explains that with a more positive point of view in life, we can be in a preferable position to improve our wellbeing.

Martin Seligman defined learned optimism in his book published in 1990 having the same title - Learned Optimism. Being a high achiever and generally healthier are some benefits of having a positive point of view. There are more pessimists than optimists, making it more common. Pessimists tend to surrender when experiencing difficulties and adversities which might cause them to suffer from depression. Seligman encourages pessimists to be aware of their reactions to difficulties and adapt an optimistic way of thinking. The positive point of view that was developed from a negative point of view is called learned optimism. Optimists view failure as something that is not personal and that it is not permanent.

This study was conducted to determine the personal optimism, self-efficacy and resilience as a result of the new normal approach amidst COVID-19 pandemic among Nurses of World Citi Medical Center, this study focused specifically on the following statement of the problem: 1. What is the Profile of the respondents in terms of the following: 1.1 Age; 1.2 Gender; 2. What is the level of personal optimism among Nurses as a result of the new normal approach brought about by the COVID-19 pandemic?; 3. What is the level of self-efficacy of Nurses in transition the new normal way?; 4. What is the level of resilience among nurses in the healthcare workforce amidst adversity?; 5. Is there a significant relationship between Personal optimism, Resilience and Self- Efficacy?.

2. Design

The study used a descriptive correlational research design. Descriptive research was used to describe personal optimism, self-efficacy, and resilience of the respondents being studied. Moreover, the correlation was used to measure a relationship among these variables without the researcher controlling either of these.

3. Objective

This study aims to describe and find out if there is a significant correlation that exists on the personal optimism, self-efficacy, and resilience among nurses in a private medical center amidst covid-19 pandemic.

4. Methodology

The respondents of the study were 40 nurses who currently works and render direct-patient care at the Nursing Department of the World Citi Medical Center. They were within the age bracket of 21- 60 years old and most of them were female with a total count of 26 (65%) and the remaining 14 (35%) are male.

The research instrument was composed of validated questionnaires to determine the Personal optimism, self-efficacy, and resilience. The short version of the Personal Optimism and Self-Efficacy Optimism Scale measured optimism. This 9-item version contains two subscales, the Personal Optimism Scale and Self Efficacy Optimism Scale. This 9-item version of the Personal Optimism and Self-Efficacy Optimism Scale includes 4 questions that reflect personal optimism and 5 questions that reflect self-efficacy optimism. Scores range from 0 to 27. Three of the questions were reverse-scored, and each question was rated on a five-point Likert-style scale such as 0= Not true at all, 1 = Rarely True, 2 = Sometimes True, 3 = Often True, 4= True Nearly All the Time (Vesna Gavrilov-Jerković et al. (2014). In measuring Resilience, The researchers used the Connor-Davidson Resilience Scale (CD-RISC; Connor, K.M., & Davidson, J.R., 2003) which is comprised of 25 questions, to which the respondents answered in terms of how they have felt within the last month. Each question is rated on a five-point Likert-style scale, ranging from (not true at all (0) to true nearly all the time (4). Scores on the CD-RISC can range from 0 to 100.

5. Results and discussions

The result of the respondents’ *Personal Optimism* is presented in Table 1 and Table 2. The over-all weighted mean of the respondents’ answers to the 9 item statement of the POSO-E particularly items 4, 7, 5, 9 which reflects Personal Optimism showed an overall weighted mean of 2.43 indicates that the respondents answered ‘often true’ to most of the items and majority of the respondents appeared to have an average level of personal optimism with a frequency of 30 (75%), 7 (17.5%) of the respondents have a low level of personal optimism, while 3 (7.5%) have a high level of personal optimism.. This is similar to the result of a study among health care workers showing moderate level of optimism during pandemic (Sergio C, et al 2021).

Table 1. Respondents’ level of personal optimism.

Levels	Frequency	Percentage
High	3	7.5%
Average	30	75%
Low	7	17.5%
Total	40	100%

Range: Low = 0 – 6, Average = 7 – 13, High = 14 – 20

Table 2. Respondents’ personal optimism.

Item	Weighted Mean	Interpretation
4. I am facing my future in an optimistic way	3.06	Often True
5. I can hardly think of something positive in the future	2.31	Sometimes True
7. I worry about my future	1.84	Sometimes True
9. It often seems to me that everything is gloomy	2.50	Often True
Overall Weighted Mean	2.43	Often True

Range: 0-0.8 Not true at all, 0.81-1.60 Rarely True, 1.61-2.40 Sometimes True, 2.41-3.20 Often True, 3.21-4.0 True Nearly all the Time

The result of the respondents’ *Self-Efficacy* is presented in Table 3. The over-all weighted mean of the respondents’ answers to the 9 item statement of the POSO-E specifically to the items 1, 2, 3, 6, 8 that reflects Self-efficacy Optimism reflected an overall weighted mean of 2.96 indicates that the respondents answered ‘often true’ to most of the items and the majority of the respondents have an average level of self-efficacy optimism indicated by a frequency of 28 (70%), 3 (7.5%) of the respondents have a low level of self-efficacy optimism, while another 9 (22.5%) have a high level of self-efficacy optimism. The results from integrative review shows that on average, nurses and healthcare worker exhibited moderate levels of self-efficacy during the COVID-19 pandemic (Davood Afshari, et al, 2021).

Table 3. Respondents' level of self-efficacy optimism.

Levels	Frequency	Percentage
High	9	22.5%
Average	28	70%
Low	3	7.5%
Total	40	100%

Range: Low = 0 – 8, Average 9 – 17, High = 18 - 25

The result of the respondents' level of Resilience is presented in Table 4. The over-all weighted mean of the respondents' answers to the 25 item statement of the Connor Davidson-Resilience Scale-25 is 3.07 indicates that the respondents answered 'often true' to most of the items and reflected that majority of the respondents have an average level of resilience indicated by a frequency of 29 (72.5%), 1 (2.5%) of the respondents have a low level of resilience, while another 10 (25%) have a high level of resilience. This is similar to the results of the study which found that Nurses are reporting moderate level of resilience scores during the COVID-19 pandemic (Rachel G. Baskin, June 2021).

Table 4. Respondents' level of resilience.

Levels	Frequency	Percentage
High	10	25%
Average	29	72.5%
Low	1	2.5%
Total	40	100%

Range: Low = 0 – 41, Average = 42 – 83, High = 84 – 125

The correlational analysis between personal optimism, resiliency, and self-efficacy using Pearson Product Moment of Correlation is shown in Table 5. It reveals that the correlational analysis between personal optimism and resilience has a computed value of 0.660 indicating a moderate positive correlation while personal optimism and self-efficacy has a computed value of 0.764 indicating high positive correlation, Furthermore, both the computed values are greater than the critical value of 0.264 at 0.05 level of significance; thus, the null hypothesis is rejected. This implies that there is significant correlation between the respondents' personal optimism, self-efficacy and resiliency. It means that the respondents with high level of personal optimism have also high level of self-efficacy and resiliency.

Table 5. Relationship of the respondents' personal optimism, self-efficacy, and resiliency.

Variables	r-value		Decision	Interpretation
	Computed	Critical		
Personal Optimism vs Resilience	0.660	0.264	Reject Null Hypothesis	There is a significant relationship
Personal Optimism vs Self -efficacy	0.764	0.264	Reject Null Hypothesis	There is a significant relationship

Level of Significance, 5% (0.05)

6. Conclusion and recommendation

The overall finding of this study showed that the self-efficacy and resiliency of the respondents during this Pandemic had a significant relationship to their personal optimism result. Thus, the null hypothesis, there is no significant relationship between the personal optimism, self-efficacy and resiliency was rejected.

Majority of the respondents have "average" level of Personal Optimism and Self-Efficacy Optimism. 30 respondents which equates to 75% of the population answered "often true" to the question related to self-efficacy statements (1,2,3,6,8) and 70% or total of 28 respondents answered "often true" to statements related to Personal Optimism (4,5,7,9) of POSO-E. This is similar to the result of the study made by Sergio C. in 2021 showing moderate level of optimism during the COVID-19 pandemic. The data also shows that there are 3 (7.5%) of the respondent shows high level of personal optimism and the other 7 (17.5%) of the respondents shows low level of optimism. For self-efficacy optimism, 9 (22.5%) of the respondents have high self-efficacy and the other 3 or 7.5% have low level of self-efficacy. (Davood Afshari, et al, 2021). There are 29 respondents which is equivalent to 72.5% of the population answered "often true" CD-RISC-25 statements which indicates that most of the respondents have "average" level of resilience. (Rachel G. Baskin, June 2021) Aside from this, the data also shows that there are 10 respondents equivalent to 25% of the population has "high" level of resilience and 1 (2.5%) of the population has "low" level of resilience.

Due to personal optimism, self-efficacy and resilience among nurses were challenged by the pandemic adding pressure to their difficult pre-pandemic situation, it is important that strategies should be effective. (Firew et al, 2020) Different strategies to boost personal optimism, self-efficacy, and resilience are available. Through the conduct of this study and results obtained, the researchers therefore recommend the following: (1) Emotional support, user of instrumental support, venting, positive reframing, planning, active coping and humor can help healthcare workers have a higher level of personal optimism, self-efficacy, and resilience. (2) Promoting the expression of gratitude and appreciation to their valuable contribution. (3) Regular debriefing of staff regarding work, conduct of wellness activities such as exercise and meditation as exercise improves level of serotonin, dopamine, and norepinephrine which are the feel-good chemicals in the body. (4) Trainings, programs and seminars on ways to maintain grace under pressure and improve well-being outside of work, counselling, mentoring and coaching for employees who are burnout. (5) Promote a work-life balance principle and enhance strategic planning and command system for emergency responses that aims to help nurses before, during, and after any health-related crisis are also some of the other recommendations by the researchers. (Jo Billings, et al 2021)

In addition, because the research centered on nurses in private medical center, broader reach in terms of the respondents could be explored.

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INNOVATE TO STRENGTHEN MULTIDISCIPLINARY WORK IN CHILD ABUSE: THE CONTRIBUTION OF AN INTEGRATED INFORMATION SYSTEM

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Abstract

The assessment and care of sexually or physically abused children and their families require the multidisciplinary collaboration of the medical, psychosocial, police and justice sectors. On the initiative of Youth Protection Agency (YPA) and a university hospital in Quebec City, Canada, a new program named *Services intégrés en abus et maltraitance* (SIAM; Integrated Services in Abuse and Maltreatment) was launched in 2018. Based on the Child Advocacy Centers model, the SIAM provides children, adolescents and their families with on-site integrated clinical assessment, investigation, treatment, support and advocacy services (Alain, Nadeau & al., 2016).

The success of child maltreatment interventions requires evaluation and research activities, but especially the integration of available data and expertise (Alain, Clément & al., 2022). Therefore, the multi-agency representatives involved in the SIAM were mobilized to develop, within the SIAM, an innovative information system. This system meets operation, evaluation and research needs with integrated, compatible and continuous clinical and administrative data.

This communication aims to: 1) present the main characteristics of the SIAM innovative and Integrated Information System (IIS), as well as the issues associated with its creation and exploitation and 2) present the results of the first exploratory study using this IIS and share potential advances in terms of knowledge and practices.

The sample of this exploratory study consists of 1633 situations referred to the SIAM and for which the service trajectory had ended as of December 2021. One of the main advantages of this integrated system is its capacity to follow the entire trajectory of socio-judicial services, from the moment the situation is reported to YPA until the judicial process, including psychosocial and trauma-informed support. Following the initial multidisciplinary triage discussion, 40% (n = 653) of the situations went to the police investigation stage, whereas the other 60% (n = 980) were redirected to YPA only. Charges were laid in 7% (n = 47) of the situations investigated by the police and trauma-informed support services were granted in 4% (n = 73) of all the situations under study (investigated or not). Descriptive and bivariate analyses about the situations and a comparison between the situations in which trauma-informed support services were granted and those without such support will be presented.

Keywords: *Child abuse and maltreatment, integrated information system, multidisciplinary (psycho-socio-judicial) trajectories, trauma-sensitive approach.*

1. Introduction

The assessment and care of sexually or physically abused children and their families require the multidisciplinary collaboration of the medical, psychosocial, police and justice sectors. Since 2001, a socio-judicial protocol has enabled the various professionals involved in the care of child victims of abuse to work together and share information with the aim of ensuring an adequate, continuous and coordinated response to the needs of child support and protection in the province of Quebec, Canada. This protocol

involves children under 18 who are victims of physical abuse, sexual abuse or serious neglect, as well as their families.

On the initiative of a university-based Youth Protection Agency (YPA) and a university hospital, a new program named *Services intégrés en abus et maltraitance* (SIAM; Integrated Services in Abuse and Maltreatment) was launched in 2018. Based on the Child Advocacy Centers model, the SIAM provides children, adolescents and their families with on-site integrated clinical assessment, investigation, treatment, support and advocacy services. The SIAM covers the regions of Quebec City and part of *Chaudière-Appalaches*, Canada. Before its implementation, a needs assessment and feasibility study was conducted to establish a balance between priority needs and the resources required to meet them (Alain, Nadeau & al., 2016).

In 2022, the SIAM brought together nearly 200 professionals, from two YPA, four police forces, the Crown prosecution, a medical team (pediatricians and nurses) specialized in child abuse and three trauma-informed psychosocial support services. The SIAM also benefits from its association with senior researchers, as well as a research center.

The SIAM handles situations of physical abuse, sexual abuse and serious neglect that are reported to the YPA who chooses to disclose to the partners using its discretionary power. This represents more than 1,300 situations per year. In each of these situations, the trajectory of services begins with a multidisciplinary discussion, named the “triage”, that takes place right after the report. The triage aims to determine whether or not a police investigation will be carried out with the aim of filing court charges against the alleged abusers. The triage team involves the SIAM child advocate, a nurse, managers of the YPA and police services, and a district crown attorney. At the time of the triage, the situation is already under the responsibility of YPA, and if a police investigation is not carried out, they continue their work alone. Support services are provided at all stages of the SIAM trajectory according to the needs of the children and their families.

The SIAM partners recognize that the success of child maltreatment interventions requires evaluation and research activities, but especially the integration of available data and expertise (Alain, Clément & al., 2022). However, in the literature, the need to better document the situations and trajectories of victims of abuse is supported by the work of several researchers and government authorities which reveals significant limitations in this area. The limits of information structures and the absence of a common database in Quebec makes it very difficult to know how situations evolve, to assess the quality of the processes involved and understand the impacts of multidisciplinary trajectories on children and their family. Therefore, the multi-agency representatives were mobilized to develop, within the SIAM, an innovative and integrated information system. This system meets operation, evaluation and research needs with integrated, compatible and continuous clinical-administrative data.

This paper aims to: 1) present the main characteristics of the SIAM innovative and Integrated Information System (IIS), as well as the issues associated with its creation and exploitation and 2) present the results of the first exploratory study using this IIS and share potential advances in terms of knowledge and practices.

2. The SIAM information system: characteristics and creation and exploitation issues

The SIAM integrated information system was developed in a concerted effort between researchers and practitioners, using field observations and consultations with each of the partners. Steps were taken with each of the partners to formalize through legal agreements the sharing of information to feed the database. Since the legislative framework is different for each partner, the creation of these legal agreements was considerably challenging and took more than a year with numerous meetings with each of them. Such a common database works insofar as all partners agree to integrate their data into the database to contribute to an overall profile of the entire multidisciplinary trajectory. Problems remain to be solved concerning access to medical data, but agreements were signed for all other partners. Deadlines for destruction of data are also short and strict within the YPA. Since the majority of the data come from these agencies, the SIAM has to follow the same rules so it represents a challenge for conducting longitudinal research projects.

Information has been constantly improved since the creation of the database, and additions and modifications are made retroactively. Many methods of data collection have been developed in order to gather complete information regarding the characteristics of the situations reported, the services rendered throughout the multidisciplinary (psycho-socio-judicial) trajectory, as well as the clinical evaluation of the well-being and needs of children and their families.

First, a case tracking file of the entire multidisciplinary trajectory regarding every situation of child abuse has been built and is updated daily with new situations. Answer choices are predetermined for each variable in the database to ensure standardized input. Given the large volume of situations to keep track of double validation is not achieved systematically. Since the same child can be victim of multiple discrete

abuses in his/her lifetime, it is possible that several trajectories in the database relate to the same child. For multiple trajectories to be created for a single child, the situations must represent distinct judicial processes. For example, a child victim of physical abuse by a parent and sexual abuse by a classmate will be the subject of two distinct multidisciplinary trajectories in the database. However, a child victim of repeated physical abuse by both parents will be the subject of a single trajectory since the multiple events and abusers will be addressed in the same judicial process. The case tracking allows to quickly identify which services have been rendered, by whom and when. The trajectories are updated by consulting youth protection files and by ad hoc transmission of updated case load by police partners and prosecutors. All requests for trauma-informed support from SIAM are centralized and psychosocial workers send back a summary of the interventions when the follow-up is closed. This procedure allows to update the support services information in the case tracking. In view of the large volume of situations disclosed each day, maintaining the case tracking up to date constitutes a great amount of work.

Second, the initial multidisciplinary discussion (triage) is widely documented. Information regarding the socio-demographic (gender, age, residential place, etc.) and factual information about the situation of abuse (frequency, chronicity, child-abuser relationship, etc.) and emergency response before the triage is taken from the disclosure by the YPA. Antecedents (child and alleged abusers), decision-making issues and decision to pursue or not the police investigation are documented following the discussion. Properly documenting the starting point of the multidisciplinary trajectory is essential, since information on the nature of the situation and the surrounding circumstances makes it possible to understand the subsequent interventions.

Third, the *Child and Adolescent Needs and Strengths (CANS)* tool is used by YPA of the SIAM at the time of the psychosocial investigation (Lyons, 2009). Furthermore, a clinical protocol, comprising 11 standardized tools, assesses four elements of child functioning (executive functions, trauma, attachment and problematic sexual behaviors) and five of parents' functioning (adverse experiences during childhood, psychological distress, rearing practices, parental support to disclosure, and violence justification). This protocol makes it possible for the stakeholders to support a sustained clinical intervention in a psychometric and more standardized way. This protocol is used by YPA in the context of follow-ups when the situation of children is compromised and by voluntary support services. This exploratory research project aims to target potential improvements in order to consolidate the database for the long term.

3. Method

The study population therefore includes children for whom the situation of abuse or maltreatment has been treated by SIAM multidisciplinary partners. Authorization from the Research Ethics Committee and the Department of Professional Services of the *Centre intégré universitaire en santé et services sociaux de la Capitale-Nationale* was obtained to gain access to the data. The sample consists of 1633 situations referred to the SIAM and for which the service trajectory had ended as of December 2021. No distinction is made in the present study between children who have a single trajectory and those who have several. Descriptive and bivariate analyses were performed regarding multidisciplinary trajectories.

4. Results

4.1. Descriptive analyses

The sample includes 1633 multidisciplinary trajectories that involve 1552 children (1441 children have one trajectory; 111 have 2 to 4 trajectories). The following table presents the characteristics of the situations of abuse (Table 1).

Table 1. Main characteristics of the situations at the time of the triage.

Gender (n = 1633)	Female	980 (60%)
	Male	653 (40%)
Age (n = 1632)	0-2 years old	164 (10%)
	3-5 years old	280 (17%)
	6-11 years old	530 (33%)
	12-17 years old	658 (40%)
Residential location (n = 1583)	Parents together	593 (37%)
	Parents separated	263 (17%)
	Mother only	476 (30%)
	Father only	107 (7%)
	Placement under Youth Protection Law	129 (8%)
	Other	15 (1%)

History of child protection services (n = 1013)	First report	466 (46%)
	At least one previous report	547 (54%)
Type of abuse (n = 1633)	Physical abuse	893 (55%)
	Sexual abuse (includes sexual exploitation and lure)	695 (43%)
	Both physical and sexual abuse	17 (1%)
	Serious neglect	28 (2%)
Frequency of abuse (n = 1037)	Single event	300 (29%)
	Recurring events	737 (71%)
Number of abusers (n = 1561)	Single abuser	1368 (88%)
	Multiple abusers	193 (12%)
Age of the abuser(s) (n = 1489)	Minor abuser(s) only	229 (15%)
	Adult abuser(s) only	1256 (84%)
	At least one minor and one adult abusers	4 (0%)
Child – abuser relationship at the time of the abuse (n = 1589)	Intrafamilial ¹ abuser(s) only	943 (59%)
	Extrafamilial ² abuser(s) only	635 (40%)
	At least one intrafamilial and one extrafamilial abusers	11 (1%)

¹ Includes parents/step-parents, siblings/step-siblings.

