The Effect of Occupational Stress and Coping Strategies on Mental Health and Emotional Well-Being Among University Academic Staff During the COVID-19 Outbreak

Panshuo Shen[1] & Paul Slater[1]

[1] School of Nursing, Ulster University, Belfast, UK

Correspondence: Panshuo Shen, School of Nursing, Ulster University, Belfast, BT37 0QB, UK. E-mail: shen-p@ulster.ac.uk

Abstract

The level of stress among academics in higher education institutions has significantly increased over the past decade. Mental health and well-being of academics can be affected once they are exposed to stressful work conditions and use negative coping strategies. This study was set against the backdrop of the pandemic disease, COVID-19, which has challenged the daily work of academics and risen to the various new stressors. This study aims to investigate the current status of occupational stress, coping styles, mental health and emotional well-being of university academics during the COVID-19 outbreak in Northern Ireland, and examine the effect of stress and coping strategies on mental health and emotional well-being. A cross-sectional online survey was conducted using a sample size of 87 academic staff working in a university in Northern Ireland. SPSS version 25 was used to analyse the collected data. The results showed academics experienced moderate stress levels, and distraction behaviours were the most common form of coping mechanism. Academics were in the moderate status of mental health and poor emotional well-being. Occupational stress has a significant effect on mental health and emotional well-being. Positive reframing and acceptance coping styles have an impact on emotional well-being. This study contributes to the understanding of occupational stress, coping strategies, mental health and emotional well-being of academics in higher education in Northern Ireland. The findings can help to develop reliable methods to inform policy on health and well-being for university academics, which in turn lead to increased productivity at work.

Keywords: academics, coping strategies, COVID-19, mental health, occupational stress, university, well-being

1. Introduction

The working environment is continuously changing in today's society with globalised economies, new policies and technologies, which have led to new challenges for employees (Darus, Azizan, & Ahmad, 2016; Jiang, Du, & Dong, 2017). The higher education sector is among the highly influenced sectors of the changes (Terán & Botero, 2011; Chaudhry, 2012; Vera & González-Ledesma, 2018); it plays the role of promoting research and development as well as delivering required human capital to the country, which is vital for attaining sustainable development of economy, society, policy and technology (Lawal & Wahab, 2011; Fernandez-Sanchez, Bernaldo, Castillejo, & Manzanero, 2014; Adewale, Ghavifekr, & Abdulsalam, 2017). The teaching profession in the higher education sector is one of the most stressful professions (Richards, 2012; Kataoka, Ozawa, Tomotake, Tanioka, & King, 2014; Kang & Sidhu, 2015; Adewale et al., 2017). More than a third of education professionals have experienced stressful work in the past academic year worldwide (The Guardian, 2019), and work stress can also lead to a financial burden on society (Skakon, Nielsen, Borg, & Guzman, 2010; Fontinha, Easton, &Van-Laar, 2019); most countries had a loss of 4% to 6% of GDP because of work-related health problems; the basic health services for the health problem in work cost between $ 18 and $ 60 per worker (World Health Organisation [WHO], 2017). In the United Kingdom (UK), there was about 217,065 staff at higher education institutions in 2018-2019 (Higher Education Statistics Agency [HSEA], 2020); according to the statistics of the Education Support (2019) in the UK, 72% of educational professionals described themselves as stressed, and 63% considered leaving their current position. In Northern Ireland, 74% of education teachers reported stress at work, and 50% expressed the intention to leave due to the pressures on health and well-being (Education Support, 2019).