² Includes grandparents, uncle/aunt, boyfriend/girlfriend, friend, neighbour, person in authority, other known person, unknown person.

With regard to their degree of urgency, 3% of the situations were deemed to require immediate intervention, 43% to require intervention within 24 hours, and 54% were placed on a waiting list. Following the triage, 60% of the situations were redirected to YPA regular services only, whereas 40% were directed to police investigation. In 47% of these investigations, forensic interview was used as an investigation technique. More than three quarters (79%) of police investigations were closed at the police level and 21% were submitted to the prosecutor for potential filing of court charges. Court charges were laid in 36% of those situations. At least one abuser was convicted in 87% of the situations in which court charges were laid. Thus, very few situations reach the end of the judicial process, but when they do, the vast majority result in a conviction.

Of all the situations discussed at the triage (investigated or not; n = 1633), only 73 (4%) were granted trauma-informed support services. These situations mainly involved teenagers (mean age = 13.09, SD = 4.04), girls (81%), victims of sexual abuse (88%), and victims of extrafamilial abuser(s) (74%). Most of these situations were directed to police investigation (79%), but were closed at the police level rather than submitted to the prosecutor (73%).

The CANS was completed in only 4% of all situations (n = 68). Children who were evaluated were no different from those who were not in terms of gender, age and type of abuse. However, they differed in terms of the relationship with the abuser (more intrafamilial abusers; $X^2(1) = 9.52, p < .01$), as well as the triage decision (more were directed to police investigation; $X^2(1) = 32.20, p < .001$). Therefore, they were not comparable in all respects to the children for whom no CANS was completed. Differences between trajectories with and without CANS may be due to established processes for completing CANS, more than to any real differences between children or situations. Indeed, YPA carries out a psychosocial investigation mainly in cases of intrafamilial abusers and the SIAM social workers who complete the CANS are specialized in pursuing the multidisciplinary trajectory with the police and prosecutors. They are assigned in priority to situations for which a police investigation is conducted.

Children who were evaluated have between 0 and 3 confirmed diagnoses ($M = 0.56, SD = 0.88$). Overall, YPA psychosocial workers identified few needs and difficulties, as well as good child and family strengths, as presented in Table 2. Unfortunately, the clinical protocol was administered in only two situations under study. These clinical results cannot be interpreted in the present study.

Table 2. Descriptive analyses of the CANS.

	N	Min.	Max.	Mean	SD
Child difficulties – Mental health (0-24)	70	0	15	3,83	4,072
Child difficulties – Risky behaviors (0-21)	74	0	11	0,77	2,174
Child difficulties – Daily functioning (0-12)	22	0	8	1,77	2,506
Child difficulties – Developmental risk factors (0-6)	73	0	1	0,06	0,229
Child difficulties – Sleep (0-3)	74	0	3	0,24	0,637
Child strengths (0-15) *	73	0	15	3,97	4,187
Family strengths (0-9) *	75	0	9	2,61	2,640

* For this scale, a higher the score is indicative of fewer strengths.

4.2. Bivariate analyses

With regard to the nature of the situations, knowing the gender of the child improved the ability to predict the type of abuse by 26% ($X^2(1) = 267.12, p < .001; \lambda = 0.261, p < .001$); 58% of the physical abuses involved boys, while 82% of sexual abuses and 94% of concomitant physical and sexual abuses involved girls. The age of sexual abuse victims ($M_{age} = 12.47, SD = 4.15$), at the moment of the triage, was significantly higher than the age of physical abuse victims ($M_{age} = 8.02, SD = 4.46$). Children reported for serious neglect ($M_{age} = 3.98, SD = 2.66$) were significantly younger than children reported for other types of abuse (KWT $p < .001$). There were strong associations between the type of abuse and having at least one intrafamilial abuser ($X^2(1) = 491.03, p < .001$), as well as the type of abuse and having at least one extrafamilial abuser ($X^2(1) = 473.59, p < .001$). In situations with at least one intrafamilial abuser, versus none, the more prevalent type of abuse was physical abuse (77%), In situations with at least one extrafamilial abuser, versus none, the more prevalent type was sexual abuse (75%).

With regard to the multidisciplinary services, situations placed on a waiting list involved significantly older children ($M_{age} = 11.66, SD = 4.36$) than situations handled immediately ($M_{age} = 8.35, SD = 5.39$) or within 24 hours ($M_{age} = 7.76, SD = 4.58$; KWT $p < .001$). A weak to moderate association was found between the degree of urgency of the situation and the type of abuse (Cramer's $V = 0.304, p < .001$). In situations requiring immediate or within-24h intervention, physical abuse was represented in higher proportions (57% and 74% of situations, respectively), while situations placed on a waiting list involved more sexual abuse (60%). Regarding triage decision, cases that returned to YPA services alone were more often cases of physical abuse (66%), while cases investigated by the police were more often cases of sexual abuse (60%) ($X^2(1) = 140.83, p < .001$). Only one-third (33%) of situations involving at least one intrafamilial abuser were directed to a police investigation following triage ($X^2(1) = 55.55, p < .001$). One reason for this may be that the judicial process is generally not in the best interest of children in these situations and psychosocial intervention is preferred. Thus, court charges were laid in more situations of sexual abuse (75%) than physical abuse (25%). Almost all (93%) situations for which court charges were laid resulted in the conviction of at least one abuser, regardless of the type of abuse ($X^2(1) = 2.52, ns$).

5. Discussion / Conclusion

One of the main advantages of the SIAM innovative and integrated information system is its capacity to follow the entire trajectory of socio-judicial services, from YPA services to the judicial process, including psychosocial trauma-informed support. It is the first intersectoral database regarding situations disclosed in the context of the Quebec socio-judicial protocol. This information system helps child advocates exercise their function, which includes defending children's rights and making sure they have the appropriate services at the proper time. However, feeding the database represents a constant, but necessary, heavy workload. The relatively small number of situations involving judicial process and trauma-informed support services may be due to the fact that the SIAM was only in its third year of operation at the time of data extraction. Since the judicial process and support services take more time, it is possible that a significant number of situations that were disclosed in 2020-2021 were still ongoing at the moment of extraction in December 2021.

Further analyses should explore a sample of ongoing and completed trajectories in order to document, in a more comprehensive and representative manner, the trajectories of the judicial process and trauma-informed support services. Such a sample would also make it possible to compare children victimized once to those polyvictimized. Future analyses of the clinical protocol will allow a better understanding of the well-being of children and their families, its evolution over time, as well as how it is associated with different characteristics of situations and services.

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THE EFFORTS OF RECEIVING PSYCHOLOGICAL SUPPORT AMONG WOMEN SURVIVORS OF DOMESTIC VIOLENCE

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Abstract

This study examines how women survivors who received protection order describe their efforts of receiving psychological or psychiatric support with their (ex) husbands and how their (ex) husbands responded to attending any intervention in Turkey. Five semi-structured interviews with women who had protection order as well as attempted to receive psychological or psychiatric support were conducted. The phenomenological analysis was used. The findings revealed two major themes, including (a) feelings of being blamed and (b) the process of men's rejection or preference to participate in therapy or psychiatric support. While psychological support is critical for women and men in cases of domestic violence, several multiple factors are involved in regular attendance in psychological support for both men and women. These factors were economic problems, substance use, psychiatric disorders, feelings of being blamed, and men's insufficient responsibility. While several studies pointed out the importance of interventions for domestic violence, this study suggests that mental health and human services should consider multiple factors in the process of psychological or psychiatric support to enhance survivors' well-being.

Keywords: *Domestic violence, psychological support, women survivors.*

1. Introduction

The protection order is a common response to family violence. However, the effectiveness of the protection order is inconsistent and uncertain whether it facilitates women survivors' safety. Importantly, the protection order is only a short-term solution to prevent violence against women - as the offenders often violate the protection order- Considering the effectiveness of restraining orders, several studies reported that unemployed partners or having a history of arrests are unlikely to discourage by the threat of arrest and are more likely to violate the protection orders (Cordier et al., 2021; Zoellner et al., 2000). Further, some studies reported that restraining orders led to further violence (Messing et al., 2021; Messing & Thaller, 2014; Russell et al., 2012), higher rates of revictimization (Logan & Walker, 2010; Logan et al., 2006) and homicide for some cases (Morton, 1997). Therefore, some women may feel discouraged from using protection orders due to the fear of their partners' retaliation. Nevertheless, some studies showed that women, who sought a restraining order, believed that they made a good decision in terms of providing safety for their family (e.g., Logan et al., 2006; Richards et al., 2019). Moreover, former studies claimed that protection order lessened the odds of violence (Russell et al., 2012), trauma and stress symptoms, and increased self-esteem among women who obtained a protection order (Logan et al., 2006; Logan & Walker, 2010; Wright & Johnson, 2012). As seen in the previous research findings, protection orders hold a moderate effect on women's well-being. Recognizing the harmful consequences of domestic violence on women survivors and the importance of male perpetrators' taking responsibility, this research aimed to explore how women survivors who received protection orders the last six months describe attending psychological or psychiatric support with their (ex) husbands. This investigation can help us to understand the elements of having psychological support.

While the previous study findings about the women survivors' accessing mental health services results were inconsistent, several factors may impact seeking psychological support. For instance, women survivors with either depression or other psychological problems often used health services (Edmond et al., 2013). However, some women had not used any mental health services due to having multiple problems such as issues of accessing housing, legal services, and medical care. Therefore, it is suggested that practitioners working with women survivors should evaluate their post-traumatic stress disorder and depression to prepare effective treatments or effective referrals (Edmond et al., 2013). Considering the high rates of depression, substance abuse, and co-occurring disorders among domestic violence survivors,

domestic violence services need to provide accessible and effective mental health care as part of treatment protocols within their agency programs (Edmond et al., 2013). Moreover, the more extended longer-term needs of survivors should be addressed for long-term well-being. Notably, a few studies examined the effectiveness of group therapy among women survivors of intimate partner violence. For example, the efficacy of trauma-sensitive yoga in group therapy was investigated for female victims of partner violence (Clark et al., 2014). They found that reduced the symptoms of anxiety, depression, and post-traumatic stress disorder after the group therapy (Clark et al., 2014). Recognizing the importance of attending mental health and psychological support services for women survivors' well-being, this research investigates how survivors who received protection order describe receiving psychological or psychiatric support and how their (ex) husband attend any interventions.

Even though the number of reported domestic violence cases and women seeking protection orders are increasing worldwide, there is not enough research on this important issue. To prevent domestic violence and protect women, it is important to understand women's experiences of seeking help and attending psychological support during or after the protection orders. Therefore, this research has two goals: examining (a) women survivors' lived experiences of gaining protection orders and (b) perspectives of accessing psychological support among women survivors and male perpetrators. The overarching research question is: How do women survivors describe their efforts of having psychological or psychiatric support during or after the protection order?

2. Research design and methods

This article is based on data collected during a more extensive research study that examined the effectiveness of the domestic violence perpetrator program. As men's involvement in interventions is critical for the safety of family members, this article focuses on survivors' participation with psychological support. This qualitative study employed interpretative phenomenological analysis (IPA) to explore how women survivors experience domestic violence and determine how they receive psychological support. Semi-structured interviews and IPA were chosen because this methodology closely examines how participants make sense of accessing psychological support (Patton, 2002; Patton, 2014; Smith et al., 2009). This method gives an in-depth and unique understanding of phenomena by facilitating participants' expression (Sokolowski, 2000).

Five participants were recruited from the Violence Prevention and Monitoring Center which provides services to survivors of violence in Turkey. We invited women survivors who received protection orders within the last six months to examine their experiences during this order and other interventions for their well-being and safety. Participant inclusion criteria (a) being adult women (18 years or older), (b) having a history of (ex)husbands' violence in the relationship, (c) receiving a protection order within the last six months, (d) being able to understand study remit.

Of 25 women initially invited to participate, 5 met the criteria and agreed to attend interviews. Their mean age was 40, ranging from 32 to 46. Regarding socio-educational status, two had participated in primary school, three high schools. Three women had full-time jobs, and 2 were unemployed. Four were married, and one was divorced. All participants attempted to have therapy or psychiatric support.

2.1. Data collection and analysis

The data collection tool of the study is semi-structured interviews (e.g., Can you tell me about your relationship with your (ex) husband? How would you decide to receive psychological or psychiatric support? How did your (ex) husband respond to receiving psychological support?). The first author drafted questions for the interviews with women prepared. The interviews were recorded for transcription and took about 30-60 minutes.

The analysis of participants' statements followed the IPA method (Denzin & Lincoln, 1998; Denzin & Lincoln, 2012; Smith et al., 2009). The transcribed interviews were fed into NVivo20 to accomplish the purposes of qualitative data analysis. We used pseudonyms names in presenting the findings. A four-stage process (Giorgi & Giorgi, 2003) was applied to the transcripts: (a) writing reflexivity by the researchers on the implications of the study themes to identify any weaknesses, limitations, and prejudices relating to the phenomena; (b) readings of the transcripts by the researchers; (c) the horizontal coding of the broad fragments related to the phenomena according to the topics of the interview outlined; and (d) clustering of the data as supported by broad fragments. This process provides extracting themes from the participants' testimonies before interpretation (Denzin & Lincoln, 1998). Researchers experienced in qualitative data analysis and domestic violence independently coded the transcripts and identified themes. Then, they discussed emerging themes and field notes.

3. Results

According to the data analysis, two themes emerged: feelings of being blamed and husbands' rejection or preference to participate in therapy or psychiatric support. Women's loss of hope about (ex) husbands' resistance to attending therapeutic support increased despair. In this section, themes are presented using verbatim samples from the interviews.

When conflicts or discussions arise among couples, many women invite their husbands to receive couple therapy or individual psychological support before the protection orders. However, women were mostly frustrated with facing men's resistance to attending any treatment or interventions. Women's efforts to invite their (ex) husbands to participate in psychological support and therapy resulted in men's further psychological abuse, lack of responsibilities, and blaming women.

Men's oppression, blaming, insulting, and humiliating wives were key characteristics of (ex) husbands' resistance to attending any psychological support. Furthermore, blaming women was interconnected with men's perceived rightness positions:

Melis: And I've always said we should attend psychological support services. I've always said it throughout our marriage. I said: let's go to the family therapist together. Let's go to the regular psychologist, even if he's not there. Let's talk; let's explain. Let's do something together. Let's fix it. What he tells me is this, always this, I studied psychology at university. I can treat myself.

A few participants also shared (ex) husbands' revenge by using children. Blaming women based on other's gossip:

Nesrin: When I was pregnant, his aunt insisted that I smoke. I had just moved to their village. Then his sister complained that I was smoking. [She said she refused to do so]. My husband also believed her. We argued a lot over this slander.

Overall, males blaming women interconnected with men's paranoid thoughts of women betraying and irrational beliefs about their wife. Perceptions or suspicion of women betraying and male betray were linked to the gendered power relations as related women's responses were mostly not acceptable in the community. In this blaming issue, men did not take responsibility and not prefer to participate in therapy.

Women's depression due to the men's lack of responsibilities was also an important finding. While women tried to invite men to attend to participate in therapy, some women faced a lack of responsibility for their abusive acts. For instance, men mostly misunderstood the meanings of the therapy by focusing on the stigma around attending psychological support by indicating how they were not a mad person:

Sevda: After that, I said it last year, I said it in the years before that. This time, before these events happened, he told me that you would go to the mental health service. He told the psychiatrist. And I said, if you go, I will come, I will not go myself. He said, "I'm not crazy, I can't go."

Breaking the boundaries during childhood and the lack of responsibility were identified as key to men's resistance to attending such interventions:

Tutkun: How can I say, my husband is not a very responsive person, because there has always been someone in the neighborhood who turned their backs on them. You know, a responsibility, not much has been given in his life. Or, let me call him a relaxed person. Or seems to be comfortable. I mean, I think he's someone who has his own, family problems. I think he has problems stemming from his childhood. However, he never prefers attending a psychologist.

4. Discussion

In many societies, stigma can prevent women from seeking protection. Douki et al. (2003), for example, found that some families in Arab and Islamic communities consider domestic violence a family rather than a criminal issue. Furthermore, among black and minority ethnic groups, especially in the middle class, speaking out about violence may contradict women's social conditioning about being a "good wife" (Higginbotham, 1992; Simon-Kumar et al., 2017). Stigma is associated with silence, invisibility, and secrecy regarding violence against women, resulting in tolerance of violence. Thus, given this stigma and women's traditional roles in many communities, many women survivors do not call the police until their relatives or children intervene. Indeed, some women survivors said that a lack of support from their parents forced them to continue in an abusive relationship for years because of the risk of social isolation.

Regarding the protection orders, the perpetrators who are unemployed or have a history of offenses are more likely to violate the protection orders (Cordier et al., 2021; Zoellner et al., 2000) and often escalate their violence (Messing et al., 2021; Messing & Thaller, 2014; Russell et al., 2012).

We found that community pressures, economic struggles, and men's alcohol use are critical vulnerabilities that combine with the partners' inadequate communication skills insufficient to create abusive and violent interactions. The vulnerability-stress-adaptation model links these complex problems to violent or abusive acts (Karney & Bradbury, 1995). Although many participants reported being initially hesitant to apply for a protection order after their relationship became abusive due to their (ex) husbands' retaliation, they mostly said that the protection order was vital for their safety. This confirms previous findings that applying a restraining order is critical to ensuring the safety of family members (e.g., Logan et al., 2006; Richards et al., 2019). Several studies have demonstrated the importance of involving mental health services or psychological support in domestic violence cases (Clark et al., 2014).

5. Conclusions

Through the experiences of women survivors, this study revealed various factors triggering domestic violence toward them by their male partners and the process of receiving psychological support before a protection order against the perpetrators. These findings thus provide initial insights into how these women access mental health or therapy services among low- and middle-class communities. The present study suggests that it is crucial to empower these women and guide them on accessing psychological support for their well-being.

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THE EMERGENCE OF SCIENCE IN ENGLISH COURTS AND THE IMPACT ON THE “ULTIMATE ISSUE RULE”

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Abstract

The purpose of this research is to trace the origins of and rationale for scientific expert witnesses in English criminal law and to elucidate their contemporary significance and reciprocal interaction with the “ultimate issue rule.” The authors explore the history of how the expert witness has become an intricate part of the English court system and how the expert witness’s specialized knowledge and qualifications strongly impact case outcomes. The research methodology employed is the case study approach, both instrumental and collective. The study provides an analysis of critical legal cases, both historical and contemporary, in which a miscarriage of justice hinged directly on scientific expert testimony. Furthermore, the cases are analyzed to determine the role of the ultimate issue rule upon the weight given to the scientific expert versus the level of responsibility placed on the jury in interpreting and comprehending complex scientific evidence. The results of the case study indicate that a myriad of psychological constructs heavily influence the jury’s interpretation of expert witness testimony, including various forms of bias and psychological anchoring; witnesses themselves are also susceptible to deficiencies in statistical reasoning and bias. The authors discuss the pros and cons of the ultimate issue rule, ultimately arguing that, as scientific evidence becomes more complex and the evidence underpinning the case outcome continues to evolve, justice might best be served by continuing to place the ultimate issue in the hands of the jury. Relaxing the ultimate issue rule is, therefore, untimely. The implications of the study are that novel scientific techniques are not always accurate, and the fear of questioning the validity of an expert witness causes many costly appeals. These inconsistencies, as well as the need for improving the reliability and admissibility of expert scientific evidence, are critical, especially where miscarriages of justice are concerned. Furthermore, evaluation is needed for reforms to improve the overall confidence the justice system must provide for public trust. Limitations of the study are that cases available are limited to those published cases, which are typically appeals cases, as the initial court case is typically not published in available databases. The cases selected are representative of a small slice of English criminal law.