1.1 Occupational Stress and Coping Strategies Among Academics

Occupational stress, which is also termed as job stress or work stress can be referred as a consequence of incongruity between demands and one's ability to cope with the situational demands within a limited time frame (De-Silva & Samanmali, 2017; Burman & Goswami, 2018). The levels of stress in university teachers have significantly increased over the past decade (Catano et al., 2010; Mudrak et al., 2016; Fontinha et al., 2019) because of their competing roles and multitasked responsibilities in teaching, research and publication (Sun, Wu, & Wang, 2011; Singh, Cross, Munro, & Jackson, 2020). The changes in the tertiary education system in the 21st century (Quraishi, Aziz, & Siddiquah, 2018) also have increased job insecurity and increased workload for academic staff (Whitley & Gläser, 2014; Kinman & Wray, 2017). It was reported that 30% to 60% of academics were experiencing stress in higher education institutions and most academics experienced moderate levels of stress in the universities of China and the UK (Urbina-Garcia, 2020). Coping with the occupational stress, academic staff employed different coping strategies (Melancon, 2014); some individuals took positive approaches such as exercises, assistance and time management, the positive coping styles have helped to reduce the work stress and protect the health and well-being of academics (Iqbal & Kokash, 2011; Fadel et al., 2019). However, others chose passive approaches such as alcohol consumption, substances misuse, smoking and unhealthy diet (Carton & Fruchart, 2014; Ruisoto, Vaca, López-Goñi, Cacho, & Fernández-Suárez, 2017). A survey in an American university (Holton, Barry, & Chaney, 2016) showed the most frequently used maladaptive coping strategies by teachers as drinking alcohol and using drugs. Although using of alcohol and drug has been regarded as negative coping style, Sattler, Sauer, Mehlkop, and Graeff (2013) reported the use of drugs among academics with the aim of reducing work stress might be seen as a potentially beneficial adaption to difficulties in the modern environments. An opinion supported by Müller and Schumann (2011). However, there is a lack of research on the effect of academics' coping styles on their health and emotional well-being.

1.2 Mental Health and Well-Being Among Academics

Occupational stress has the most significant effect on mental health (Holton et al., 2016). A great deal of stress and health strategies in work have been implemented worldwide to combat the potential negative effects of work stress; these included the "Global Plan of Action on Workers' health 2008-2017", the "Health and Safety Executive strategy" in the UK; and the "Organisational Multi-level Program" in Australia (Urbina-Garcia, 2020). There were nearly 34% and 39% of education professionals have experienced a mental health issue in the past academic year in the UK and Northern Ireland, respectively (Education Support, 2019); 46% and 35% of education professionals reported anxiety and depression symptoms, respectively (Education Support, 2019). The average rates of stress, depression and anxiety for the teaching profession, which included the teachers in third level settings, were higher compared to the general workforce (Renn, 2018). The fact that 50% of educators were absent due to mental health symptoms in 2018 (Education Support, 2019), and 44% health expenditure have been paid out on teachers' ill-health per year in the UK (Health and Safety Executive [HSE], 2019). Well-being also has become an increasingly important factor in the professional industry (Jeffrey, Mahony, Michaelson, & Abdallah, 2014; Achour, Azmi, Isahak, Nor, & Yusoff, 2019); it refers to how people evaluate their lives considering variables such as life satisfaction, positive emotions and lack of negative emotions (Klug & Maier, 2015). However, to date, limited research has focused on well-being among academics in the university. Recent studies showed a decreased well-being in university teaching staff (Richards, Levesque-Bristol, Templin, & Graber, 2016; Qudah, Davies, & Deakin, 2019). Conversely, the quality of working life of academics at universities in Norway and Finland has been proven high, which is mainly due to the fact that the quality of life is good in general in both countries (Collinson, 2018). It is essential to investigate variables that may reduce the adverse impact on health (Darabi, Macaskill, & Reidy, 2017) and protect academics in higher education from increasing stress and promote well-being (Aquino, Lee, Spawn, & Bishop-Royse, 2018).

1.3 The Theoretical Framework of the Study

Lazarus and Folkman's (1984) model of stress and coping (Transactional Stress and Coping Theory (TTSC) (see Figure 1) is the most widely accepted theoretical framework of stress and coping (Margaret, Ngigi, & Mutisya, 2018; Lee & Roberts, 2018); it considers stress as a transaction between an individual and the environment (Folkman, Lazarus, Gruen, & DeLongis, 1986). TTSC was regarded as intrapersonal processes of stress, coping and their relationship to health and well-being of individuals (Lee & Roberts, 2018). High stress leads to ill-being and poor health concerns, especially where an individual lacks the coping resources or uses ineffective strategies to cope with stress (Lazarus & Folkman, 1984; Hendy, Can, & Black, 2019). TTSC provided a theoretical framework for analysing the effect of stress and coping strategies on mental health and well-being among academics (Walinga, 2010), which also provided the theoretical underpinning for the present study.
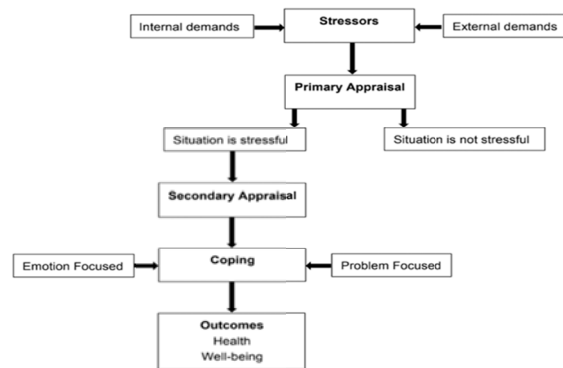
Figure 1. Transactional model of stress and coping (Lazarus & Folkman, 1984)

1.4 Rationale for the Study

There are limited studies focus on the effect of occupational stress and coping mechanism on mental health and emotional well-being among academic staff in the university setting in Northern Ireland. This study focused on one of the higher education institutions in Northern Ireland and investigated the situation of occupational stress, coping strategies, mental health and emotional well-being of academic staff. It is important for institutions to recognise work-related stress, mental ill-health, and ill-being of academics. This study was set against the backdrop of the pandemic disease, novel coronavirus (nCoV) disease (COVID-19), which has been declared a public health threat globally (WHO, 2020). This pandemic has resulted in a global social and economic disruption (Islam, Ferdous, & Potenza, 2020). Filtering down to an individual level among academics, it has challenged their daily work and risen to the various new stressors, as well as blurred the interface between work/home life distinction and balance (Li et al., 2020). This study will help provide a clear picture of the impact of these new challenges on work stress, coping strategies, and outcome measures of mental health and well-being.

1.5 Purpose of the Study

This study contributes to the current literature on occupational stress, coping strategies, health and emotional well-being among university academic faculty; and informs policy and strategies on improving health and well-being for university academics. The main objectives were formulated:

1) To investigate the level of occupational stress in university academic staff.

2) To inspect the coping strategies employed by academic staff to deal with stress.

3) To explore the status of mental health and emotional well-being within university academic staff.

4) To examine the relationship between occupational stress, mental health and emotional well-being along with coping strategies.

2. Methods

2.1 Design and Setting

A descriptive, cross-sectional, self-administrated questionnaire survey was conducted using a population of academic staff working in a third level education setting in Northern Ireland. This was determined and appropriate based on the advanced theoretical framework and necessary to achieve the study objectives. The study was guided by cross-sectional studies guidelines STROBE (von Elm et al., 2007).

2.2 Sample

The identified target population of this study was the academic staff at Ulster University in Northern Ireland, and the questionnaires were sent to all academic staff at Ulster University, an overall of 886 subjects. One hundred and ten voluntary participants returned the survey, with a response rate of 12.4%. After removal of 23 questionnaires which were ineligible, a sample of 87 full-time academic staff across all departments in the university was attained. A post hoc analysis of confidence intervals showed a margin of error as 9.98%.

2.3 Procedure of Data Collection

Data were collected through a self-reported and administered questionnaire using an online survey system (Qualtrics) from May 2020 to July 2020 at the height of the pandemic lockdown in the UK. Permission was

sought and gained from central IT systems to distribute the questionnaire pack (participant information sheet, letter of invitation, support information and survey link) to all staff via the email system after ethical approval. Inclusion criteria were academic staff who are employed and currently working at Ulster University as full-time academics for more than 3-months as well as on the university staff emailing list. Filter questions in the introduction section of the online survey helped to ensure only the relevant staff members participating in the study. Those individuals not fulfilling these criteria were thanked for their interest and screened out when relevant. All participants also received a support sheet which signposting organisations to provide help. The research team had no access to the distribution list for the questionnaire. Completion of the questionnaire implied consent to participate in the study. Participants were assured of the confidentiality and anonymity of the data.