Keywords: *Ultimate issue rule, evidence, English criminal law, expert witness, miscarriage of justice.*

1. Introduction

Expert witnesses have been used in criminal cases since the late 1600’s. It was not until a century later that a precedent was created for expert witnesses in *Folks v. Chadd* (1782). Lord Mansfield in his dictation of the case gave expert witnesses the first formal authority to express an opinion. It was held that: “In matters of science no other witnesses can be called... Therefore we are of the opinion that his judgement formed on facts, was very proper evidence.” (at 58). The case became a landmark in that it gave science the authority to assess the facts of the case apart from the law. Although previous cases had been assisted by expert evidence, the trial judge could have also easily excluded when complex facts were required to be interpreted. In *Folkes v. Chadd* the terms “science and faculty” were used. In contrast to the Latin origin of the term “science” being knowledge, it appears that the term referred to the practical aspects of proof, answers, and explanations. It can be assumed that the term “faculty” referred to a particular discipline.

The judicial precedent that had been created for expert witnesses gave them a new profound status of having special knowledge beyond the law. The law courts, however, were unwilling to give science too much power, and, thus, created the rules of evidence. The expert’s opinion was identified as

being invaluable in *Folkes v. Chadd*. Yet the admissibility rules maintained control of what the expert was allowed to say.

The presenting of sound evidence is critical and strongly influences the “ultimate issue rule”; moreover, what this rule means to the overwhelming responsibility the jury has on interpreting and comprehending such complex evidence. Traditionally, expert opinion evidence about the ultimate issues of a case was not admissible because it would undermine the jury process and constitute a trial by expert (*R v. Doheny*, 1997; *R v. Jefferies*, 1998; *R v. Stockwell*, 1993). The motivation behind the exclusionary rule is, then, the desire to prevent the judge or jury from being usurped in their roles. Another worry is preventing the fact-finder from being unduly swayed by an unreliable expert judgment on a vital topic that will determine the outcome of the case (Fennell, 2003; Tapper, 1999). Recent cases indicate, however, that this criterion is rapidly becoming seen as overly restrictive. In addition, courts have historically struggled to define what constitutes the ultimate issue. This confusion has resulted in various interpretations of the guideline. Consequently, it has been gradually abandoned or, with careful language, evaded in this jurisdiction, in accordance with trends in the United States, Australasia, and Canada, to the point where it may be regarded as nearly outdated.

The authors investigate the advantages and disadvantages the expert witness has on the English legal system. The study discusses the complexities of expert evidence and the critical role it plays in miscarriages of justice throughout the centuries. It further evaluates the need for reforms to improve the overall confidence our justice system must provide for our public. In essence, the study aims to clarify the historical relevance of scientific expert witnesses in English criminal law and their reciprocal relationship with the “ultimate issue rule.” The writers examine the development of the expert witness in English law courts and the significant influence that the expert's expertise may have on the result of a case.

2. Design: case study method

The research technique adopted is an instrumental and collective case study approach. The former is employed for purposes other than gaining knowledge of the specific legal circumstance; it offers understanding of a problem or aids in the development of a theory. The case is just incidentally interesting; it serves as a tool to help us comprehend something else. The situation could or might not be viewed as usual. As for the latter, collective case study research enables the researcher to investigate variations between and within instances. The objective is to duplicate results across scenarios. Because comparisons will be made, it is essential that the instances be properly selected so that the researcher can expect similar or contrasting findings (Crowe, 2011). This paper analyzes significant judicial examples, both historical and modern, in which scientific expert testimony directly contributed to a miscarriage of justice. In addition, the cases are studied to establish the impact of the ultimate issue rule on the weight accorded to the scientific expert versus the amount of juror accountability in evaluating and comprehending difficult scientific evidence.

3. Case analyses

Case examples are examined to support the findings that expert evidence is a key component in solving crimes; however, there is much more work to be done, considering that many scientific techniques, even by today's technological standards, are considered flawed. Novel scientific techniques do not mean that it is always incorrect, but the fear of questioning the validity of an expert witness causes many costly appeals. These inconsistencies, as well as the need for improving the reliability and admissibility of expert scientific evidence, are critical, especially when miscarriages of justice are concerned.

3.1. Unreliable expert testimony: The Birmingham Six

In the months between 1973 and 1974 several bombings took place in England. The IRA was blamed. Consequently, eighteen suspects were arrested and convicted for involvement in the bombings. Years later, however, all of the suspects had their convictions overturned on the grounds of unreliable expert evidence. The “Birmingham Six” was one of the parties convicted. The party proclaimed their innocence and placed appeals. After intense media coverage, the appeal was granted.

The “Birmingham Six” were convicted for the bombing in 1974 of two Birmingham pubs. The prosecution used scientific evidence that two of the defendants had been in contact with nitroglycerine (NG). Thus, the ultimate issue in the case hinged directly upon the NG evidence. The case was refused a leave to appeal in 1976. A controversial television program aired in 1985 which highlighted flaws with the evidence in the case and, in particular, the tests used by the expert witnesses. Scientists had

demonstrated that the forensic evidence was, at best, inaccurate, and in 1987, an appeals judge recognized that the identical results could have been acquired by testing anyone who had recently handled playing cards or cigarette paper. The case was then sent to the Court of Appeal by recommendation of the Home Secretary. Nevertheless, the Court stood by the decision of the jury at trial. It was not until 1990 that the conviction was quashed on the basis of inconsistencies in the convictions. It raises questions as to how unreliable condemning expert evidence was allowed into the courts (Birmingham Six Case, 1974-2002).

3.2. Unreliable expert testimony: *R v. Sally Clark*

The case of *R v. Sally Clark* showed that there was unreliable expert evidence that had led to Clark's conviction for murdering her sons. Christopher died at eleven weeks and Harry at eight weeks. Christopher's death at first instance was concluded to be a result of Sudden Infant Death Syndrome (SIDS). Similarities were found in both the children's deaths. After Harry's death, Clark and her husband, both solicitors, were arrested for the murder of their children. Only Clark was eventually charged with the murder. The prosecution's argument concerning the ultimate issue of murder entirely hinged on expert testimony that it was extraordinarily uncommon for two infants to die within the same family; hence, it was highly plausible that the defendant murdered her children (*R v Clark*, 2000; *R v Clark*, 2003).

3.3. Unreliable scientific evidence: *R v Luttrell*

In the case of *R v Luttrell*, the expert was a well-educated deaf woman who read lips all her life; therefore, the expert witness evidence was deemed reliable and admissible. The case involved the theft of high value computer equipment. The expert translated the name of the perpetrator and the word "computer" from CCTV footage. On appeal, the admissibility was upheld and likened to the inherently flawed "facial mapping" techniques. The court reasoned that the expert opinion was one factor among many that weighed upon a jury's mind. Again, this reinforces the analysis that scientific techniques have their flaws, and the methodology is a key factor to consider if it is to be reliable and admissible in court (*R v. Luttrell*, 2004).

3.4. Admissibility of psychological expert testimony: *R v. Turner*

The leading case of *R v. Turner* (1975) governs the admissibility of psychological evidence. The defendant Turner was convicted of murder after having struck a girl repeatedly with a hammer whilst in his car. Turner pleaded provocation; however his conviction was overruled. Turner later appealed on the grounds that the judge had disallowed expert evidence from a psychiatrist to support his defense of provocation. The defense was based on the fact that Turner had been dating the girl and she admitted that whilst he was in prison, she had slept with several other men and had become pregnant. Turner argued that this was the catalyst that had provoked him to commit the crime (*R v. Turner*, 1975).

The defense called a psychiatrist to give evidence on Turner's personality and mental state. The psychologist stated that Turner was susceptible to being provoked. It was held, however, that the defendant did not have a mental illness (Mental Health Act, 1959). Therefore, the evidence was inadmissible and irrelevant. The grounds for refusing expert evidence were that the jury was quite capable of assessing normal emotions (see *R v. Chard*, 1971) and feelings and was, therefore, within the scope of the jury's experiences (Reece, 1998). The main issue in the Turner case was the protection of the jury to allow them to be able to hold the position as triers of fact. Lawton, L.J. argued that:

"... because it is unnecessary...Jurors do not need psychiatrists to tell them how ordinary folk who are not suffering from any mental illness are likely to react to the stresses and strains of life" (Redmayne, 2001).

Although Turner is the recognized case on psychological evidence, the principle is not new. In the earlier case of *R v. Chard* (1971) it was also held that psychological evidence was not admissible to assess a normal person's state of mind. Roskil, L.J. clarified this:

"... the admissibility of expert evidence, that it is not permissible to call a witness, whatever his personal experience, merely to tell the jury how he thinks an accused man's minds – assumedly a normal mind – operated at the time of an alleged crime." (*R v. Chard*, 1971).

Psychiatric evidence is a controversial area when considering expert evidence. The vast majority of rules on the admissibility of expert evidence are based on psychological evidence. This is because expert evidence before the last ten years was mainly psychological. The admissibility of psychological

expert evidence can have different consequences depending on who is involved. The courts are more inclined to admit psychological evidence when it concerns children or people with intellectual impairments. The courts are also likely to admit psychological evidence when it is regarding issues that the court is unable to determine.

3.5. Experts' novel techniques: *R. v. Gray*

In the case of *R v. Gray* in 2003, the Court of Appeal was concerned with the admission of facial mapping techniques or imaging evidence. An armed robbery at a Lloyds bank was the subject of the investigation. The thief displayed partial facial traits during the crime, which were captured by a CCTV camera. Police arrested a man driving a car that fit the description given by witnesses. The defendant denied that the image taken of him on CCTV was his. Witnesses were unable to pick the defendant out of a line-up. The Crown Prosecution Service hired Mr. Harrow, a specialist in imaging processing, who utilized a technique during the trial to compare the defendant's traits to those captured by security cameras. Mr. Harrow testified to a number of traits in both the defendant and the CCTV footage that matched. Individual features between the photographs were also detected by the expert. High elevated eyebrows, pronounced nose, lip chin fold, and the pronounced size of the lower ear lobe were among the characteristics. The jury was given the opportunity to compare the defendant in person with the CCTV footage. The Crown's case rested upon five pillars, one of which was the testimony given by Mr. Harrow. The jury found the defendant guilty (*R v Gray*, 2003).

Mr. Harrow's testimony was challenged on appeal. It was asserted in the appeal that Mr. Harrow had not mentioned that the method was based on any mathematical formula, that it was part of a national database, or that it was based on probabilities. Simply drawing this conclusion leads one to believe that the courts considered the lack of a scientific approach in facial mapping techniques to be the most significant factor in determining that the expert testimony was not reliable. Because there was no scientific process to follow, the court argued that face mapping should only be considered a subjective view because of this. It was emphasized that even though the opinions of experts can be considered, they should nevertheless be viewed with some degree of skepticism. In addition, Mr. Harrow was also found to have provided untrustworthy expert testimony on the facial mapping approach on multiple other court cases in which he was hired by the Crown. Mr. Harrow's expert testimony was therefore deemed untrustworthy. The appeal judge noted that these earlier incidents of the expert delivering untrustworthy evidence should have been highlighted in previous cases. The fact that untrustworthy expert evidence was admitted in a number of subsequent trials implies a breakdown in communication among the courts. While the courts are evaluating other admission requirements, it is critical that they also investigate the expert witness' previous background and reputation (*R v Gray*, 2003).

4. Results and discussion

This paper presents a number of wrongful criminal convictions that directly hinge on expert testimony. The case study's findings suggest that the jury's perception of expert witness testimony is significantly influenced by several psychological characteristics, such as different types of prejudice; witnesses are also vulnerable to weaknesses in statistical reasoning and bias. With the complexity of scientific evidence and the ever-changing nature of the case's supporting evidence, it may be in the greatest interest of justice to continue to leave the ultimate question in the hands of the jury. The ultimate issue rule should not be loosened at this time. The study's findings suggest that innovative scientific procedures are not always reliable, and that the reluctance to cast doubt on the credibility of an expert witness leads to many, expensive appeals. In the case of miscarriages of justice, these discrepancies and the need to enhance the trustworthiness and admissibility of expert scientific testimony are of the utmost importance. The public's faith in the judicial system depends on it, thus any proposed changes must be thoroughly evaluated. Since the original court case is not often recorded in public databases, the analysis is confined to the published cases, which are typically appeals cases. Only a limited subset of English criminal law is reflected in the chosen examples.

5. Conclusion

Overall, the paper's argument effectively explains the advantages and disadvantages of having expert evidence in the courts. The expert is necessary in certain cases to educate the jury so that they can make a conviction or acquittal through understanding the evidence of the case. What has been established is the necessity to provide careful instructions for the jury at all times as society plays a key role in the outcomes of cases due to the very sensitive nature of these cases. The limitations are that scientific techniques, such as DNA and fingerprinting, have been introduced in the courtroom in the early 1980's,

as well earlier influences which have helped our courts to solve many crimes but still there are many other techniques that are not widely accepted. There are other technologies that need to be more tightly controlled where the methodology should be the focus not the expert witness. The expert witness needs to answer to a higher standard order to ensure the reliability of the evidence. Moreover, the reliability of expert evidence stems from the competence of the expert witness. At present, the current English law recognizes that the expert witness is competent if he or she has sufficient knowledge of the evidence gained from either qualification and/or experience. These two requirements are not sufficient in controlling the reliability of the expert witness with the increase of scientific evidence. Relaxing, disregarding, abandoned or evaded during a time period when technology is rapidly advancing and methodologies may not be adequately vetted for the jury.

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THE EFFECT OF COGNITIVE LOAD, AGE AND DRIVING EXPERIENCE ON PROCESSING TIME IN AN EXPERIMENTAL TRAFFIC TASK

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Abstract

The general goal of this research was to examine risk factors in traffic that are related to the individual's cognitive abilities. Attention is very important for driving, because it allows us to focus our mental activity on selected information and neglect other irrelevant ones. But, attention has a limited capacity. During driving, the driver is affected by numerous distractors that can absorb available attention resources and make it difficult to process relevant data. Accordingly, we wanted to examine how increasing cognitive load affects reaction time in an experimental "traffic" task. We manipulated the cognitive load by adding another, auditory, task to the primary visual task, as an analogy with frequent distractors while driving, such as talking to a passenger or using a mobile phone. We also wanted to examine whether the effect of cognitive load differs among drivers of different ages, given that perceptual and cognitive changes occur as people get older. But, along with age, we also analyzed years of driving experience, because research has shown that this is an important aspect of driving behavior. The sample consisted of 279 drivers ($M=26,9$, $SD=8,6$) who voluntarily participated in the research. There were three factors in the study: cognitive load, age and driving experience. Reaction time was measured in an experimental task from the traffic domain, that was created in Psytoolkit online platform. The obtained results show that there is a main effect of cognitive load on reaction time. Subjects who had an additional task had an extended reaction time in the traffic task. There is also statistically significant interaction between cognitive load and age. When the cognitive load of a new task increases, younger drivers (younger than 33) react more slowly in the traffic task, while this is not observed in older drivers. An effect of driving experience on the RT is statistically significant. Subjects with the least driving experience have the shortest reaction time. The obtained findings indicate differences between drivers in cognitive information processing mechanisms and can be explained by the attention capacity model.

Keywords: *Cognitive load, driver attention, age, driving experience, processing time.*

1. Introduction

Driving is a complex activity that involves the integration of sensory information and their coordination with motor actions. In an attempt to explain driving activity, Rumar (1985) created a model that includes basic perceptual functions, limited cognitive capacities, memory and motivation. He particularly emphasized the importance of perceptual and cognitive errors that can significantly reduce road safety. With ideal vehicle performance and road conditions, a large number of accidents are caused by those human factors. A cognitive process that is particularly important for driving is attention. It is defined as a brain mechanism for selecting relevant information or as a cognitive state that is constantly changing and characterized by selectivity, intensity and dynamic character (Van Zomeren & Brouwer, 1994). Attention also functions like a spotlight because it enables the fastest processing of information that is in its focus (which is best "illuminated") (Posner, 1978). While driving the driver may be faced with a large number of distractors that can affect traffic safety. The most common distinction is made between visual, manual and cognitive components of distractors (Victor, Engström, Harbluk, 2008). Distraction is a phenomenon of inattention that causes a delay in recognizing and processing information that is necessary for the successful performance of a driving activity. Distraction refers to the various situations of dispersion of the driver's attention due to the fact that the driver temporarily focuses on something (object, person, task or event) that is not related to his driving. This can cause a delay in recognizing and processing information necessary for safety traffic (Hedlund, Simpson,

& Mayhew, 2006). The most researched distractor while driving is the use of the phone and the cognitive load associated with it. Driver's cognitive workload is defined as cognitive resources that are taken from the driver by any activity other than the driving itself (Engström et al., 2017). In the study of the impact of using a mobile phone as a distractor, the authors (Strayer & Johnston, 2001) indicated that it includes two aspects of attention engagement. The first refers to physical manipulation of the device itself, such as unlocking the phone, typing letters on the keyboard, typing or dialing a number from the contact list. Another aspect of engaging attention is related to communication - the process of exchanging information through a certain sign system that represents a form of "cognitive activity". The results of this research showed that the use and conversation on a mobile phone influenced the reduction of the number of accurate detections of traffic signs. This confirms the assumption of cognitive load and occupation of available attentional resources, which leads to interference in the processing of other relevant information.

Age can also be a significant factor in driving safety. As we get older, there are changes in perceptual and cognitive processes, which can significantly affect driving itself. Older drivers have more accidents due to sensory and decision-making processes, but younger drivers, on the other hand, participate in accidents due to excessive speed and risk taking (Verhaegen, Toebat, & Delbeke, 1988). Compared to older drivers, younger drivers report more frequent distractions while driving and increased fatigue (Lyon et al., 2020).

Experience is an important aspect of driving activity. Although most often there is an overlap of age and years of driving experience, there are also exceptions where a greater number of years of age is associated with a smaller number of years of driving practice. This usually occurs if an individual opts for driver's training in older adulthood. Research shows certain differences in driving behavior in relation to experience. Patten et al. (2006) found that inexperienced drivers have an increased reaction time to peripheral stimuli. They also have simpler and static patterns for recognizing traffic situations (Boy, 1998). Crundall and Underwood (1998) found that experienced drivers have greater variations in eye fixations on horizontal axes. Experienced drivers also chose appropriate visual strategies in relation to the type of road.

The main goal of this research was to examine the effect of cognitive load, age and years of driving experience on reaction time in a experimental traffic task. On the most general level, the research enables examination of risk factors in traffic that are related to the individual's cognitive abilities.

2. Methods

Two hundred and seventy-nine respondents, active drivers from the territory of Republika Srpska, aged from 19 to 55, participated in the research. Of the total number of participants, 104 were female. The experimental procedure was created in the online platform Psytoolkit. It consisted of four trials. In each trial, an intersection with vehicles was shown, and the subject's task was to determine which vehicle had the right of way. Reaction time was measured in each trial. An example of stimuli (traffic situations) is shown in Figure 1. The artistic and graphic preparation of the stimulus was done by Mirjana Despot (graphic designer).

Figure 1. Example of experimental stimulus.



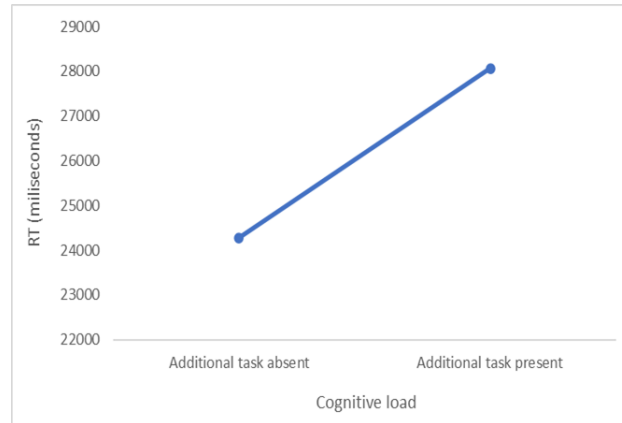
In order to examine the effect of cognitive load on the performance of the traffic task, an additional task was introduced for one group of participants. It was presented in the auditory sensory modality and consisted of the presentation of a word (color name) in intervals of 500 milliseconds, during which the participant had to keep track of how many times the word "blue" was spoken. This kind of experimental manipulation was introduced by analogy with the use of a mobile phone while driving, which is related to receiving information from the sense of hearing, and requires a certain cognitive

engagement. Through randomization, the participants were assigned to one of two experimental conditions (without additional task and with additional task). In addition to the experimental task, all participants also filled out a follow-up questionnaire that collected data on age and years of driving experience.