2.4 Measurement Tools

2.4.1 Socio-Demographic Characteristics Information

Key demographic details were collected including gender, age, marital status, number of dependents, parental role and educational level. Details regarding work such as position, employment status, work experience, and working hours per week were also be sought.

2.4.2 Measurement of Stress

Perceived stress scale (PSS) (Cohen & Williamson, 1988) was used to measure the degree to which situations in one's life were appraised as stressful during the last month. It comprises 10 items which measured on a 5-point Likert scale ranging from never (0) to very often (4).

2.4.3 Measurement of Coping Strategies

The Brief-COPE (Carver, 1997) is a 28 item self-report questionnaire (14 subscales) designed to measure effective and ineffective ways to cope with a stressful life event. The score ranging from 1 to 4 with 1 beings 'I haven't been doing this at all' and 4 beings 'I've been doing this a lot'. An abridged version consisting of 18 items with nine subscales (active coping, substance use, emotional support, instrumental support, behavioural disengagement, positive reframing, planning, acceptance and religion) relating to coping in Covid-19 were used.

2.4.4 Measurement of Alcohol Use

The Alcohol Use Disorders Identification Test (AUDIT) developed by the WHO (Babor, La Fuente, Saunders, & Grant, 1992) is used to identify persons with alcohol consumption during the past year. It comprises 10 questions that represent three conceptual domains: alcohol consumption (Items 1–3), alcohol dependence (Items 4–6), and alcohol-related consequences (Items 7–10). The total score ranges from 0 to 40, higher scores indicate a higher risk of problematic alcohol consumption. The generally accepted cut-point of the scale for identifying a potential alcohol problem is 8 (Babor & Robaina, 2016).

2.4.5 Measurement of Mental Health

The Short From-12 Health Survey version 1 (SF-12v1) designed by Ware, Kosinski and Keller (1996) is widely used to assess self-reported health-related quality of life (HRQoL) within the last four weeks. Two dimensions can be derived from the SF-12, including a Mental Component Summary (MCS) and a Physical Component Summary (PCS) (Damásio, Andrade, & Koller, 2015). The SF-12 summary scores (PCS and MCS) ranged from 0 to 100, a zero score indicates the lowest level of mental health and 100 indicates the highest level of mental health (Shou et al., 2016). This study used subscale-MCS (6 items) to explore the status of mental health among academics.

2.4.6 Measurement of Emotional Well-being

The satisfaction with life scale (SWLS) originally developed by Diener, Emmons, Larsen, and Griffin (1985) was designed to measure global cognitive judgements of satisfaction with life. This scale consists of 5 items measured on a 7-point scale that ranges from 7 strongly agree to 1 strongly disagree; higher scores on the SWLS mean greater levels of life satisfaction.

2.4.7 Validity and Reliability of Scales

An expert panel consisted of 5 academic staff from the faculty leading the research in the university examined the validity of the instruments before distribution electronically. Cronbach's alpha coefficients of each scale were greater than 0.7 (see Table 1), indicating that the measurement tools employed in the present study had reasonable internal consistency reliability.

Table 1. Reliability analysis

Scale	No of Items	Cronbach's Alpha
Perceived Stress Scale (PSS)	10	0.91
Brief COPE Scale	18	0.83
Alcohol Use Disorders Identification Test (AUDIT)	10	0.74
The Short Form Health Survey (SF)	6	0.81
Satisfaction with Life Scale (SWLS)	5	0.92

2.5 Ethical Considerations

This study was approved by the Nursing and Health Science Filter Committee of Ulster University and Ethics Committee of Ulster University, and the study was carried out in accordance with the ethical standards. Participants were informed about the information of the study, and their rights to participate and withdraw during the research. Confidentiality and anonymity were ensured by informing the participants that completing the questionnaire implies their consent. All participants were provided with a support sheet which signposting organisations to provide help. The collected data were only used for the research purpose and were protected properly by obeying protection legislation and Ulster University policy.

2.6 Statistical Analysis

Statistical Package for the Social Sciences (SPSS) was used to analyse the collected data. Descriptive statistics were used to summarise the feature of the demographic data and examine the normality of distribution. Cronbach's alpha coefficients were used to test the internal consistency reliability of each scale before summation to a total score. Linear regression analysis includes model fitness, and regression coefficients were used to determine the significance of differences of sociodemographic variables (such as age, gender, work experience and position), stress, coping strategies (active coping, substance using, emotional support, instrumental support, behavioural disengagement, positive reframing, planning, acceptance and religion), mental health and emotional well-being. For all the tests conducted, a p-value of ≤ 0.05 is considered statistically significant. The analysis was guided by the TTSC, and coping mechanisms were examined as moderating variables between stress and well-being measures.

3. Results

3.1 Response Rate

A total of 886 questionnaires were issued, and 110 voluntary participants returned the survey, yielding a response rate of 12.4%. After removal of 23 ineligible questionnaires, 87 effective questionnaires were obtained, with effective response rate at 9.8%.

3.2 Sociodemographic Characteristics

The basic characteristics of the respondents were shown in Table 1. Respondents included 55 (63.2%) females. Most of the respondents (79.3%, n=69) were married or cohabitation. The majority (35.6%, n=31) of them age ranged from 45 to 54; and 28.7% (n=25) reported age ranged from 55-65. A large number of respondents had Doctor degree (64.4%, n=56). In terms of academic rank, 63.2% (n=55) were lecturers and 35.6% (n=31) were senior lecturer and above, with 93.1% (n=81) in permanent post and 6.9 % (n=6) in fixed position. Majority of respondents were from the "Life and Health Sciences School" (50.6%, n=44). Most respondents (32.2%, n=28) have worked for 1-5 years in the university, 17.2% (n=15) had 21-30 years' working experience, with a large number of respondents had a workload of 41-50 hours per week which accounting for 37.9% (n=33) of the questionnaires. The characteristics of dependents and home-schooling involvement were presented in Table 2.

Table 2. Sociodemographic characteristics of the study participants

Variable		Frequency	Percent (%)
Age	25-34	9	10.3
	35-44	22	25.3
Gender	Male	32	36.8
Marital status	Single/divorced/separated	17	19.5
	Missing	1	1.1
Educational level	Masters and below	31	35.6
Dependents under 18 years old	0	42	48.3
	1	14	16.1
	2	20	23.0
	≥3	11	12.6
Involving in dependents' home-schooling (hours/per day)	<1	45	51.7
	1-2	15	17.2
	≥3	23	26.4
	Missing	4	4.6

3.3 Occupational Stress

Most academics (66.7%) experienced moderate stress, and 16.1% with high stress level during the COVID-19 outbreak, with mean (SD) stress score was 19.78 (7.44) (see Table 3). Overall socio-demographic factors were not significantly associated with stress (F=1.350, P=0.228) using multiple regression analysis (see Table 4). Coefficients analysis justified the individual effect of the independent variables, which also showed the individual socio-demographic factor had no significant association with stress among academics and were poor predictors of the model.

Table 3. Stress level of academics

Stress Level	Frequency	Percent (%)	Mean (SD)
Low	15	17.2	
Moderate	58	66.7	
High	14	16.1	
Total	87	100	
Stress Score			19.78 (7.44)

Table 4. Association between stress and socio-demographic factors of academics

Model	R	Adjusted R Square	F	P
1	0.385[a]	0.038	1.350	0.228

Note. a. Predictors: (Constant), socio-demographic factors (i.e. gender, age, marital status)

3.4 Coping Strategies

Coping styles of academics were summarised in Table 5. Instrumental support and religion were shown in low score among these coping strategies. After recoding the negative coping styles, the mean score of substance using and behavioural disengagement was high, which means academics less relied on substance and disengagement to cope with stress. Distraction behaviours were the most common form of coping mechanism. Using multiple regression analysis, the overall model of socio-demographic factors and behavioural disengagement was not statistically significant (F=1.275, P=0.268). The regression of coefficient further explored the individual impact of the independent variable, socio-demographic factors, which showed that working hours and behavioural disengagement of academics have a significantly negative relationship (β=-0.279, P=0.033). Positive reframing and acceptance coping styles both have a positive and significant relation with dependents of academics (β=0.512, P=0.003; β=0.536, P=0.005 respectively). Other coping strategies have no significant relation to socio-demographic factors.