3. Results

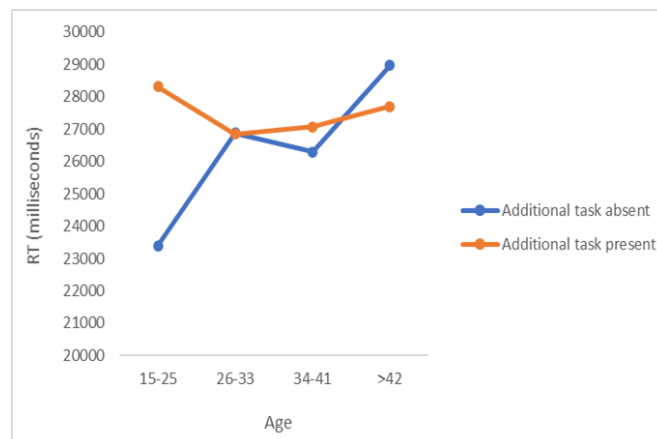
Analysis of the obtained data shows that there is a main effect of cognitive load on reaction time $F(1,279) = 26.741, p < .001, \eta^2 = .088$). Participants who had an additional task had an extended reaction time in the traffic task (Figure 2).

Figure 2. Reaction time depending on the cognitive load.



Results also show that there is statistically significant interaction between cognitive load and age $F(3,279) = 3.168, p < .05, \eta^2 = .034$). When the cognitive load of a new task increases with adding a new task, younger drivers (< 33 years) react more slowly in the traffic task, while this is not observed in older drivers (Figure 3).

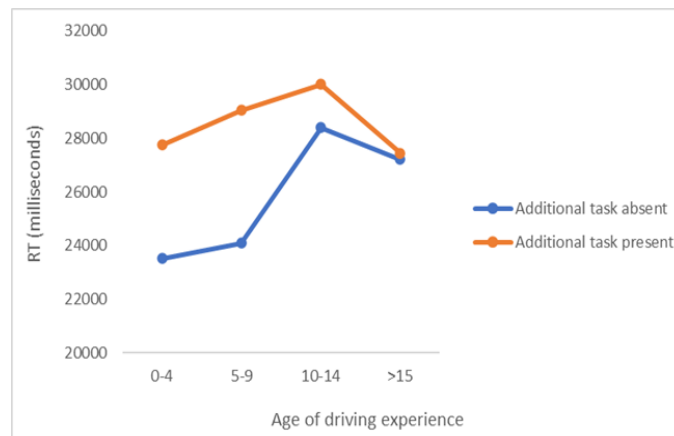
Figure 3. Reaction time depending on cognitive load and age.



Analysis of driving experience effect shows borderline statistical significance $F(3,279) = 2.420, p = .06, \eta^2 = .026$). Subjects with the least driving experience have the shortest reaction time, while the longest reaction time is present in drivers with 10 to 14 years of driving experience.

When the experimental factor (existence/absence of an additional task) is included in the analysis, the distribution of reaction times differs to a certain extent (Figure 4).

Figure 4. Reaction time depending on cognitive load and driving experience.



Although no statistically significant interaction between driving experience and cognitive load was obtained, individual comparisons between groups show that in drivers with up to 4 years of driving experience and those between 5 and 9 years, the reaction time in the task increases with the addition of another task.

4. Discussion

This study provided empirical data on the functioning of human cognitive processes in the context of a traffic task. The driver must select, process, encode and store or retrieve information in order to make the right decision in traffic. If an error occurs in that series of operations, driving safety is significantly reduced. Even greater problems can arise if the driver is affected by a large number of distractors that can make it difficult to process important information. In psychological research, this is known as cognitive load, and it is mainly examined during a dual-task experimental paradigm. Starting from the assumption that increasing the difficulty of tasks leads to an increase in cognitive load, we wanted to examine what effect it has on reaction speed in an experimental task from the domain of traffic. We also wanted to examine whether this effect is the same in drivers of different ages, as well as different years of driving experience. The obtained results show that cognitive load significantly affect reaction time. Drivers who had an additional task had an extended reaction time in the traffic task. By increasing the cognitive load, a larger part of the available attention resources is engaged, which leads to a slowdown in the processing of relevant information. This can be explained by the attention capacity model. But, significant interaction between age and the experimental manipulation was also found and it indicates that the effect of cognitive load is not the same for all participants. When the cognitive load of a new task increases, younger drivers (younger than 33) react more slowly in the traffic task, while this is not observed in older drivers. Such results can be explained by the findings of Lundqvist and Eriksson (2019), who showed significant positive effects of bimodal warning in a car. The additional task in our research belonged to the auditory modality, so it is possible that older drivers integrate information from different sources more easily than younger ones.

A similar explanation could be given for the effect of cognitive load on subjects with different driving experience. The most negative effect of the additional task can be observed in participants with fewer years of driving experience. Over many years of practice, drivers bring certain actions to a level of automation and more easily integrate information from multiple sensory systems. The results of earlier research also show that novice drivers, compared to more experienced drivers, have a longer processing time and a narrower scope of visual search, as well as that more experienced drivers manage better on more demanding sections of the road (Crundall & Underwood, 1998; Underwood et al., 2002), which can partially be applied to our results.

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STUDY ON THE RELATIONSHIP BETWEEN CREATIVITY AND BOREDOM

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Abstract

The connection between creativity and boredom has received attention from researchers, but with contradictory findings on whether boredom has a positive or negative influence on creative outcomes. To examine this issue, this study investigated how the state of boredom affects creative performance, assessing four dimensions of creativity: fluency, flexibility, originality, and elaboration. There were 25 participants, half of whom completed a boring task before completing a creativity task. The results suggested that the influence of boredom on creativity varied depending on the dimension of creativity. The study highlights the importance of specifying dimensions of creativity and suggests that taking on tedious tasks may help individuals achieve more creative performance.

Keywords: *Creativity, boredom, dimensions of creativity, Japan, university students.*

1. Introduction

Creativity is an essential ability for working and living in the 21st century (Donovan et al., 2014). Moreover, creativity plays an important role not only in developing innovation in the workplace (Zhou & Hoever, 2014) but also in making improvements in daily activities (Tanggaard, 2013). These notions confirm the importance of creativity in making something new, useful, and helpful for our social life. It is crucial to continue exploring various influential factors that influence creativity.

Since the 1950s, creativity has been studied in various fields such as psychology (Amabile et al., 2005; Guilford, 1950; Vodanovich & Watt, 2016), education (Kaufmann, 2003; Plucker et al., 2004), and management (Zhou & Hoever, 2014). Several studies reported important findings about the psychological factors of creativity, including motivation (Amabile, 1985), emotion (Gasper & Middlewood, 2014; Harris, 2000; Mann & Cadman, 2014), and environments (Amabile, 1982; Khatena, 1973). Among these factors, the present study focused on a particular emotion: boredom.

Over recent years, boredom has been much studied in the area of psychology (Chin et al., 2017). Boredom is considered a psychological and affective state related to monotonous and repetitive work (Eastwood et al., 2012; O'Hanlon, 1981), difficult tasks (Chin et al., 2017), settings without meaning (Fahlman et al., 2009), and low stimulation (O'Hanlon, 1981). People experience boredom everywhere and frequently in daily life (Bench & Lench, 2013). Typically, boredom is viewed as a hallmark of unproductivity. Indeed, boredom has been linked to a range of negative consequences (Fahlman et al., 2009). These include unsustained attention (Eastwood et al., 2012), and an increased number of mistakes (O'Hanlon, 1981)

Yet, there is a contrasting view that boredom might lead to a moment of inspiration. Even though boredom has a negative influence on mental activities, several researchers have suggested that the state of boredom may facilitate creativity (e.g., Burkus, 2014; Carroll et al., 2010; Harris, 2010). There are studies that suggested that boredom has a positive influence on creativity. The study of Mann and Cadman (2014) presented a positive relationship between the two constructs. The study assigned participants to a control group and an experimental group that experienced boredom by writing down telephone numbers. Both groups were required to do a creative task by listing as many different items as possible. The results of the study revealed a significant difference between the groups in terms of the number of writing items and an insignificant difference in terms of the quality rating of the items. Gasper and Middlewood (2014) found that participants who were induced to be bored or elated engaged in more associative thought on the association task than participants who were induced to be relaxed or distressed. It is suggested that the dimension of boredom vs. elation is important for creative performance. In contrast, the study of Haager et al. (2018) showed that boredom undermined creative performance. The study found that boredom

induced by repeated tasks can impede fluency in idea generation. With the inconsistency in empirical results, further investigation of the relationship between creativity and boredom is needed.

Based on the study of Guilford (1967), creativity can be divided into four dimensions: fluency, flexibility, originality, and elaboration. The current study examined whether there is a positive relationship between creativity and boredom with regard to the four dimensions. It is estimated that a level of higher boredom leads to a higher score on the assessment of the creativity test, and a lower level of boredom leads to a lower score. Thus, this study examined the following hypothesis:

- H1: A boredom condition leads to a greater number of responses on the creativity test than a control condition.
- H2: A boredom condition leads to more flexible responses on the creativity test than a control condition.
- H3: A boredom condition leads to more original responses on the creativity test than a control condition.
- H4: A boredom condition leads to more elaborated responses on the creativity test than a control condition.

2. Methods

2.1. Participants and sampling procedure

Initially, there were 26 participants in the main study, but one was eliminated since the instruction was erroneous. Therefore, data from 25 participants were used in the analysis. The participants in this experiment were university students in Japan, recruited from their acquaintance with the author, or from the course Biological Foundations of Mind and Behavior. Each participant was assigned to the boredom or control group with a randomization procedure.

2.2. Material

The boredom task was created with reference to the experiment done by Mann and Cadman (2014) and was consistent with the cognitive aspect of boredom discussed by Eastwood et al. (2012) in terms of the repetition of simple tasks. The participants in the boredom group were presented with an online document that contained a list of phone numbers and was asked to write down the number on paper for 10 minutes.

Creativity was measured by using a part of the S-A creativity test devised by Guilford (1967) to assess divergent thinking ability. The S-A creativity test asks participants to write down responses in three areas: (1) possible uses of an item; (2) desire for a particular item; and (3) possible consequences of novel circumstances that are unlikely to happen. The current study used the standardized version of this test in the Japanese language for only the third part of the S-A creativity, the consequence test, due to the concern of decreasing boredom as the creativity test continued. The consequence task (Wilson et al., 1954) was chosen because responses tend to have high rating scores (Hass & Beaty, 2018).

The content of the creativity test was shared with the participants from a laptop computer (Apple, MacBook Pro 13). The author and participants communicated online using Zoom (ver.5.8.4).

2.3. Procedures

An overview of the experiment was given to the participants, and they were asked to prepare their pen and paper. Participants in the experimental group then worked on the boredom task for about 10 minutes. They received a file with a list of telephone numbers via email and were asked to write down as many as they could. After completing the task, they described the degree of boredom they felt during the task on a 5-point Likert scale (1 = Not boring at all, 5 = Extremely boring).

In the next phase, participants performed the S-A creativity test. The content of the test was shared on the experimenter's computer screen. Participants were asked to write down a list of consequences in each scenario. They were instructed to produce as many consequences as possible for a given prompt. There were two questions, and participants were given 5 minutes to answer both questions. Upon finishing the creativity test, all participants were asked to take photographs of their responses and answers and to send the data to the author through e-mail.

The experiment for the control group had only the second phase. After being given the overall instruction for the experiment, participants moved directly to the S-A creativity test.

2.4. Evaluation of the creativity task

Four criteria were used to evaluate creativity: fluency, flexibility, originality, and elaboration. The general explanation for each criterion was introduced by the excerpt from the evaluation manual of

the official S-A creativity test. (Society for Creative Minds, 1969, as cited in Takeuchi et al., 2014). The score was determined by two raters: the author of this study and Saccess Bell, a third party. The third-party evaluation was used to obtain more reliable results and compare them with the author's analysis. The author evaluated fluency, flexibility, and originality, and the scoring agent evaluated those criteria and elaboration. The analysis was based on the general instructions for the test (Society for Creative Minds, 1969, as cited in Takeuchi et al., 2014).

2.5 Statistical design

The experiment was conducted in a between-participants design. The independent variable was boredom experience, and the dependent variable was creative performance. To analyze the effect of boredom on creativity, an independent *t*-test was used to investigate the mean frequency of the number of answers given as well as to examine the mean scores of flexibility, originality, and elaboration.

3. Results

There were 12 participants in the boredom condition and 13 in the control condition. Participant responses considered repetition or irrelevant were omitted from the analysis. Table 1 provided the overall mean, standard deviation, *t*-value, and significance for each criterion of creativity. The mean score of boredom felt during the boring task in the experimental group was 2.41.

Based on the author's evaluation, the results of the independent-samples *t*-test revealed that the difference in the number of responses between the two groups was significant: $t(23) = 2.15, p < .05$. Based on the scoring agent's evaluation, the *t*-test showed a marginally significant difference in the number of responses between the two groups: $t(23) = 1.85, p < .10$. Using data from the author's evaluation, the results demonstrated that the categories of responses between the two groups were marginally significant: $t(23) = 1.81, p < .10$. Using data from the scoring agent, the results revealed that the difference between the two groups was not significant: $t(23) = 1.40, n.s.$ Based on assessments of both the author and the scoring agent, the difference in points given to rare responses was not significant between the two groups: $t(23) = 1.30, n.s.$ for the author; $t(23) = .78, n.s.$ for the scoring agent. According to the scoring agent's evaluation, the results of the independent-samples *t*-test illustrated that the difference in the detail of the ideas between the two groups was significant: $t(23) = 2.37, p < .05$. The finding demonstrated that the boredom group produced significantly more elaborate responses than the control group.

4. Discussion

The current study used an experimental design to examine whether a state of boredom affects creativity. The method used to induce boredom was the telephone writing task, and the person's creativity was measured with a part of the S-A creativity test asking about the consequence of a particular event. Creativity was examined in four dimensions: fluency, flexibility, originality, and elaboration.

Overall, the results indicated the partial acceptance of the hypothesis related to fluency, slight acceptance of flexibility, rejection of originality, and acceptance of elaboration. This suggested that being bored might be beneficial in increasing the fluency for the creativity test. This implied that boredom could bring more detailed responses in the creativity test. Accordingly, boredom's influence on creativity depends on the dimension of creativity. This notion indicates the need to further investigate those relationships, particularly the two creativity aspects of fluency and flexibility due to the partial or slight acceptance of the relationships. Also, it might support a premise derived from the review of literature that relationships between creativity and boredom are inconsistent. That is, some dimensions of creativity may be affected by boredom, while others may not. It will be important to specify which dimensions of creativity are investigated when a creativity study relates to boredom.

4.1. Comparison with the previous result

The results suggest that a boring state may enhance creativity in terms of fluency. This tendency is largely aligned with the findings of past research. In part of the study of Mann and Cadman (2014) using a creativity task, the number of answers obtained was significantly greater when a higher level of boredom was experienced. On the other hand, the current study contradicts the results of Haager et al. (2018), which demonstrated a decrease in fluency performance as more boredom was induced. Thus, the findings of this study reinforce the hypothesis that a boring state increases fluency performance. In a qualitative analysis of creativity, Mann and Cadman (2014) further noted that the originality ratings were higher after completing boring tasks. Although the present research reported a higher originality score for

boredom conditions in general, the effect was insignificant. Hence, the current research could not replicate previous findings.

With regard to flexibility and elaboration, little research has analyzed those dimensions in the context of boredom. Without the factor of boredom, flexibility was used as a criterion of creativity in studies by Iwasaki (1971) and Yamaoka and Yukawa (2016). Some studies dealt with the topic of creativity using the criteria of flexibility (Iwasaki, 1971; Yamaoka & Yukawa, 2016) and elaboration (Suryandari et al., 2021). The influence of boredom on other dimensions of creativity such as flexibility and elaboration needs to be further examined.

4.2. Limitation

A major limitation of this study related to the assessment of qualitative data collected from participants. The correlation between the author's and the scoring agent's assessment was significant for fluency and flexibility but insignificant for originality. For originality, the raters used different criteria to judge the rarity of the answer. The author inferred the rarity of the answer based on the sample data acquired through this experiment. However, the scoring agent could identify based on data accumulated in the past.

4.3. Implications

The current study offers both methodological and practical implications. A methodological implication, as mentioned above, is to focus on dimensions of creativity. The findings of this study were varied in terms of the effects of boredom on dimensions of creativity. Thus, it is crucial to specify which component of creativity needs to be analyzed.

The study also provides practical implications related to feelings of boredom in the workplace and education sector. The current study implied that boredom may have some benefits in itself. Embracing a sense of boredom at work or school could be worthwhile. For individuals attempting to resolve an issue or propose a creative solution, the results of the present study indicate that taking on a tedious task may help them achieve more creative performance.

Table 1. Relation of Boredom to Creativity Elements of Fluency, Flexibility, Originality, and Elaboration in the Experimental and Control Groups.

Creativity dimensions		Author			Scoring agent		
		Experimental	Control	<i>t</i>	Experimental	Control	<i>t</i>
	<i>N</i>	12	13		12	13	
Fluency	Mean	17.40	12.30	2.15*	15.08	12.31	1.85†
	<i>SD</i>	7.97	3.08		4.42	3.01	
Flexibility	Mean	10.50	8.31	1.81†	10.00	8.85	1.40
	<i>SD</i>	3.66	2.32		2.34	1.77	
Originality	Mean	3.83	2.46	1.30	3.92	3.31	0.78
	<i>SD</i>	3.07	2.18		1.98	1.93	
Elaboration	Mean				14.08	11.15	2.37*
	<i>SD</i>				3.50	2.58	

* $p < .05$; † $p < .10$.

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RELATIONSHIP BETWEEN APATHY AND COGNITIVE FUNCTIONS IN PARKINSON'S DISEASE

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Abstract

Although apathy and cognitive impairment are among the frequently reported neuropsychiatric symptoms of Parkinson's disease (PD), the relationship between apathy and cognitive functions in Parkinson's disease has not been adequately explained. In this study, we aimed to reveal the relationship between apathy and cognitive impairment by evaluating the cognitive functions of PD patients with and without apathy, using neuropsychometric tests. The inclusion criteria for this study was diagnosis of PD according to the criteria of "United Kingdom Parkinson's Disease Society Brain Bank". Patients were distributed into groups based on their AES scores (cut-off point=38) and NPI Apathy subscores, together with the clinical evaluation. PD patients with apathy (n=32) were assigned to the a+PD group, and PD patients without apathy (n=45) to the a-PD group; age, education level, HYS and CDR stages were matched. The cognitive functions of the patients in both groups were evaluated using the following tests; personal and current information subtest of the WMS, orientation subtest of WMS, verbal fluency tests, abstraction skills tests, Stroop Test Çapa Version, Clock Drawing Test, visual memory subtest of WMS, logical memory subtest of WMS, Öktem-VMPT, BNT, BFRT, Yesavage GDS, NPI and MMSE were used. For the evaluation of the motor and non-motor clinical symptoms; the UPDRS, HYE, UM-PDHQ, and RBDSQ were used. Independent Sample t-test was carried out to compare the normally distributed variables between the PD groups with and without apathy, and for the non-normal distributed variables Mann-Whitney U test was utilized for comparison. Results of the statistical analysis showed, in PD patients with apathy; depression scores are increased; orientation and abstract thinking skills are impaired; and attention span, verbal fluency, performance in visual and logical memory tests, and cognitive flexibility are decreased. Overall, these findings suggest that clinical and cognitive features of PD patients with apathy differ from PD patients without apathy; and multifaceted decline is observed in neuropsychometric profile of parkinsonian apathy.

Keywords: Apathy, cognitive functions, neuropsychological assessment, Parkinson's disease.

1. Introduction

Parkinson's disease (PD) manifests a heterogeneous profile of clinical syndromes with motor and non-motor symptoms (Greenland et al., 2019). Non-motor symptoms may precede the diagnosis of PD, and the underlying pathophysiology has not yet been clearly elucidated (Schrag et al., 2015). Apathy is one of the frequently reported non-motor symptoms in PD and is defined as a decrease in emotional, behavioral, and cognitive components of goal-directed behavior, based on a lack of motivation, loss of interest, emotional bluntness, and lack of energy (Levy & Dubois, 2006; Marin et al., 1997; Marin et al., 1991).

Parkinsonian apathy is believed to involve several different pathophysiological mechanisms, depending on the stage of the disease and comorbid neuropsychiatric conditions (Santangelo et al., 2013). There are studies showing that frontal-subcortical system dysfunction, specifically damage to the prefrontal cortex-basal ganglia circuit leading to apathy. (Santangelo et al., 2018; Chase, 2011; Levy & Dubois 2006). The apathy symptom in Parkinson's disease is thought to be stemming from lesions in the ventral striatum and dopamine deficiency in the frontostriatal circuitry (Baggio et al., 2015; Levy & Dubois, 2006).

Neuropsychology studies show that executive dysfunction is the most consistent neuropsychological sign of apathy (Santangelo et al., 2018; Dirnberger & Jahanshahi, 2013; Brown & Pluck, 2000). Impairments in executive functions cause difficulties in directing attention to novel stimuli, problems in planning, and difficulties in manipulating internal and external stimuli (Lewy & Dubois, 2006). These impairments can lead to decreased cognitive interests and auto-activation deficits.

One of the reasons why the pathophysiological mechanism underlying the development of apathy in Parkinson's disease remains unclear is that it is difficult to evaluate apathy in Parkinson's patients due to motor symptoms such as the masked face, dystonia, and bradykinesia. Therefore, it is thought that applying apathy assessment scales to both the patient and their caregivers may provide more reliable results (Kirsch-Darrow et al., 2006). Another reason is that the clinical manifestations of apathy are multidimensional. In a study conducted by Pagonabarraga et al. (2015), apathy is classified into 3 sub-groups as emotional/affective apathy, cognitive apathy, and auto-activation apathy, after considering both the clinical manifestations of apathy and the findings of functional neuroimaging studies. Defining the subtypes of apathy and using specific neuropsychiatric assessment tools for each of these subtypes can help resolve different aspects of apathy at an individual patient-level (Leentjens et al., 2008; Schrag et al., 2007).

In this study, the neuropsychological assessment was performed in PD patients with and without apathy in order to determine the neuropsychological correlates of apathy in Parkinson's disease and thus contribute to clarifying the pathophysiological mechanism of apathy.

2. Methods

2.1. Participants

77 participants who were diagnosed with PD according to the United Kingdom Parkinson's Disease Society Brain Bank criteria were included in the study. Participants with suspected Parkinson-plus syndromes and a medical history of alcohol/substance abuse, stroke, head trauma, intoxication, and epileptic seizures were excluded from the study.

Participants were assigned to a+PD group (n=32) and the a-PD (n=45) group as a result of clinical evaluation, scores from the AES (cut-off point=38), and the NPI apathy subscale. Groups were matched by age, education level, HYE, and CDR stages. The Unified Parkinson's Disease Rating Scale (UPDRS), Hoehn Yahr Parkinson's Rating Scale (HYS), University of Miami Parkinson's Disease Hallucination Scale (UM-PDHQ), and REM Sleep Behavior Disorder Screening Questionnaire (RBSQ) were used to evaluate clinical symptoms. All participants were right-handed.

2.2. Data collection

Data were collected by demographic information form and neuropsychometric inventory. The neuropsychometric inventory includes personal and current information subtest of the Wechsler Memory Scale (WMS), orientation subtest of WMS, verbal fluency tests, abstraction skills tests, Stroop Test Çapa Version, Clock Drawing Test (CDT), visual memory subtest of WMS, logical memory subtest of WMS, Öktem Verbal Memory Processes Test (VMPT), Boston Naming Test (BNT), Benton Face Recognition Test (BFRT), Yesavage Geriatric Depression Scale (GDS), Neuropsychiatric Inventory (NPI) and Mini-Mental State Examination (MMSE). Neuropsychological assessment was completed in approximately 2 hours.

2.3. Statistical analysis

SPSS (statistical package for social science) 25.0 for Windows was used for statistical analysis. For the variables that met the normality criteria, parametric tests were applied, and for the variables that did not meet the criteria non-parametric tests were applied. In cases where the variables were normally distributed, the Independent samples t-test was used, and in cases where the variables were not normally distributed, the Mann-Whitney U test was used. The significance value was accepted as $p < .05$.

3. Results

Statistical analysis results showed that UPDRS total scores ($t(75) = -2.110, p < .05$), GDS scores ($t(75) = -3.209, p < .01$), AES scores ($t(75) = -15.234.110, p < .001$), NPI total scores ($U = 484, p < .05$), and NPI caregiver distress scores ($U = 520, p < .05$) of the a+PD group were significantly higher than the a-PD group. The demographic and clinical characteristics of the participants are shown in Table 1.

Table 1. Demographic and clinical characteristics of sample.

	a+PD n = 32	a-PD n = 45	<i>t</i>	<i>p</i> -value
	Mean (SD)	Mean (SD)		
Age (years)	72.22 (6.65)	68.67 (9.57)	-1.810	.074
Gender (female/male) ^a	14/18	17/28		.598
Education (years)	5.66 (4.67)	7.37 (4.14)	1.694	.094
Duration of disease (months) ^b	87.19 (54.05)	89.55 (58.30)		.882
UPDRS total score	50.41 (17.05)	41.51 (19.02)	-2.110	.038*
Hoehn and Yahr Stages ^{a,c}	Stage 2	Stage 2		.908
GDS	13.16 (7.93)	8.09 (5.93)	-3.209	.002**
AES	45.31 (8.18)	22.33 (2.88)	-15.234	<.001***
CDR ^{a,c}	1.0	1.0		.130
NPI total score (frequency × severity) ^b	19.81 (14.78)	12.98 (12.81)		.015*
NPI caregiver distress score ^b	11.06 (8.32)	7.69 (7.13)		.038*
UM-PDHQ	2.41 (4.03)	3.02 (3.86)	.677	.500
RBDSQ	4.06 (2.29)	4.04 (2.31)	-0.034	.973

Note. **p* < .05; ***p* < .01; ****p* < 0.001; AES = Apathy Evaluation Scale, CDR = Clinical Demantia Rating, GDS = Yesavage Geriatric Depression Scale, NPI = Neuropsychiatric Inventory, RBDSQ = REM Sleep Behavior Disorder Screening Questionnaire, SD = Standard Deviation, UM-PDHQ = University of Miami Parkinson's Disease Hallucination Scale, UPDRS = Unified Parkinson Disease Rating Scale.

^a Chi-square test was used.

^b Mann-Whitney U test was used.

^c Median values are shown.

WMS personal and current information scores ($t(75) = 2.875, p < .01$), WMS personal and current information scores ($t(75) = 2.774, p < .0$), forward digit span ($t(75) = 2.554, p < .05$), reverse digit span ($t(75) = 3.664, p < .001$), visual memory immediate scores ($t(74) = 2.381, p < .05$), logical memory immediate scores ($t(74) = 2.977, p < .01$), logical memory delayed ($t(74) = 4.682, p < .001$), phonetic fluency scores ($U = 412, p < .05$), semantic fluency scores ($t(75) = 3.579, p < .01$), alternating word fluency scores ($t(75) = 5.239, p < .001$), Stroop interference scores ($U = 383, p < .05$) binary similarities test scores ($t(75) = 3.307, p < .001$), CDT scores ($t(75) = 2.510, p < .05$), and BNT scores ($t(75) = 3.756, p < .001$) of the a+PD group were significantly lower than the a-PD group. The neuropsychometric findings of the groups are shown in Table 2.

Table 2. Neuropsychological characteristics of a+PD and a-PD groups.

		a+PD n=32	a-PD n=45	<i>t</i>	<i>p</i> -value
		Mean (SD)	Mean (SD)		
General Cognitive Function	MMSE	20.00 (3.91)	21.29 (5.12)	1.248	.216
Personal and Spatial Orientation	WMS personal and current information	3.78 (1.58)	4.71 (1.25)	2.875	.005**
	WMS orientation	2.88 (1.79)	3.91 (1.33)	2.774	.008**
Digit Span	Forward digit span	4.22 (0.94)	4.80 (1.01)	2.554	.013*
	Reverse digit span	1.97 (1.18)	2.89 (1.03)	3.644	<.001***
Verbal Memory	VMPT learning	49.03 (20.47)	59.00 (22.76)	1.974	.052
	VMPT delayed recall	3.78 (2.95)	4.67 (3.30)	1.211	.221
	VMPT recognition	4.88 (3.00)	6.24 (3.21)	1.896	.062
Visual Memory	Visual memory immediate	3.81 (2.22)	5.48 (3.84)	2.381	.020*
	Visual memory delayed	2.50 (2.0)	3.77 (3.57)	4.840	.052
Logical Memory	Logical memory immediate	8.88 (3.28)	11.68 (4.93)	2.977	.007**
	Logical memory delayed	6.19 (4.03)	11.41 (5.29)	4.682	<.001***
	Phonetic fluency ^a	13.59 (8.15)	20.66 (11.81)		.011*
	Semantic fluency	10.56 (4.18)	14.78 (5.65)	3.579	.001**
Executive Functions	Alternating word fluency	2.34 (1.89)	5.07 (2.67)	5.239	<.001***
	Stroop interference score ^a	110.23 (56.25)	85.33 (38.66)		.029*
	Proverb interpretation task	1.97 (1.38)	2.33 (0.93)	1.300	.199.
	Binary similarities test	6.09 (2.25)	7.69 (1.96)	3.307	.001**
	CDT	1.88 (1.33)	2.67 (1.33)	2.510	.014*
Language	BNT	19.19 (5.85)	23.77 (4.78)	3.756	.001**
Visuospatial function	BFRT	37.78 (5.72)	38.77 (5.58)	0.749	.456

Note. * $p < .05$; ** $p < .01$; *** $p < 0.001$; BFRT = Benton Face Recognition Test, BNT = Boston Naming Test, CDT = Clock Drawing Test, MMSE = Mini Mental State Examination, VMPT = Öktem Verbal Memory Process Test
^a Mann-Whitney U test was used.

4. Discussion

Previous studies showed that apathy in PD is associated with depression (Oguru et al., 2010, Starkstein et al., 2009; Kirsch-Darrow et al., 2006), executive dysfunction (Lee, 2020; Sinha et al., 2013), anxiety (Santangelo et al., 2013; Gallagher & Schrag, 2012) and personality traits (Pluck & Brown, 2002). Our findings showed that the depression scores of the a+PD group were higher than the a-PD group. This finding was expected given the overlapping symptomatology of apathy and depression. However, there is no consensus on the relationship between depression and apathy in the literature. While some researchers argue that apathy emerges as a sign of depression (Starkstein et al., 2009; Pluck & Brown, 2002), others argue that apathy should be considered a separate syndrome independent of depression (Kirsch-Darrow et al., 2006).

In our study, it was found that the verbal fluency scores of the a+PD groups were lower compared to the a-PD group. In previous studies, verbal fluency tests are shown to be tasks that are sensitive to frontal and language functions, and reflect the impairment in verbal fluency, executive dysfunction, and loss of language functions (Whiteside et al., 2016; Herrera et al., 2012). It was also reported that verbal fluency was lower in patients with PD (Henry et al., 2004). This finding was interpreted as a marker of progressive impairment of executive functions in PD patients without dementia (Azuma et al., 2003). Consistent with previous findings, Santangelo et al. (2007) claimed that decreased phonological fluency may predict the development of dementia in PD patients. In addition, the a+PD group had a higher Stroop interference score compared to the a-PD group. This finding can be explained in relation to the deterioration in inhibition and cognitive flexibility skills (Santangelo et al., 2018).

Impairment in memory and learning processes observed in PD patients was interpreted as secondary type memory deficit attributed to frontal dysfunction (Ivory et al., 1999). Similarly, in our study, visual memory and logical memory functions of a+PD were observed to be impaired compared to the a-PD group. This finding may indicate loss of memory functions and impairment in attention functions. Our results show that the proverb interpretation task and binary similarities test scores of the a+PD group were lower than the a-PD group. These findings can be explained by the abstraction skills of PD patients with apathy being impaired. In addition, it was observed that the personal and current information and orientations of the a+PD group were lower than the a-PD group. Finally, the higher NPI scores of the a+PD group compared to the a-PD group indicate that parkinsonian apathy creates extra distress for caregivers.

Considering that neuropsychometric assessment is a performance-based measurement and can be affected by motivation level, parkinsonian apathy is associated with multi-domain cognitive impairment in which executive dysfunction is prominent.

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NON-BIASED CFACS MEASUREMENT TOOL: FROM IDEA TO SOFTWARE APPLICATION

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Abstract

We would like to draw the readers' attention to our method of precise facial expressions analysis. Our research pursued two main objectives: (1) developing the methods and algorithms for the direct evaluation of facial expressions using computer vision (CV) technology; (2) creating software for conducting empirical research in psychology and related subjects. We have developed an authentic implementation of cFACS (Rosenberg, Ekman, 2020) as an approach to computer facial expressions analysis. We would like to stress that at present, the neural network approach is de facto dominant. The approach is based on the basic emotions concept, and on the assumption that a neural network can be trained to recognize emotions using a respective set of pictures, or, more rarely, videos. In our opinion, implementing this approach is limited (Baev et al., 2021). We have applied a comprehensive approach to the analysis of facial activity, based on detecting and analyzing time-defined FACS action units' (AUs) combinations. The chosen approach has obvious advantages: 1) employing AUs as facial activity analysis units; 2) the feasibility of assessment of individual features of facial activity; 3) racial and age biases becoming irrelevant. While developing the software, two major methodological principles have been used: 1) the direct assessment of facial surface movements aiming to detect AUs, coupled with the deliberate rejection of employing neural networks for facial events classification; 2) modelling an expert's perception of facial surface movements' peculiarities while detecting certain AUs, taking into account the general topography of facial surface movements. We have developed the EmoRadar software, using our proprietary CV procedures that allow us to evaluate facial surface changes in the areas corresponding to different AUs. In the process, there was created a system of rules, based on which the "raw" data on lighting changes transform into surface movements, and those, in turn, convert into AUs, and, further on, into basic emotions and patters of facial activity. In the course of our software's empirical verification, the method of automated analysis of job interviews was created. We have also performed automatic evaluation of video recordings for forensic psychological examinations and analyzed participants' emotional dynamics, participating in the "SIRIUS-21" project of the Institute of Biomedical Problems of the Russian Academy of Sciences. We believe that the implementation of the above-mentioned principles of the direct approach to facial activity registering and the comprehensive approach to its analysis provides tangible advantages:

- High accuracy of facial surface movements assessment.
- Feasibility of conducting all kinds of facial analysis (basic emotions, basic emotions emblems, facial activity patterns) based on reliable allocation of 22 main AUs.
- Complete absence of racial bias.
- Feasibility of assessing children's facial activity (up to 5-7 years old).
- Independence from theoretical approaches to the facial expressions analysis (P. Ekman, K. Scherer, L. Feldman Barrett, H. Oster).

Keywords: FACS, emotions, affective computing, facial expressions, computer vision.

1. Introduction

In the psychological studies of today, a toolkit for automatic analysis of a person's emotional state by his/her facial expressions is becoming more and more acclaimed. In our opinion, somewhat of a paradox has emerged: each year the volume of videos increases, while no software, allowing to reliably assess facial expressions on an expert level, has been developed. Specialists able to professionally code mimic activity and categorize various facial expressions as emotional states' manifestations, are critically few; given this

deficit, we observe an obvious lack of software intended for research and empirical work that require exact and objective assessment of an emotional state of the person whose face appears in the video.

We believe that the quality of the existing software is, for now, rather low, and the hope that neural networks will soon learn to do that, is yet to be fulfilled. Our own research, and our fellow psychologists' experience have proved that the work by the leading world companies in the sphere of affective computing, such as Microsoft Azure, Amazon Rekognition, and Noldus FaceReader, does not provide the required precision and reliability of the automatic assessment of either the basic emotions, or separate Facial Action Coding System (FACS) Action Units (AUs).

Thus, we present the results of our own software development for precise and non-biased facial expressions analysis, and the preliminary outcomes of the empirical research carried out with the help of our software. We also propose a substantiation of the approach used in the process of our software development.

We have applied cFACS (computer FACS) (Ekman, 2020) in the course of facial expressions analysis based on our CV procedures. We'd like to emphasize that the neural network approach is currently de facto dominant. It is based on the discrete emotions concept and an assumption that consistently applying a training set of pictures it is possible to train a neural network to recognize emotions. In our opinion, this approach has limitations (Baev et al., 2021).

2. Substantiation of our approach

Our approach to mimic activity assessment is based on the FACS, created by P. Ekman and his colleagues (Ekman, Friesen, Hager, 2002), which was widely recognized as a method of universal description of facial expressions. The base element of the analysis by FACS is an Action Unit (AU), understood as the characteristic change of the face surface in the form of a single movement of, e.g., lips, brows, eyelids, nasolabial folds. A certain combination of AUs allows to single out an expression of seven basic emotions (Ibid.). It should be underlined that FACS does not define the theoretical base for singling out and assessment of the basic emotions.

Now in the sources there is a discussion on what emotions are reflected in the facial expressions, and how they are expressed (Rosenberg, Ekman, 2020, Davidson, Scherer, Goldsmith, 2003, Feldman Barrett et al., 2019); thus, we focus on the fact that FACS and its computer adaptation, cFACS is the system that can be used to detect expressions of emotions and other facial activity patterns on the face, regardless of the way different authors understand the task of detecting emotions on a person's face. The latter is especially important, because even professional psychologists quite often blend these two problems, i.e., *describing* facial expressions, and *categorizing* them as emotional expressions.

In the sources, there are two main approaches to the solution of the task of automated analysis of facial expressions presented on a video recording (Rosenberg, 2020). The *selective* approach is based on establishing correspondence between the facial expression seen in the video, and a sample of basic emotions and/or AUs, beforehand annotated by experts.

Its peculiarities and flaws are as follows:

1. It applies a neural network trained by a limited, and, as a rule, low-variant selection of the images of people's faces;

2. Because the training datasets are limited, fast facial expressions of the face (microexpressions) are either detected badly, or not at all;

3. To train a neural network, one needs datasets of images of the faces belonging to people of various sex, age and ethnicity;

4. A manual tuning of the sensitivity of triggering of the used neural network algorithms is required.

The *comprehensive* approach is based on detecting and analyzing time-defined FACS AUs combinations. Its peculiarities are as follows:

1. Using FACS allows to describe all the possible facial expressions;

2. Feasibility of assessing asymmetrical facial movements and microexpressions of emotions;

3. Feasibility of assessing the individual variability of facial expressions, i.e., instances of hyperkinesis, mannerisms, mimical dialects;

4. It is free of racial bias;

5. While analyzing a video recording, one assesses the individual dynamics of facial expressions of a certain given person, which is why there is no need to tune the computer system in accordance with the specifics of the task in question;

6. There are no age limitations, because it is AUs emergence that is described, but not emotions.

The algorithms of the facial expressions computer analysis that we have developed, are based on the comprehensive approach and the following principles:

1. The direct assessment of the facial surface aimed at detecting AUs and deliberate rejection of employing neural networks for facial events classification;
2. Modelling an expert's perception of facial surface movements' peculiarities while detecting certain AUs.

To implement the comprehensive approach, we have developed authentic CV procedures, that were specifically focused on the movement of certain parts of the facial surface and characteristic peculiarities of various AUs' emergence.

To detect various AUs, we have applied the principle of multi-layer analysis of mimic activity:

- Within the frames of the video, analyzing the change of light distribution over the various segments of the face, singling out the meaningful changes and rendering them on the facial surface as bulges, pouches, furrows and wrinkles appearing;
- Matching the singled-out changes with each other in accordance with the anatomical structure of the face and the FACS scheme;
- Defining the begin and end of certain AUs;
- Singling out the emotions and other complex mimic patterns;
- Calculating the integral indexes of facial activity, e.g., frequency of AUs per time unit, valency etc.;
- Complex categorization of facial activity patterns, i.e., true emotions, emblems of emotions, mannerisms, singling out the significant speech fragments, etc.

3. The software empirical testing

The EmoRadar LS software has been empirically tested in a number of applied studies.