Table 5. Coping styles of academics

Coping Strategies	Mean (SD)
Religion	3.35 (1.69)
Instrumental support	3.44 (1.44)
Emotional support	4.11 (1.62)
Active coping	5.00 (1.93)
Planning	5.00 (1.92)
Positive reframing	5.10 (1.68)
Acceptance	5.79 (1.82)
Substance using	7.08 (1.29)
Behavioural disengagement	7.16 (1.08)

Most academics (78.2%) had a low risk of alcohol dependence and 19.5% academics had an increasing risk of alcohol dependence. Academics with high risk and possible alcohol dependence only took 2.2%. Mean (SD) alcohol use score was 4.98 (4.04) (see Table 6). The relation of socio-demographic factors and alcohol use among academics was not statistically significant (F=1.450, P=0.184)

Table 6. Alcohol dependence risk category of academics

Risk category	Frequency	Percent (%)	Mean (SD)
Low risk	68	78.2	
Increasing risk	17	19.5	
High risk/Possible dependence	2	2.2	
Total	87	100.0	
Alcohol use Score			4.98 (4.04)

3.5 Predicting Mental Health

The average status of mental health among university academics during the COVID-19 outbreak was in moderate level with the mean score (SD) was 50.79 (25.64). Socio-demographic variables and mental health showed no significant association (F=0.825, P=0.596). Stress as a predictor in the regression analysis produced a statistically significant model (F=72.725, P=0.001), accounting for approximately 48.2% of the variance in the mental health of academics. There was a significantly negative relationship between stress and mental health, which indicated higher levels of stress (β= -0.699, t = -8.528, P=0.001) predicted poor mental health (see Table 7). The entry of the ten coping strategies in the regression analysis resulted in a not statistically significant model (F=8.090, P=0.594), each coping style had no significant relationship with the mental health of academics.

Table 7. Regression analysis with mental health as dependent variable and stress as predictor

Predictors	Unstandardized Coefficients		Standardised coefficients Beta	t	P	F	Adjusted R Square
	B	SE					
(Constant)	1.359	0.172		7.906	0.000	72.725	0.482
Stress	-0.690	0.081	-0.699	-8.528	0.000		

3.6 Predicting Emotional Well-being

Most participants reported poor emotional well-being during the COVID-19 outbreak with a mean (SD) score of 16.28 (7.46). 35.6% of academics showed dissatisfaction with life and 11.5% extremely dissatisfied, only 13.8% satisfied and 3.4% extremely satisfied with life. Socio-demographic variables and emotional well-being had no significant relations (F=0.760, P=0.653). Stress as a predictor in the regression analysis produced a statistically significant model (F=27.749, P=0.004), accounting for approximately 25.8% of the variance in the emotional well-being of academics. There was a significant relationship between stress and the emotional well-being (β= 0.517, t = 5.268, P=0.000< 0.05) (see Table 8). The entry of the coping strategies in the regression analysis resulted in a statistically significant model (F=5.222, P=0.004), accounting for approximately 37.6% of the

variance in the emotional well-being of academics (see Table 9). Specifically, positive reframing and acceptance coping styles were significant predictors of emotional well-being (β= -0.236, t = -1.934, P=0.002; β= -0.134, t = -1.082, P=0.032) (see Table 9).

Table 8. Regression analysis with well-being as dependent variable and stress as predictor

Predictors	Unstandardized Coefficients		Standardised coefficients Beta	t	P	F	Adjusted R Square
	B	SE					
(Constant)	1.226	0.412		2.975	0.004	27.749	0.258
Stress	1.023	0.194	0.517	5.268	0.000		

Table 9. Regression analysis with well-being as dependent variable and coping styles as predictor