3.1. Personnel assessment during a video job interview

Employees of large industrial companies (413 men and 242 women, aged 42.6 in average) remotely participated in a structured 6-16 questions video interview. 4038 videos were selected for the analysis. Individual AUs, basic emotions and facial expressions patterns had been detected automatically.

Based on the data from the sources and our own experience, we have constructed the following facial activity patterns: Fear/Stress, Tension, Displeasure, Negative Attitude in communication.

Following the criteria proposed by HR specialists, six rules for automatic analysis were developed. The rules were based on the combinations of different AUs patterns and characterized the respondent behavior while answering an interview question as corresponding/inconsistent with the expert's expectation. Sixty videos were selected for comparative analysis. These videos were evaluated by six experts on the following scales: inclusiveness, stress, confidence, lightness, activity, strength. The obtained results show good agreement between the results of the computer facial expressions analysis and expert assessments. Thus, the possibility of practical use of the original technology of facial expressions analysis for evaluating of a video job interview has been confirmed.

3.2. Forensic psychology

Forty-three office employees of a large Russian company were being tested for involvement in fraudulent activity. The security service asked them to answer the 15 questions of a standardized video interview. The respondents were told that the aim of the interview was clearing the circumstances of committing offenses, and their working relations with the employees who had been officially accused.

Based on the facial activity patterns, characterizing outward expression of negative emotions, all the videos were assessed according to the level of the risk of the possible involvement in the crime:

1. Risk level 1 (low possibility of the involvement) marked the videos with the minimal indexes of coping with stress, absence of the negative attitude in communication, minimal signs of experiencing danger and frustration. In this group, there were 62.8% of the videos.
2. Risk level 2 (there is a possibility of involvement, additional research is recommended) marked the videos with medium to low indexes of coping with stress, presence of the negative attitude in communication, experiencing danger and frustration. In this group, there were 27.9% of the videos.
3. Risk level 3 (the possibility of involvement is high) marked the videos with extremely high, or high signs of stress, with the negative attitude in communication simultaneously discovered, as well as frustration and discontent. In this group, there were 9.3% of the videos.

Here is a sample fragment of an expert's assessment concerning the respondent A.K., whose video interview was marked as Risk Level 3: "Obvious negative emotional reaction to the introductory part of the interview [is demonstrated]. In the course of the interview, high-level emotional tension is seen.

[The respondent shows] clear difficulties in coping with stress and controlling his own behavior. The facial activity is intensive and non-coordinated. An emotion of fear was found at the time of the question on his attitude to the fact of his colleagues' detention. There are stereotypical movements of the tic type. An additional polygraph examination is recommended."

3.3. Aerospace psychology

Within the SIRIUS-21 experiment, we studied the change of the participants' emotional state influenced by lower gravity. The paradigm of the so-called "dry immersion" imitating the state of relative weightlessness, where a person is immersed in water without immediate contact with the liquid, was applied. For 7.5 days, in the morning and in the evening, 10 participants recorded a brief video interview about their state of health and emotion. With the help of EmoRadar LS, the basic emotions and above-mentioned facial expression patterns were assessed. *Figure 1* demonstrates a screenshot of EmoRadar LS interface presenting the results of facial expressions' analysis of Participant 104 in the evening of the seventh day of the experiment. The vertical line (*Figure 1*) is used to mark a complex time-defined combination of various facial events, i.e., Sadness and negative AUs patterns of the Negative Attitude, Fear/Stress. We emphasize the emergence of AUs 1, 10, 14, 41, 44, corresponding to these patterns, within the area of the marked frame.

Figure 1. EmoRadar LS software screenshot. There are different indexes of facial expression patterns, emotion expressions and AUs on the timelines under the participant's photos. The lower line shows the frame number in the video.



4. Conclusion

Our technology of facial expression analysis allows for high-precision assessment of a person's face videos, detecting within them the outer expressions of emotional state change. We see the perspectives of our research in the integration of facial activity with the results of voice analysis, psychosemantic analysis of speech and the psychophysiological studies data.

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CONSUMER DECISION-MAKING AND PSYCHO-SOCIAL WELL-BEING: EXPLORING THE ASSOCIATION IN THE SOUTH AFRICAN URBAN CONTEXT

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Abstract

Urban populations' significant growth results in larger market environments and complex decision-making. Various factors influence decisions, of which the social environment is an important role player. Informed decision-making is essential for good overall well-being; however, whether a relationship exists between consumer decision-making and psycho-social well-being is questioned. Correlational research with an online survey determined South African urban respondents' decision-making styles and consideration for future consequences of medium to high-risk products such as household equipment. These consumer decision-making components were brought into association with psycho-social well-being variables as operationalized with the Mental Health Continuum – Short Form and the Satisfaction With Life Scale. Results revealed associations between consumer decision-making and psycho-social well-being indicators, which can inform scientists and practitioners about client profiles that may be considered in future planning. The association of decision-making regarding certain products with the quality of and satisfaction with life provide new insights through this multi-disciplinary research study.

Keywords: *Consumer decision-making, immediate and future consequences, mental health continuum, psycho-social well-being, satisfaction with life.*

1. Introduction and objectives of study

Consumers migrating to urban environments are increasing as they search for work opportunities with the hope of an increased income, better lifestyles, ideally better quality of life, and improved well-being (Selod & Shilpi, 2021). Consequently, urban populations are growing significantly and are predicted to continue growing (Shaker, 2015), resulting in larger market environments and complex decision-making. Increasingly research focuses on urban environments to understand better the well-being of urban consumers – an integral part of a country's workforce (Le Roux, Van der Merwe, Wilders, & Wissing, 2017). A growth in population in a particular environment can pose various social, emotional and environmental challenges, which, if not managed, can be detrimental to consumers' well-being (Vearey, 2017). Therefore, the social environment is an important role player during decision-making. Informed decision-making is crucial for good overall well-being; however, whether a relationship exists between consumer decision-making (CDM) and psycho-social well-being is questioned.

2. Method

Correlational cross-sectional research with an online survey explored South African urban respondents' decision-making styles and consideration for future consequences of medium to high-risk products, such as household equipment, considered medium to higher risk products due to the substantial social, functional, and financial aspects of this type of decision-making. Consumer decision-making styles (DMS), measured using the Consumer Style Inventory scale (CSI) and Consideration of future consequences (CFC) scale (Joireman et al., 2012; Potgieter et al., 2013), were brought into association with psycho-social well-being variables as operationalized with the Mental Health Continuum – Short Form (MHC-SF) and the Satisfaction With Life Scale (SWLS) to explore and describe the extent of association between CDM and psycho-social well-being among South African urban sample groups (N=391).

Data were analyzed using IBM®SPSS® Version 24. Exploratory factor analysis (EFA) ensured construct validity. Principal component analysis (PCA) was employed using Oblimin rotation with Kaiser Normalization for the scales and reported a good KMO above .7 (Field, 2013). Using Kaiser's criterion, factors with eigenvalues higher than one were extracted, and the lowest percentage variance explained was more than 57%, which is higher than the acceptable minimum of 50% (Field, 2013). Cronbach alpha values for the extracted items on the CSI scale ranged between $\alpha=.74$ and $\alpha=.87$ and for the CFC scale, between $\alpha=.85$ and $\alpha=.88$, confirming internal reliability (Field, 2013). The mean inter-item correlations for the EFA's of two CDM instruments were reported to be between .343 and .534, within the required margins of .15 and .55 (Clark & Watson, 1995).

The psycho-social instruments were interpreted according to the authors' guidelines. Both scales reported excellent internal reliability (SWLS: $\alpha=.909$; MHC-SF: $\alpha=.802$). The different subscales of the MHC-SF were as follows: emotional well-being (EWB) $\alpha=.876$, social well-being (SWB) $\alpha=.907$ and psychological well-being (PSW) $\alpha=.919$. The total score of all items gave a good overall indication of respondents' total well-being (Keyes et al., 2008). The SWLS was analyzed by determining the total score of items. Spearman's rank order correlations were determined between the CDM and the respondents' psycho-social well-being. Only medium ($r=.3$) and large ($r=.5$) effect sizes will be reported. Ethical approval was obtained from the institutional ethics committee (NWU-0091-15-A1), and the study was accordingly conducted within the ethical guidelines.

3. Findings

Different races in South Africa relatively equally represented the sample, mainly aged between 18 and 59 years, and the majority female. Seven factors describing the DMS of respondents were extracted with EFA (Le Roux, 2018) and further categorized as either hedonic (i.e., being the more emotional with greater emphasis on the value gained from the shopping experience, personal gratification and self-expression) or utilitarian (i.e., influence performance, more task-oriented, cognitive and non-emotional) DMS (Gilovich & Gallo, 2019; Zhou et al., 2010). Hedonic DMS include "image and brand consciousness", "recreational / novelty", and "habitual" DMS. Utilitarian DMS include "impulsive purchases", "confused by over-choice", "value for money", and "perfectionistic/high-quality products". The CFC scale determined respondents' extent of thinking about the consequences of current decisions. Two factors emerged: "immediate-oriented" and "future-oriented" consumers.

Results from the MHC-SF revealed that respondents have moderate to upper levels of emotional (11.54 ± 2.91), social (15.67 ± 6.01) and psychological (23.25 ± 5.68) well-being. The mental health of the entire group indicates a generally high level of well-being, as 63.4% ($n=246$) of participants were flourishing. These urban respondents seemed to experience positive emotions, good psychological functioning, independence, and functioning well in their social environment, contributing and being an essential part of it. The SWLS revealed that respondents experienced high satisfaction with life (26.25 ± 6.50). Thus, on average, this group of respondents was satisfied with their lives and experienced good psycho-social well-being.

3.1. Correlations between CDM and psycho-social well-being

SWL correlated (Table 1) with "image and brand consciousness" ($r=.420$), "recreational / novelty" ($r=.277$), "habitual" ($r=.290$), "perfectionistic/high quality" ($r=.290$), and "immediate oriented" ($r=.355$) and "future-oriented" ($r=.352$). SWB also correlated with "image and brand consciousness" ($r=.330$), "recreational and novelty" ($r=.319$), "habitual" ($r=.288$), "perfectionistic and high-quality products" ($r=.337$), "immediate-oriented" ($r=.342$) and "future-oriented" ($r=.369$). Correlations were shown between PWB and "value for money" ($r=.274$), "perfectionistic/high quality" ($r=.325$) and "future-oriented" ($r=.318$). Regarding total mental well-being, correlations were reported with "image and brand consciousness" ($r=.306$), "recreational and novelty" ($r=.295$), "value for money" ($r=.296$), "perfectionistic/high quality" ($r=.356$) as well as with "future-oriented" ($r=.372$). No correlations were noted between the MHC-SF variables and "impulsive purchases" or "confused by over-choice" as a DMS of higher-risk household equipment.

Table 1. Spearman's rank order correlations (*r*) between CDM (DMS and immediate and future consequences) and psycho-social well-being (MHC-SF and SWLS).

	Consumer decision-making components (<i>r</i>)								
	Decision-making styles (H = Hedonistic oriented style; U = Utilitarian oriented style)							Consideration of immediate and future consequences	
	Image/brand consciousness (H)	Impulsive purchases (U)	Confused (U)	Recreational / Novelty (H)	Habitual (H)	Value for money (U)	Perfectionistic / High quality (U)	Immediate oriented	Future-oriented
Subjective psycho-social well-being									
SWLS (n=388)	.420**	.207**	.212**	.277**	.290**	.139**	.290**	.355**	.352**
MHC-SF – emotional well- being (n=389)	.247**	.069	.131**	.190**	.217**	.257**	.262**	.153**	.267**
MHC-SF – social well- being (n=389)	.330**	.168**	.252**	.319**	.288**	.260**	.337**	.342**	.369**
MHC-SF – psychological well-being (n=389)	.214**	.008	.045	.241**	.166**	.274**	.325**	.108*	.318**
MHC-SF – Total (n=389)	.306**	.096	.177**	.295**	.252**	.296**	.356**	.248**	.372**

SWLS= Satisfaction with life scale

MHC-SF = Mental health continuum – Short form;

Interpretation of approximate effect sizes for Spearman's two-tailed correlation coefficients: $r \geq 0.3$ = medium effect or tendency and $r \geq 0.5$ = large effect – indicated by bolded values.

** Statistically significant at $P \leq .05$; * Statistically significant at $P \leq .01$

4. Conclusion

This study aimed to determine associations between urban consumers' decision-making and psycho-social well-being. Results indicated that most respondents flourished regarding overall mental health with high emotional and social well-being levels, with psychological well-being the highest. Respondents also reported reasonable satisfaction with life and emotional well-being.

4.1. The association between CDM and psycho-social well-being

Psychological and decision-making differences emerged between respondents experiencing high levels of well-being and those experiencing low mental well-being. Respondents, showing higher levels of mental well-being, found the image and brands of household equipment important. Also, respondents with better well-being resorted to recreational DMS and novel household equipment products. These respondents also found it more critical than respondents with lower well-being that the purchase should be perfect and high-quality, keeping future consequences in mind. This indicates that respondents who experienced high total mental health may place much value on image and brand during these purchases. They make well-informed decisions while still enjoying the shopping experience of new products (Lysonski & Durvasula, 2013).

Hedonic DMS correlated with psycho-social well-being variables. Image and brand, recreational and novelty, and habitual DMS reflect shopping behaviour not necessarily product-related but personal gratification, desire, and self-expression (Zhou et al., 2010). These DMS showed correlations with respondents' satisfaction with life and their SWB. SWB, being eudaimonic, reflects the extent of social contribution, acceptance, actualization and coherence in the social environment (Keyes et al., 2008). Therefore, hedonic DMS may contribute to respondents' satisfaction with life, adding to their experience of social acceptance.

Conversely, not all utilitarian-oriented DMS correlated with psycho-social well-being variables. Value for money -significant for household equipment due to their expensiveness (Danziger, 2004) - correlated on a psychological and total well-being level. Moreover, perfectionistic and high-quality DMS correlated with SWLS and the total MHC-SF. This finding may confirm that household equipment is often purchased to increase consumers' perception of well-being (e.g. Nakazato et al., 2011).

Impulsive purchases and confused by over-choice, regarded as unfavourable due to negative emotions or stress, might not contribute positively to psycho-social well-being. Correlations indicated that future-oriented decision-making might influence aspects of one's psycho-social well-being. These findings imply that being future-oriented may benefit one's psycho-social well-being by addressing social, emotional and psychological well-being and satisfaction in life.

Previous research indicated that decision-making is often driven by one's social environment and a desire for social acceptance and integration (Schiffman & Wissenblit, 2019). This research contributes by indicating a relationship between CDM and psycho-social well-being.

4.2. Concluding remarks and implications

This study approached consumer decision-making through two disciplinary lenses: consumer behaviour and positive psychology. Hence, we provide a unique perspective on the association between decision-making and psycho-social well-being on a multi-disciplinary level. This knowledge can be valuable to consumer scientists, marketers and policymakers studying the behaviour and decision-making of consumers. Medical professionals and occupational therapists concerned with stress and the psycho-social well-being of individuals in urban corporate settings may use this knowledge to understand and assist patients experiencing low mental health. Despite population and locational restrictions, these findings add to CDM literature. It would be insightful to determine if similar results will be obtained in other contexts.

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AGGRESSIVENESS AND ASSERTIVE BEHAVIOUR

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Abstract

Assertiveness can be described as a phenomenon that involves assertive expression of ideas, feelings and boundaries while respecting the rights of others, while maintaining a positive impact on the partner. Assertiveness is an important component of professionalism in professions that are related to work with people. The opposite of assertiveness is aggressive behaviour. The purpose of this study is to establish the ratio of assertiveness and aggressive behaviour of respondents of different behavioural groups and to explore its relation to the age factor. The participants of this study were student – teachers from the regional university of Latvia. The entire sample was divided into two groups based on age. The first group included participants under 30 years old. The second group was comprised of participants in the age group older than 30. Based on the results gained in the assertiveness test, the subgroups of so-called passive, assertive and aggressive respondents were singled out. The second test determined the structure and the level of aggressiveness of respondents in each of the selected groups. The results indicate that aggressive behavior is inherent in representatives from each group. The difference lies in the ratio of assertiveness and aggression, as well as in the degree of influence of self-aggression in the overall structure of aggressiveness of an individual.

Keywords: *Teachers, assertiveness, passivity, aggressiveness, self-aggression.*

1. Introduction

Assertiveness is a relative new term in psychology and refers to adaptive personality traits. The concept was formed in late 50's of the 20st century and is based on humanistic psychology and transaction analyses. Assertive people freely express their ideas and feelings not limiting oneself to rituals and conventions. Assertive behaviour can be visible in interaction when an individual flexibly changes his/her behaviour according to context, politely defend his/her opinion, also accepts and provides feedback. The concept is an alternative to passive and aggressive type of behaviour. Assertiveness relates to person's ability to pursue his/her goals without violating the rights of other people. Salter (2002) refer assertiveness to confidence in one's self effectiveness and self-worth, autonomy and independence from external influences. Assertiveness can be described as a subjective personal quality charactered by initiative and risk taking in novel life situations, one's ability to make freely decisions by taking into account the rights of other participants. Confident people can express their feelings without aggression, they have flexible thinking. According to Tanck and Robbins (2008), assertive people are sociable and can easily overcome situations related to high stress.

It is a phenomenon that involves persuasive expression of ideas, feelings, and boundaries while respecting the rights of others, maintaining a positive impact on the communication partner by considering possible consequences of interaction (Pfafman, 2020).

The need to study assertive behavior emerged after the Second World War. In 1954, the book of the American scientist Abraham Maslow "Motivation and Personality" was published that he presented to the scientific community as a complete version of his concept of hierarchy of human needs. The highest need in his concept was the need for self-actualization (Maslow, 1954). Self-actualization is a person's desire to realize his/her personal potential in life. Along with criticism, this concept has generated an interest to focus on the phenomenon of self-actualization. Assertive behavior was presented as a main aim in achieving the goals of self-actualization.

A renewed interest in assertive behaviour is being observed today in the international research. This can be explained by the fact that in professions that require communication, like (medicine, pedagogy, politics, public administration), professionalism is associated with assertive behavior in the communication processes. Researchers have found out that assertiveness is a communicative personality

trait and, according researchers, it can be obtained most often as a result of social or special learning (Parray, Kumar & David, 2020). This expanded the age limit of respondents. Today, a separate direction of study of assertive behavior is focus on characteristics and causes and manifestations of assertive behaviour among adolescents (Gading, 2020; Gultekin, Ozdemir, Budak, 2018; Kumar, Fernandez, 2017; Prabha, Babu, 2021 and others).

A number of studies in recent decades confirm a negative relationship between assertiveness and anxiety of an individual (Niusha, Farghadani, Safari, 2012 and others). This can also be noted that assertiveness increases a motivation to reach academic achievement (Galata, 2018). Assertive personalities show higher results in life satisfaction tests (Galata, 2018) and assertive behavior reduces the level of anxiety (Fornell, Westbrook, 1979).

Researchers assert that assertiveness is located between two poles of social behavior: passivity and aggressiveness (Postolati, 2017). One the one pole of the behavioral repertoire there is a passivity and at the other end - aggressiveness, suggesting the existence of three types of personalities: assertive and non-assertive (including passive and aggressive personality types) (Sheinov, 2014). It should be noted that assertive behavior can be perceived as aggressive. But, as Chamberlain concludes, aggression is understood as instrumental, but not as hostile (Chamberlain, 2009). Are there individuals who possess only assertive behavior or the ones who possess aggressive behavior? Research indicates that it is about the relationship between two types of behavior. Research shows that when assertiveness is taught, the level of aggressiveness decreases but does not disappear (Mofrad & Mehrabi, 2015). Researchers explain this phenomenon by the fact that instrumental aggression is part of our culture (Fornell and Westbrook, 1979). The ratio of assertive and aggressive behavior seems to depend on the role of emotions on the choice of the method of reaction to a conflict situation (Tankamani & Jalali, 2017).

The level of aggressiveness increases in the absence of experience of assertive behavior (Yuliani, Etika, Suharto & Nurseskasatmata, 2020). The researchers also indicate to the boundary between assertiveness and aggressiveness (as well as between assertiveness and passivity) that depends on the norms accepted in the society that can change when moving from one culture to another (Margalit, & Mauger, 1984). Aggression is highly studied area in psychology, particularly in relation to adolescent aggression, adult aggression and violence. Aggressive behaviour can be conceptualized as observable manifestation of aggression, act intended to cause harm or pain. The term aggressive behaviour also includes verbal, psychological, and other means of causing pain. In adulthood aggression can escalate even into more violent acts, such as abuse and homicide.