Predictors	Unstandardized Coefficients		Standardised coefficients Beta	t	P	F	Adjusted R Square
	B	SE					
(Constant)	5.206	1.779		2.975	0.004	5.222	0.376
Active Coping	0.359	0.198	0.231	1.814	0.895		
Substance Using	-0.073	0.307	-0.032	-0.237	0.422		
Emotional Support	-0.414	0.260	-0.230	-1.597	0.105		
Instrumental Support	0.254	0.304	0.130	0.833	0.823		
Behavioural Disengagement	-0.546	0.309	-0.196	-1.767	0.057		
Positive Reframing	-0.419	0.217	-0.236	-1.934	0.002		
Planning	-0.014	0.258	-0.009	-0.055	0.159		
Acceptance	-0.221	0.204	-0.134	-1.082	0.032		
Religion	-0.218	0.174	-0.123	-1.252	0.059		
Alcohol Use	0.218	0.437	0.061	0.498	0.413		

4. Discussion

This study investigated the current status of occupational stress, coping styles, mental health and emotional well-being of university academics, and examined the effect of stress and coping strategies on mental health and emotional well-being through the lens of TTSC. It was found that academics experienced moderate stress during the COVID-19 outbreak. This stress level was lower than the stress level of previous findings in developing countries such as China (Li & Kou, 2018), India (Priyadarshini, Ponnam, & Banerjee, 2015) and Brazil (Tavares et al., 2012), but it was similar to the findings in Australian university (Bell, Rajendran, & Theiler, 2012) and other universities in the UK (Kinman, 2016). These findings suggest that the academic environment and outside environment in different countries can impact the academics differently. Socio-demographic factors did not affect stress in this study. Similarly, a study in a public university in Brazil (Fadel et al., 2019) also found no demographic condition had shown a significant relationship with stress. However, a survey of 5,445 academic staff in 56 Canadian universities found that female academics have more risk of stress compared to male faculty. This was also reported in Fontinha et al.'s (2019) study that women showed significantly higher levels of stress at work in a sample of 1,474 academics in nine British higher education institutions. Some findings also revealed academics who aged from 36 to 45 (Catano et al., 2010; Li & Kou, 2018), in an assistant professor position (Tavares et al., 2012; Meng & Wang, 2018) and working over ten years (Meng & Wang, 2018) in the institution were likely to report a higher level of psychological stress.

Most of the academics in this study employed positive coping styles to deal with occupational stress during the COVID-19 outbreak, which including emotional support, active coping, planning, positive reframing and acceptance. Adaptive coping styles were used by academics in most previous studies. Problem-focused coping was more likely to be used to manage stress by academics according to the study conducted by Darabi et al. (2017) in a British university. Priyadarshini et al. (2015) conducted an in-depth interview also found that academics in the universities in India were enjoying the work through a positive cognitive appraisal. Negative coping styles among academics, such as the high level of alcohol consumption were few in this study. Conversely, alcohol drinking as a coping behaviour for stressful conditions was used by 82% of professors in a private university in Spain (Ruisoto et al., 2017), with 13.1% reported problematic alcohol consumption. Ruisoto

et al. (2017) found that male professors were more likely to have alcohol drinking for stress coping than female professors. The present study found no gender difference in alcohol use, but it found that long working hours had an impact on behavioural disengagement coping style, and dependents of academics contributed to positive reframing and acceptance coping styles. There are no literature has the same finding with the present study, which need to be further explored.

In terms of mental health, academics were in the moderate status of mental health in the study. A study conducted in a Chinese university showed 43% of academics were in not good or even poor mental health (Li & Kou, 2018). Khan, Yusoff, and Isa (2016) investigated stress related mental health problems among 1,189 academic staff members in 12 universities in Pakistan, the results showed that 50% academics experienced a mild level of anxiety, 49% had social dysfunction and depression symptoms. There was no significant difference between socio-demographic characteristics and mental health of academics in this study. This result was consistent with Darabi et al.'s (2017) study among academics in the UK. Gender difference in mental health was reported by Catano et al. (2010), which showed female academics reported more physical and psychological health issues than male faculty. Professors were found had a lower level of mental disorders than other academic ranks in Khan et al. (2016) and Shen et al.'s (2014) studies. Occupational stress has a significant effect on mental health in this study. This also supported by Catano et al. (2010) and Kinman (2016), they found high levels of stress at work among academics were related to greater levels of mental health problem. The study among Chinese academics also found that occupational stress was positively associated with depressive symptoms. Coping strategies were found not significantly related to the mental health of academics in this study. A study conducted by Darabi et al. (2017) found that emotion-focused coping has no relationship with mental health while the problem-focused coping style was positively associated with mental health.