The hypothesis of this study is based on the analysis of assertiveness studies and is formulated in a following way: assertive people behave aggressively. Only the ratio of assertiveness and aggressiveness is different for assertive people as compared with non-assertive individuals.

2. Methodology

In order to measure assertiveness, the authors have applied the test by Sheinov (2014). The test consists of 26 statements that were measured with the Lickert scale (always - 1 point, often - 2 points, rarely - 3 points and never - 4 points). According to the results of the test, respondents are divided into three groups: passive, assertive and aggressive. An example of the statement from this test is as following: *I don't know how to get acquainted with people to whom I feel sympathy for. I'm waiting for them to undertake the first step.*

Aggressiveness was measured by the use of a questionnaire designed by L.G. Pochebut (Platonov, 2003). The questionnaire consists of five scales that includes the following levels: verbal, physical, objective, emotional aggression, as well as self-aggression. Each scale consists of eight statements that must be answered either in an affirmative or negative way. The answers that match the key are rated by 1 point. The overall level of aggressiveness is determined by the sum of the points in each scale. The example of a statement from the self-aggression scale is as following: *when remembering my past experience, I get offended.*

The number of participants who were involved in the experiment reached seventy four 1st year students from the Faculty of Education and Management of regional university in Latvia who are enrolled in educational programmes. Among them were 69 female and 5 male students. Gender disparity was due to a specialization traditionally chosen by female students.

Participation in this study was voluntary. Participants of this study have received questionnaires and replied to the researchers by e-mail. When processing the obtained results, the sample was divided into two parts: young participants (below 30 years) and experienced (older than 30). Data regarding the age of the respondents is reflected in Table 1.

Table 1. The age of the research participants.

Sample	Number	Females/Males	Mean	Mean squared deviation σ
All participants	74	69/5	27.9	9.96
Below 30 years	41	39/2	21.1	3.1
Above 30 years	33	30/3	37.9	8.1

Based on the results gained in this study, all respondents were divided into groups: passive, assertive and aggressive. The tables show the average value of the aggressiveness indicators for each of these groups, as well as standard deviation indicators. The entire sample was divided into two subsamples: in the age group below 30 and above 30.

3. Results

Tables 2 and 3 reflect the results of a study about the level of manifestation of aggression among the respondents who belong to different groups, which were compiled on the basis of the data obtained from the assertiveness test.

Table 2. Average aggressiveness of respondents from different groups in the age group until 30.

Groups of research participants Type of aggression	Passive N=17 Mean (σ)	Aggressive N=18 Mean (σ)	Aaggressive N=6 Mean (σ)
General	13,3 (4,54)	12,4 (3,9)	11,8 (5,19)
Verbal	2,2 (1,48)	2,8 (1,65)	3,2 (1,47)
Physical	1,5 (2,0)	1,8 (2,06)	2,8 (2,23)
Aggression against the physical environment	2,8 (0,75)	1,8 (1,22)	2,0 (1,43)
Emotional	2,5 (0,87)	2,0 (1,23)	2,0 (0,89)
Self- aggression	4,3 (1,4)	4,0 (0,53)	1,8 (2,14)

Table 3. Average indicators of aggressiveness among respondents from different groups above 30.

Groups of research participants Type of aggression	Passive N=10 Mean (σ)	Aassertive N=17 Mean (σ)	Aggressive N=6 Mean (σ)
General	13,2 (3,8)	9,5 (4,81)	8,3 (3,5)
Verbal	2,5 (1,7)	2,25 (2,05)	1,5 (1,22)
Physical	0,8 (0,78)	1,75 (1,71)	0,8 (0,98)
Aggression against the physical environment	2,6 (1,07)	2,2 (1,19)	1,5 (1,38)
Emotional	2,4 (0,52)	1,25 (0,62)	2,0 (0,89)
Self-aggression	5,0 (2,05)	2,3 (1,5)	2,7 (1,03)

4. Discussion

At the first glance, the authors have obtained a paradoxical result. According to the theoretical bases of assertiveness, for the so-called aggressive respondents, the level of their aggressiveness should exceed the corresponding level of assertiveness. But the research data indicates that the highest level of aggressiveness is manifested among the participants of the group of so-called passive respondents.

For the assertive and aggressive individuals, aggressiveness is lower. At the same time, the decreased level of aggressiveness for the assertive and aggressive individuals in the age group above 30, it is more pronounced than in the group of respondents in the age group below 30.

The level of verbal aggression in all groups of respondents is low. In the age group of participants under 30, when switching from passive to assertive and aggressive individuals, aggression tends to increase, but in the age group above 30 - to decrease.

The indicators of physical aggression obtained in this study is low. They reach their maximum value in the group of aggressive respondents below 30. The level of objective aggression is low in all groups of respondents and trends to decrease from passive respondents to assertive and aggressive ones.

In regards to emotional aggression, the lowest rates are obtained in the group of assertive respondents in the age category above 30. In the group of respondents in the age category above 30, the lowest rates were among aggressive individuals and the highest among the participants of passive group.

The highest rates are gained in the subscale of self-aggression. For the passive and assertive respondents in the age group above 30 and for the passive respondents from in the age group above 30, who have exceeded the average values (according to the criteria proposed by the author of the test). For the aggressive respondents in the age group above 30 and in the age group below 30, self-aggression indicators were low.

The results obtained in this study indicate that the ideas about assertiveness proposed by the authors in early written theories, there is a need of modification of the notion of aggressiveness. It must be also emphasized that aggressive behaviour is also common among both, passive and assertive respondents. These groups differ from two types of behavior described above, as well as in regards the structure of aggressiveness.

The highest scores on general aggressiveness were observed among passive, assertive and aggressive respondents from the age group above 30, as well as among passive respondents in the age group below 30.

At the same time, for the groups of passive and assertive respondents above 30 and passive respondents below 30, self-aggressiveness had the greatest contribution to the overall assessment of aggressiveness. This allows to conclude that the reason for the passivity of respondents may lie in self-aggression, or in doubts about their abilities. In the transition to assertive behavior, this reason for behaviour decreases since the professional experience is being obtained.

Self-aggression is one of the causes of professional burnout. An increased level of self-aggression in passive and assertive respondents in the age group above 30, continuously increases for this type of aggression among passive respondents in the age group below 30. It might be related to difficulty in regards to a professional growth when there is a choice for the alternative behavior.

There are three choices: to remain passive and to become dissatisfied with the chosen profession (an increased level of self-aggression persists); to improve the skills of assertive behavior or to use aggressive techniques in professional communication. The second path seems to involve an intermediate stage, when the increased level of aggression persists for some time. The dominant is the third way of expression of verbal aggression and self-aggression.

Limitations of the research. Firstly, the representatives of only one profession took part in the study (almost all participants work in the educational institutions simultaneously combining work with their studies at the university). There might be a possibility that in a sample comprised of medical workers, officials or police officers, the authors could obtain different results. Secondly, almost the entire sample consisted of female participants. Thirdly, the size of the sample was limited to students of the same course. Similar results could be obtained while doing the follow up research.

5. Conclusions

Aggressive behavior is inherent in representatives of all three groups of respondents: passive, assertive and aggressive. Differences are manifested only in the ratio of these two types of behavior, as well as in the structure of aggressiveness.

In the structure of aggressive behavior of passive and assertive respondents in the age group above 30 and passive respondents in the age group below 30, self-aggression dominates. This can provoke stressful situations and subsequently, professional burnout.

Improving the skills of assertive behavior may involve a transitional time, when the level of assertiveness increases while maintaining the level of aggressiveness.

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MENTAL HEALTH DIFFICULTIES AND RELATED PERSONAL FACTORS (ACCORDING TO PEOPLE DURING COVID-19 PANDEMIC)

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Abstract

This paper aims to scrutinize people's mental health issues (stress, anxiety, and depression) in the conditions of the Coronavirus pandemic and personal factors linked to them: unique traits, maladaptive cognitive schemes, and defense mechanisms. Through an online survey, we gathered information from 343 individuals aged 16 through 73. We used self-report questionnaires including DASS-21, Hexaco, maladaptive cognitive schemes, and defense mechanisms. Statistical analysis of the data revealed that women, young people, single individuals, and people with low income and poor education level report to have experienced more psychological distress during the pandemic. Also, the study results show that mental health difficulties are positively related to maladaptive cognitive schemes, immature and neurotic defense mechanisms, and Emotionality while negatively correlating with mature defense mechanisms and personal traits such as - Extraversion, Agreeableness, Conscientiousness, and Honesty-Humility. According to the study, there is a positive correlation between maladaptive cognitive schemas, neurotic and immature defense mechanisms, and Emotionality. Mediation analysis has shown that the personal trait "emotionality" partly mediates the link between maladaptive schemes and mental health difficulties.

Keywords: *Maladaptive, schemas, defense, mental, traits.*

1. Introduction

Over the past few years, epidemics and pandemics have become a significant concern for physical health and mental well-being (Harvard Global Health Institute, 2018) (Bloom & Cadarette, 2019). WHO declared the COVID-19 pandemic on March 11, 2020, quickly spreading to 114 countries. Social isolation became necessary from the beginning to prevent the spread of the virus. As a result of the current circumstances, there has been a notable rise in psychological stress caused by factors such as personal identification and economic downturn. The Georgian government documented the initial COVID-19 case on February 26. As a result of the pandemic protocols, there has been a significant transformation in the living conditions of the populace due to the requirement for physical distancing. The government has enforced a state of emergency that included a curfew, shutting down non-essential businesses, and other measures to prevent the spread of the virus.

However, only a specific part of people was affected by psychological difficulties, including stress, anxiety, and depression, during the pandemic. It is essential to understand which personal factors contribute to mental health issues. These factors include personality traits, which are stable, consistent, and enduring internal characteristics connected to behaviors, attitudes, and habits. Apart from them, the role of maladaptive cognitive schemes and defense mechanisms in mental health issues is interesting. Maladaptive cognitive schemas are rigid cognitive structures formed in early life and containing maladaptive cognitive and emotional patterns (Young, Klosko, & Weishaar, 2006).

No research discusses the connection between personality traits, maladaptive cognitive schemes, defense mechanisms, and mental health difficulties. Integrating different theoretical models and psychological interventions can lead to better results and increased popularity of combined therapy. It helps us to utilize better the knowledge acquired in the field of psychology and to approach existing issues in a more eclectic manner.

The study aims to determine whether it is possible or not to predict mental health difficulties (stress, anxiety, and depression) based on personal traits, maladaptive cognitive schemas, and coping mechanisms (during the pandemic period). Additionally, studying the interactions between personality

traits, cognitive schemas, and coping mechanisms can provide a more comprehensive understanding of the situation.

2. Literature review

Individuals with different personality traits react differently to daily life stressors (including those related to the pandemic), resulting in varying levels of psychological distress. People with a high level of Emotionality exhibit high levels of anxiety (Mazza, 2020).

Maladaptive cognitive schemes play an essential role in the development of psychological distress. Maladaptive cognitive schemas are composed of beliefs, emotions, cognitions, and physical experiences and connect with the self and others. Schemas emerge in childhood and adolescence and develop throughout the lifespan (Young, Klosko, & Weishaar, 2003). Here are four main categories of maladaptive cognitive schemas: Disconnection & Rejection; Impaired Autonomy & Performance; Impaired Limits; Other Directedness; Over-vigilance & Inhibition. There is a significant correlation between dysfunctional schemas and psychological distress (anxiety and depression). Research shows a positive correlation between schemas and neuroticism (Shojaati, Kalantari, & Mulavi, 2019).

The defense mechanisms are "mechanisms that allow individuals to manage emotional conflict and react to external stressors" (American Psychiatric Association, 2013). These mechanisms protect individuals from situations that may not be manageable for their cognition, self, or ego during this stage (Vaillant G. E., 1993). It may be considered both a beneficial and therapeutic outcome, as well as a consequence of these mechanisms' type and frequency of use. Defense mechanisms play an essential role in coping with psychological distress. Mature defense mechanisms improve functioning (Vaillant G. E., 2000). Research conducted during the COVID-19 pandemic found a negative correlation between psychological distress and the level of defense mechanisms, particularly regarding stress, anxiety, and depression.

3. Objectives

In the survey, 113 males and 221 females participated. Individuals aged 16-73 were represented during the study, and 343 participated. The following categories are Age 16-18 years: 47 individuals; Age 19-29 years: 153 individuals; Age 30-44 years: 99 individuals Age 45-73 years: 44 individuals.

In light of the restrictions arising from the COVID-19 pandemic, research has moved online using the "crowdsourcing" principle. We provided selected participants with information about the study and the possibility of participation in it, as well as information about the confidentiality and anonymity of the research.

4. Methods

The HEXACO-PI-R (HEXACO Personality Inventory-Revised) questionnaire assesses personality traits. Kibeom Lee, Ph.D., and Michael C. Ashton, Ph created it. The questionnaire consists of 100 items, and responses are rated on a Likert scale ranging from 0 (strongly disagree) to 5 (strongly agree). It includes six broad domains (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience), each further divided into four facets and an additional factor (Altruism) with 25 parts.

YSQ-SF3, a maladaptive cognitive schema questionnaire, was created by J. Young in 1990 and revised in 2003, with 90 items (J. Young., 1990, 2003). The questionnaire is on a Likert scale from 1 (not at all) to 6 (totally), with five scales and 19 sub-scales.

The Questionnaire on Defense Mechanisms, DSQ-40, is a 40-item questionnaire created by Andrews, Singh, and Bond in 1993, which is a modified version of the original Defense Style Questionnaire (DSQ; Bond, Gardner, & Sigal, 1983). The instrument consists of three scales (mature, neurotic, and immature defense mechanisms) and includes 20 subscales. The items are scored on a Likert scale ranging from 1 (strongly disagree) to 9 (strongly agree) (not applicable).

5. Results

The questionnaire related to mental health difficulty indicated high internal consistency ($\alpha=.918$) and maladaptive cognitive schemes ($\alpha=.964$). Defense mechanisms have an above-average internal consistency ($\alpha=.828$). In Hexaco, six main personality traits (factors)- Honesty-Humility ($\alpha=.810$),

Emotionality ($\alpha=.782$), extraversion ($\alpha=.802$), Agreeableness (versus Anger) ($\alpha=.759$), Conscientiousness ($\alpha=.712$), Openness to Experience ($\alpha=.779$).

Mental health difficulties correlate statistically significantly with the following indicators: positively associated with emotional instability ($r=.444$ $p=.000$), while negatively correlated with extraversion ($r=-.415$ $p=.000$) on average.

The relationship between maladaptive cognitive schemas and the severity of psychological distress (stress, anxiety, and depression)- As we found at the beginning of the study, the severity of psychological distress significantly and positively correlates with maladaptive cognitive schemas ($r=.653$ $p=.000$), and its scales: disconnection and rejection ($r=.653$ $p=.000$), impaired Autonomy ($r=.626$ $p=.000$), while the average positive correlation with the following rankings was observed: over-vigilance ($r=.475$ $p=.000$), orientation toward others ($r=.488$ $p=.000$), and self-blame ($r=.499$ $p=.000$). Regarding specific subscales, a high positive correlation was found with social isolation ($r=.549$ $p=.000$), helplessness ($r=.547$ $p=.000$), instability ($r=.552$ $p=.000$).

The relationship between the defense mechanisms and mental health difficulties (stress, anxiety, and depression)- Mental health difficulties are positively and significantly correlated with immature defense mechanisms ($r=.546$, $p=.000$) and negatively and significantly associated with neurotic defense mechanisms ($r=.172$, $p=.001$). The statistical relationships between them are essential. Specifically, regarding the sub-scales, a significant positive correlation was found between mental health difficulties and projection ($r=.549$, $p=.000$), as well as autistic fantasy ($r=.506$, $p=.000$).

To determine differences between groups based on gender, we used the T-test for independent samples. Based on the average scores, females have significantly higher levels of protection against infections ($M=7.3$, $SD=5.0$) compared to males ($M=6.2$, $SD=4.3$) ($t(311.210)=9.104$, $p=.003$). However, the effect size is small at .03, indicating that gender differences explain only 3% of the variance.

Based on the average indicators of mental health problems ($F(3,339)=11.676$ $p=.000$), statistically significant differences are among different age groups. Adolescents aged 16-18 showed higher levels of psychological distress ($M=31.2$, $SD=13.4$) compared to individuals aged 19-29 ($M=23.8$, $SD=12.5$), 30-44 ($M=19.1$, $SD=11.4$), and 45-73 ($M=20.0$, $SD=10.3$). Moreover, the individuals aged 19-29 ($M=23.8$, $SD=12.5$) showed higher mental health problems than those aged 30-44 ($M=19.1$, $SD=11.4$). The significant effect size ($\eta^2=.09$) indicates that age differences can explain 9% of the variance in mental health problems.

Regression analysis is an approach used to determine how much change in dependent variables can be attributed to changes in independent variables to predict the most significant predictors of psychological health.

A model combining maladaptive cognitive scheme combinations revealed 45.2% ($R^2=.452$, $F(5,297)=49.067$, $p=.000$) of the variance in severity of psychological distress. Two out of the five variables included in the model statistically contributed to the significant predictors, namely avoidance and rejection ($\beta=.345$, $p=.000$) and encapsulated self ($\beta=.286$, $p=.000$). Individual contributions of avoidance and rejection and encapsulated self to the variance were 4% and 3%, respectively.

The individual contribution of maladaptive cognitive schemas is 7%, emotions - 6%, unhelpful coping mechanisms - 4%, and extraversion - 0.8%. The model of the combination of personal factors (maladaptive cognitive schemes, defense mechanisms, extraversion, and Emotionality) explains 53.9% of the variance of mental health levels ($R^2=.539$, $F(4, 298)=87.275$, $p=.000$). All variables included in the model are statistically significant. Based on the beta coefficient, the strongest predictor of mental health levels is maladaptive cognitive schemes ($\beta=.383$, $p=.000$), followed by defense mechanisms ($\beta=.262$, $p=.000$) and Emotionality ($\beta=.261$, $p=.000$), while extraversion has the lowest predictive value ($\beta=-.104$, $p=.017$).

To study the medial effect of maladaptive cognitive schemes and their connection with the severity of psychopathology, we used the PROCESS macro by Andrew F. Hayes. According to the results of the medical analysis, maladaptive cognitive schemes are a significant predictor of the severity of psychopathology through the mediator of emotion, with a statistically significant coefficient of $b=.23$, $t(301)=5.0$, $p<.001$ ($F(1, 301)=24.73$, $p<.001$, $R^2=.08$). The predictor was maladaptive cognitive schemes, the mediator was emotion, and the dependent variable was the severity of mental health difficulty.

The second model, which includes a unique predictor variable for the mediator and the moderator, is statistically significant in predicting the variance in psychological well-being ($F(2, 300)=143.01$, $P<.001$, $R^2=.49$). Maladaptive cognitive schemes are not significant predictors of psychological well-being ($b=10.0$, $t(301)=13.5$, $p<.001$). In contrast, emotion is a significant predictor ($b=5.2$, $t(301)=6.0$, $p<.001$) of psychological well-being. Therefore, emotion partially mediates the relationship between maladaptive cognitive schemes and psychological well-being with an indirect effect

of $IE=.07$, 95% CI [.04, 1.1]. The unique predictive power of maladaptive cognitive schemes diminishes considerably when controlling for the mediator.

6. Discussion

Regarding the severity of mental illness, the intensity of stress is directly and negatively related to good health, well-being, and self-esteem. A positive correlation ($r=.444$ $p=.000$) was between psychological distress and emotions, and a negative correlation ($r=-.415$ $p=.000$) was between emotional difficulties and extraversion. It is because extroverts are more stable to stress and need stimulation (Eysenck & Eysenck, 1991).

Wealth, social status, and resources are essential to people. Therefore, they may be susceptible to constant anxiety and stress related to these issues. As indicated, low income and education levels are associated with stress, depression, and overall psychological distress.