This study showed academics were in poor emotional well-being during the COVID-19 outbreak. This result was same with the study in Canadian universities, academics reported a decreased positivity towards their well-being in higher education institution (Catano et al., 2010). A study in an Indian university (Sawhney & Bansal, 2013) and a study in Australian universities (Bell et al., 2012) found college teachers had an average life satisfaction level and low levels of ill-being (Sawhney & Bansal, 2013). Socio-demographic factors were found did not affect the well-being of academics in the present study. However, Fontinha et al. (2019) found male faculty was likely to express higher levels of positive well-being than female faculty. Academics with tenure track in British universities were more likely to have poorer emotional well-being than temporary workers (Fontinha et al., 2019). Occupational stress has a significant effect on the well-being of university academics. This was supported by Bell et al. (2012) and Sawhney and Bansal (2013), they found that occupational stress was negatively related to well-being, which indicates a higher level of work stress did lead to poorer well-being among academic faulty. Positive reframing and acceptance coping styles significantly influenced the emotional well-being of academics in the present study. Darabi et al. (2017) also found problem-focused and emotional-focused coping styles were positively associated with the well-being of academics (Darabi et al., 2017).

5. Limitations and Strengths

This study contributed to the current understanding of occupational stress, coping strategies, health and emotional well-being among academics in higher education. Despite the strengths of the study, some limitations need to be considered. The participants were from one university, which made sample representativeness and difficult to generalise the results to a wider population. The response rate was low in the present study, which cannot fully explore statistically significant relations between the investigated variables. Larger sample size and powerful respondent rate may give better result and interpretation; therefore, future research should expand the sample size and the sample can across different higher education settings. The cross-sectional correlational data of the stress, coping, health and well-being of university academics in the study cannot reveal the dynamic changes of the effect of occupational stress and coping strategies on mental health and emotional well-being among academics, and the direction of causality cannot be established. In the future study, employing a longitudinal design would be practical to track the dynamic changes and avoid the limitation of cross-sectional data. Depending on different scales to measure stress and coping strategies, more aspects of stress experience and coping styles in work cannot be explored from the subjective perception of academics, an in-depth interview with selected participants would help understand the issues at hand. The scope of this research is limited as it cannot dissociate COVID-19 impact with academic stress; and this study only explored the effect of occupational stress and coping strategies on mental health and emotional well-being of academics. The source of stress and relation between stress and coping styles can be explored in the future study to enrich the research.

6. Recommendation

Addressing occupational stress can improve health and well-being in academics, which also can lead to increased productivity and efficiency in work (Dehnad et al., 2016). Implementing interventions and policy to reduce stress is necessary. Universities should address attention on academics' health and well-being over profits; creating a comfortable work environment for university teachers to improve their performance in work (Fadel et al., 2019); and organising workshops, programme and activities for enhancing counsel, advise and negotiation skills (Iqbal & Kokash, 2011). Besides, employers should care for workers and give adequate resource and support in their work. At the government level, the Higher Education Commission in Northern Ireland should invest to the development of higher education institutions; and legislation should be designed related to work stress, health, safety and benefits of teachers (Khan et al., 2016). More researches also should be conducted to further explore the dynamic changes of occupational stress, coping strategies as well as mental health and emotional well-being among academics in higher education institutions, and the relationship between stress and coping strategies.

7. Conclusion

This study contributed to the current understanding of occupational stress, coping strategies, mental health and emotional well-being of academics in higher education in Northern Ireland. The results of the present study were suggestive due to the limitations of the study. Academics experienced moderate stress during the COVID-19 outbreak, and distraction behaviours were the most common form of the coping mechanism among academics in dealing with occupational stress. In terms of mental health and emotional well-being, academics were in the moderate status of mental health and poor emotional well-being. Occupational stress has a significant effect on mental health and emotional well-being of university academics. Positive reframing and acceptance coping styles significantly influenced emotional well-being among academics. The findings can help to develop reliable methods to inform policy on health and well-being for university academics, which in turn lead to increased productivity at work.

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