There is a significant correlation between mental health difficulties, immature ($r=.546$ $p=.000$), and neurotic ($r=.172$ $p=.001$) defense mechanisms. Immature and neurotic defense mechanisms are less complex than mature ones. Individuals are less likely to recognize them when used. Their psychological-social stressors, ideas, and results logically lead to psychological distress. The projection ($r=.549$ $p=.000$) and autistic fantasy ($r=.506$ $p=.000$) are significantly related to the severity of psychological well-being, including depression. The psychodynamic approach explains the activation of the defense mechanism of projection during the depression (Bond, Gardner, Christian, & Sigal, 1983). Regarding the mechanism of autistic fantasy defense, during times of depression, individuals with low energy and anhedonia tend to withdraw and experience less motivation and interest in real life and therefore rely on their fantasies more. It is logical to assume they may turn to fantasies instead of real-life changes.

The study found a significant positive correlation ($r=.653$, $p=.000$) between maladaptive cognitive schemas and the severity of psychological distress (anxiety, stress, depression) in the general population, which supports previous research findings (Noei, L., & Ashouri, 2010). Maladaptive cognitive schemas are negative patterns, including negative views about oneself and the world.

Medial analysis has determined that emotional regulation plays a partially mediated role among maladaptive cognitive schemas and the severity of psychological distress. This significant result suggests that changes in maladaptive cognitive schemas as a result of schema therapy may lead to a reduction in psychological distress and an improvement in an individual's psychological well-being.

7. Conclusions

The study results show that the severity of mental health difficulties is significantly related to maladaptive cognitive schemas, immature and neurotic defense mechanisms, and Emotionality. The personality trait Emotionality partially contributes to the development of maladaptive schemas, which can exacerbate psychological health issues.

8. Limits

We conducted the study online, and the questions used in the survey may increase the chance that participants should have reported truthfully, which could result in inaccurate or biased results.

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The background features a vibrant, abstract design. At the top, there's a solid red area. Below it, a thick, wavy band of bright cyan blue curves across the frame. Underneath this, a dark, almost black, wavy band follows the same path. The bottom half of the image is dominated by a light, textured blue background with subtle, darker blue and white mottled patterns, giving it a watercolor or marbled appearance.

WORKSHOP

KIDSTIME AND MINDFUL SCHOOLS: SOCIAL INTERVENTIONS FOR CHILDREN AND ADOLESCENTS FROM FAMILIES AFFECTED BY PARENTAL MENTAL PROBLEMS¹

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Abstract

About one in five children lives with a parent with a mental illness. These children bear high risks of developing an own mental illness and usually face a lot of obstacles like stigma, social isolation and feelings of guilt. Many of them take a role as a young carer, thus taking over more responsibilities within and outside the family than they can really bear.

The workshop will introduce children of parents with mental illness (COPMI) as a group and explain the impact and risk factors of parental mental illness on children. We will provide examples of approaches that can help children in this situation, using the KidsTime Workshop model as a case study. We will describe the approaches and methods of the KidsTime practice model and explain how a combination of family therapy and systemic therapy influences, together with drama, can create an effective multi-family therapy intervention.

It will describe the impact of the KidsTime model, including testimonials from children and families, and highlight the evidence in support of preventive approaches, as well as the barriers to securing investment for these interventions. The workshop also shows a concept of how to better address mental health in school contexts, this presenting a generic approach to raise resilience within a whole-school-project. The workshop will conclude with recommendations for practice.

Keywords: *Parental mental illness, resilience, stigma.*

1. Introduction

Having a parent with a mental disorder increases the risk of social and behavioral problems in childhood and mental health problems in adolescence. In Australia, approximately twenty percent of children grow up in a home where at least one parent is diagnosed with a mental health problem (Maybery et al., 2005), while in England this figure is estimated to be around two million (Parrott et al., 2008). Over 3,8 million children in Germany live with a parent with a mental health problem and an average of 4-8 children in an average classroom will be in this situation; this is 20–25% of the school population, similar figures in other EU-countries from which 70% likely to develop a mental health condition. Parental mental illness is one of the 10 adverse childhood experiences (ACEs), which has a lifetime impact on both physical and mental health. Parental mental illness (PMI) is a root cause of many other ACEs. WHO identifies PMI as one of the most important public health issues of our generation. Intervention late after the onset of an ACE is less likely to be effective and rising thresholds for acute support are exacerbated by significant reductions in early intervention spending by local authorities. By focusing on clinically diagnosable mental illnesses, interventions are often too late to address ACEs. Many of the young carers (80%) are not identified. Research into adverse childhood experiences, known as ACEs, identifies parental mental illness as one of the ten most powerful sources of toxic stress in young people. The presence of mental illness in a parent is known to negatively impact a child's cognitive and language development, educational achievement and social, emotional and behavioural development.

¹ The following have participated in this work: Marta Coromina, psychiatrist, Parc Sanitari Sant Joan de Déu; Irene Ardévol, clinical psychologist, CASM Benito Menni-Sisters Hospitalers; Fernando Lacasa, clinical psychologist, Hospital Sant Joan de Déu; Teresa Ribalta, clinical psychologist, Fundación Orienta, Núria Grasses, clinical psychologist, Parc Sanitari Sant Joan de Déu; Miriam Fuentes, clinical psychologist, Orienta Foundation; Carme Saltó, clinical psychologist, Parc Sanitari Sant Joan de Déu; Trini Sánchez, social worker, Orienta Foundation; Olga Pérez Ibáñez, clinical psychologist, Parc Sanitari Sant Joan de Déu, Barcelona, SPAIN.

It can lead to anxiety and guilt coming from a sense of personal responsibility. Where there is severe mental illness in a parent and no second parent who is well it can lead to neglect or abuse. These children are also at greater risk of bullying, a lower standard of living and financial hardship.

2. Risk factors and vulnerability to mental disorders

The fact that having a father or mother with a mental disorder increases the risk in children of presenting social and behavioral problems in childhood. Additionally, minors often assume role reversal, especially in single-parent families with severe mental illness (Huntsman, 2008). There are studies on severe mental disorders that have shown a greater risk of mental decompensation in minors who have a parent with schizophrenia in relation to controls (Niemi et al., 2003).

Among children and adolescents of parents with bipolar disorder, there is a higher percentage of behavioral problems, such as aggression, rule breaking, and attention problems (Dienes et al., 2002; Giles et al., 2007).

The children of adults with major depressive disorder have more problems in academic functioning, and in relationships with peers and with the family. Greater knowledge of the mental illness on the part of the patient and the family decreases the risk of distress in the minor, while a serious mental disorder with greater severity of the illness and a greater number of decompensations increases the risk (Huntsman, 2008). Family psychosocial factors of good prognosis are having a mother with good mental health—that is, that the mental illness is in the father—, contact with health services, good maternal habits, social support, a good relationship between the couple, positive attitudes towards pregnancy, a high socioeconomic status, an older age in the infants and the late onset of the disease (Maybery et al., 2005; Huntsman, 2008; Logan et al., 2007). They constitute one of the most stigmatized groups in our society, especially those who suffer from schizophrenia. (Ochoa et al., 2011).

3. Protective factors

Contact with other people who have a mental disorder, and sharing experiences, facilitates changes in stereotypes (Cooklin, 2010). Some resilient social and educational aspects are having access to a good support network, good schooling and belonging to social and religious groups (Fonagy et al., 1994; Kotliarenco et al., 1997).

4. Objectives

The main objectives in the Kidstime workshops are focused on:

- Help parents suffering from mental illness to find means through the which the disorder and its impact can be discussed between them and their children
- Help parents access or redirect their pride, confidence, and competence as parents
- Address fears, confusion, and lack of knowledge about the mental disorder and its treatments
- Help children and youth increase their understanding of information about their parents' mental disorder and parental behavior associated with disease
- That children may experience a more positive response from their parents

5. Intervention model

These workshops were developed in England in 1999 by Alan Cooklin, (Cooklin, 2010; Cooklin et al., 2012). The structure of workshops includes monthly workshops, which take place in the community, in non-sanitary facilities (such as a social center, library), with two-hour sessions. These sessions are structured in three parts: a first multifamily part; in the second part, the groups are separated, a seminar is held with the parents and a psychodrama activity with the minors, which is usually recorded on video; In the third part, a closing multi-family group is held aimed at sharing what has been worked on in the separate groups and the video is viewed while a snack is offered.

6. Discussion

The Kidstime workshops are a multifamily group event that provides an atmosphere of trust and equality, and, through psychodrama techniques, using art as a resource, a space is fostered to talk about mental health problems and their impact on family life. The use of play and psychodrama to communicate and teach children to address the issue of mental health, allows them to find a place to meet friends, play games, make movies, eat pizza and understand what is happening to their parents. Parents seem to feel relieved after being able to speak in the group and later explain mental health problems to their children. In families, bonds are strengthened by understanding these problems. In forming and finding a safe space and dealing with stigma. A study of the German KidsTime Workshops found that 95% of families

(similar reports from adults, adolescents and younger children) submitting individual form evaluations stated they benefited from attending the workshops and wanted to continue attending. All family members stated they had learned something new about mental illness at the workshops and that the workshops helped them to talk about mental illness within and outside of their families. Watching and reflecting on the children's drama film, as well as the multi-family group format (particularly the feeling of solidarity among families) were viewed as helpful catalysts in enabling the open discussion of issues that may have been perceived as being too "shameful" to talk about outside of the group. In Barcelona, a research was made with 65 parents who participated in the workshops. There were administered: Self-perception of Social Stigma Scale SSQ, Rosenberg self-esteem scale, CD-RISC Resilience Scale, Inventory of Parenting Practices IPC, SDQ, Satisfaction survey for children and adults, collecting a total of 173 surveys. The results showed significant pre-post differences in the "involvement" and "expression of affection" subscales of the Parenting Guidelines Inventory and "Prosocial behavior" of children measured with the SDQ and in adult self-stigma.

7. Intervention in schools

The Mindful School Project has been developed as a complement to the Kidstime Workshop, and it is based on the kidstime model and philosophy. It offers Awareness raising for the whole school staff, lessons on mental illness and mental health plus ideas on how to develop a Mindful School atmosphere to support better the students most at risk when identifying young carers. With an Erasmus+ project mindful schools has been running in Berlin, Barcelona and Reykjavik for 8th to 10th grade in 2022 and is currently followed by a similar Project in primary school in Berlin, Barcelona, Reykjavik and Viena.

8. Conclusions

Kidstime workshops have proven to be effective when it comes to enhancing the affective support of parents towards their children, improving the prosocial behavior of boys and girls and reducing the stigma of parents affected by mental health problems.

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AUTHOR INDEX

Abrinková, L.	399	Brambila, B.	131, 146
Adamiste, M.	636	Brewer, J.	646
Afonso, M.	11	Brophy, T.	206
Agnesone, M.	459	Bruno, F.	479
Alain, M.	636	Burdun, P.	561
Alecka, M.	416	Butsashvili, N.	236
Alves, L.	131	Cagnani, L.	163
Andre, M.	315	Calaresi, D.	435
Andrecio, E.	556	Cannavò, M.	435
Apesland, A.	611	Cárdenas, M.	687
Aravena, V.	445	Carraro, I.	616
Arikan, M.	661	Catania, A.	221
Arslan, M.	474	Catania, G.	16, 221
Arutinova, L.	680	Ceple, I.	416
Ashkenazi, S.	507	Cervai, S.	231, 390
Astar, M.	88, 464	Chakraborty, S.	517
Attabib, N.	106	Chandra, P.	338
Bacikova-Sleskova, M.	454	Chandur, J.	338
Baev, M.	666	Chiesi, F.	479
Barbagli, F.	450	Cibin, I.	616
Barberis, N.	435	Colombo, L.	621
Barbierik, L.	454	Cömert, I.	88, 121
Barros, I.	163, 343	Commons, M.	323
Başer, I.	83, 88, 464	Corral, S.	295, 305
Baykal, N.	70, 641	Correa, H.	372
Bedard-Gilligan, M.	366	Costa, J.	131, 146
Beesdo-Baum, K.	351	Côté, K.	375
Begega, A.	413	Cramer, K.	300
Bekiroğlu, B.	270	Cserjési, R.	35, 111, 357
Belanger, R.	636	Cuevas, L.	168
Belmon, J.	158	Cunha, O.	333
Benbenishty, R.	176	Čurová, V.	399, 527
Benka, J.	527	Cvetković, A.	275
Berinšterová, M.	606	da Cruz, M.	131, 146
Berzina, A.	416	Dal Corso, L.	616, 626
Best, L.	96, 106, 116	Dallas, J.	240
Blasutig, G.	231	Damjениć, M.	651
Bojarski, D.	561	Dancsik, A.	35
Bokuchava, T.	216	DeBlock, D.	300
Bologna, A.	231	De Carlo, A.	626
Bores Bárcena, E.	295	De Luca, A.	450
Borojević, S.	651	De Marco, L.	372
Borring, C.	201	Demetriou, C.	196
Both, L.	440	Derivois, D.	354
Bouayed, S.	405	di Furia, M.	522
Bozogáňová, M.	591, 606	Dimoski, J.	280

Dufresne-Tassé, C.	6	Hancheva, C.	445
Đurbisová, S.	419	Hanoğlu, L.	661
Đuricová, L.	484, 571	Hashimoto, S.	402
Dushaj, A.	45	Herrington, M.	440
Engelhard, E.	3	Hickey, P.	116
Er, M.	83	Hildred, K.	245, 387, 390
Farrera, A.	168	Hricová, M.	80
Felix, G.	338	Huh, D.	366
Felizardo, S.	512	Ignjatovic, T.	280, 586
Fernandes, R.	512	Iliško, D.	675
Fernández Quindós, R.	305	Iona, T.	435
Finestrone, F.	596	Iriarte Elejalde, L.	295
Fitos, M.	35	Ishibashi, K.	402
Franzoi, I.	450, 459	Janković, I.	75, 275
Frydrychowicz, M.	561	Janovska, A.	454
Fujisawa, A.	502	Javakhishvili, N.	216, 236
Fusejima, A.	402	Jhean-Larose, S.	158
Gagnon, C.	240	Joseph, N.	354
Gajdošová, B.	527	Jove, C.	413
Gajšek, M.	186	Jurčec, L.	181, 186
Gangloff, B.	250	Kačmár, P.	396
Gaudet, D.	106	Kahhale, E.	131, 146
Geç, E.	40, 641	Kahraman, T.	661
George, J.	328	Kantar, D.	651
Gimenes, G.	378	Karaman, G.	101
Ginocchetti, M.	231	Karaoğlu, K.	393
Göbel, O.	357	Kartal, O.	537
Gogibedashvili, A.	236	Kashyap, H.	338
Gogichaishvili, M.	126	Kassaliete, E.	416
Goliskina, V.	416	Katz, M.	260
Golub, T.	181, 186	Kaysen, D.	366
Gonella, M.	459	Khanam, T.	410
Gonzalez, B.	11	Khechushvili, L.	126
Gordo Cenizo, L.	295	Kılıç, N.	101, 270
Gosselin, E.	240	Kische, H.	351
Govrin, A.	26	Kissaun, G.	16
Goyet, L.	405	Klavinska, A.	416
Grandi, A.	621	Kleszczewska-Albińska, A.	30
Granieri, A.	450, 459	Kohútová, K.	566
Greco, D.	616	Kõiv, K.	576
Grimaldi, C.	459	Koleda, M.	416
Guerrien, A.	378	Kosic, A.	280, 586
Gusev, A.	666	Koury, J.	146
Guviyska, V.	552	Kousholt, D.	201
Guyer, T.	150	Kovačević, I.	265
Habijan, E.	556	Köverová, M.	136
Haimov, I.	320	Krank, M.	141
Hall, C.	226	Kremlev, A.	666

Krumina, G.	416	Nishinobo, M.	384
Kupfer, M.	163	Noel, R.	191
Kusaj, E.	561	Noel-Harrison, D.	290
Kužet, I.	265	Northcutt, K.	532
Kyuchukova, M.	552	Novo, R.	11
Lammel, A.	173, 405	Noyer-Martin, M.	158
Lamont, A.	226	Obod, M.	631
Lauri, M.	221	Odilavadze, M.	126
Le Roux, N.	671	Oliveira, D.	343
Lecerf, J.	378	Orosova, O.	399, 527, 547
Leilop, L.	576	Ortiz, G.	168
Leite, S.	323	Özmen, H.	121
Lesenecal, A.	173	Ozola, E.	416
Lima Neta, M.	131	Padilla, S.	168
Limone, P.	596	Palafox, G.	168
Liu, S.	489	Papaleontiou-Louca, E.	196, 211
Lodia, T.	50	Parent, N.	375, 381
López, M.	413	Parent, R.	636
MacDonald, J.	226	Paskova, L.	494
Magrin, M.	542	Pat-Horenczyk, R.	176
Maintenant, C.	315	Pearson, C.	366
Majdanová, M.	547	Peconio, G.	522, 596
Makarevičs, V.	675	Pereira, J.	146
Mangion, C.	255	Pešić, M.	55, 285
Manojlović, M.	265	Pete, K.	357
Mariani, P.	566	Pethö, T.	591, 606
Marín, R.	366	Petrovic, D.	280, 586
Markowitsch, H.	60, 65	Pinto, J.	245, 387, 390
Martinez, H.	631	Piteira, M.	390
Martinis, M.	390	Poliach, V.	484, 571
Martins, E.	512	Popovic, G.	537
Marunic, G.	479	Proctor, C.	96
Mendes, F.	512	Ráczová, B.	396
Mgebrishvili, N.	680	Ragni, B.	596
Mikelsone, R.	416	Rahman, M. J.	310
Miller, P.	323	Ramos-Silva, A.	323
Mitrović, M.	55, 75	Rapisarda, S.	616
Miyata, N.	402	Rcondo, C.	390
Mora, D.	626	Reiman, A.	96
Morrissey, S.	532, 537	Rezrazi, A.	250
Mota, B.	323	Ribeiro, E.	512
Moustadraf, S.	381	Rijavec, M.	181
Müller, V.	357	Rizzo, M.	621
Murry, G.	191, 310, 410	Rodrigues, P.	323
Nadeau, D.	636	Rodríguez, K.	168
Nava-José, P.	363, 469	Romaşcanu, M.	581
Negrão, R.	111	Romero-Mendoza, M.	363, 469
Nikolić, M.	285	Rosenstreich, E.	408

Rossi, M.	522	Tsuda, A.	402
Rückert, F.	351	Turhan, Z.	641
Ruza, T.	416	Udabor, A.	425
Sá, S.	333	Valachiné, Z.	35, 357
Sabolová, N.	80	van der Merwe, D.	671
Salar, A.	661	Vardanashvili, I.	236
Saldívar Hernández, G.	469	Varga, J.	357
Saltukoğlu, G.	83, 92, 101	Vasiljeva, S.	416
Sauta, M.	450, 459	Vatansever, Z.	88
Savić, G.	265	Vaz-Rebelo, P.	196
Schiff, M.	176	Verma, M.	338
Seeder, A.	646	Vijaykumar, C.	338
Serpa, E.	416	Volberga, L.	416
Shacham, M.	21	Voss, C.	351
Shkēmbi, F.	360, 369	Walker, D.	366
Sik-Lanyi, C.	357	Wissing, M.	671
Simon, B.	35	Wright, E.	155
Smith, E.	226	Yamazaki, Y.	601
Šnele, M.	55, 75	Yamazaki, Y.	656
Sönmez, B.	393	Yarkoni, M.	21
Speed, D.	116, 226, 440	Yıldırım, S.	661
Spierling, H.	687	Yıldız, Z.	121, 661
St-Amand, A.	636	Yumuşak, N.	101
Stănescu, D.	581	Zecheva, V.	196
Staniloiu, A.	60, 65	Živković, I.	265
St-Louis, A.	6	Zsigmond, I.	196
Suleiman, I.	430		
Svede, A.	416		
Szilágyi, A.	196		
Tagliaferro, C.	479		
Tahir, S.	111		
Takahashi, K.	499		
Tani, K.	402		
Tatar, A.	92, 270		
Tenieshvili, A.	50		
Tiamzon, E.	556		
Todorović, J.	275, 285		
Toloka, D.	416		
Toran, M.	641		
Tóth-Bakos, A.	196		
Toto, G.	522, 596		
Toyama, M.	601		
Traversa, T.	542		
Tremblay, J.-F.	240		
Treska, V.	369		