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Published in the Slovak Republic
European Journal of Contemporary Education
E-ISSN 2305-6746
2020, 9(4): 886-892
DOI: 10.13187/ejced.2020.4.886
www.ejournal1.com

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Global Level of Trait Emotional Intelligence as a Predictor of Achievement Motivationi Students of Physical and Sports Education

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Abstract

Introduction: The role of emotions in increasing the achievement of athletes is at the forefront of sports psychology whilst it is a key area not only in terms of perception and orientation in their own emotions, but also their management and control to succeed, which motivated us to analyze the relationship of EI as a complex of dispositions to behave emotionally in a competent way and the tendency to deliver high sports achievement. The research group consisted of achievement athletes studying physical and sports education.

Material and Methods: The design is in the form of a cross-sectional study. The research group consisted of 183 respondents – university students. To record the level of EI, we used TEIQue-SF/TEIQue-ASF (Slovak translation by: Kaliska, Nabelkova and Salbot, 2015) and to determine the share of individual personality dimensions on a global level of achievement motivation, we used LMI (translation and editing by: Hoskovcová, 2003). From mathematical-statistical methods, we subjected the data to correlation and regression analysis.

Results: We found the closest significant correlations in the case of well-being and confidence in success, flexibility, which is also significantly associated with self-control. Sociability is most strongly associated with dominance and emotionality with flexibility and internality. The global level of trait EI is most significantly associated with confidence in success and flexibility.

Discussion: Our findings clearly show that adequate processing of one's own emotions contributes to a deepening of concentration on sport achievement as well as to a higher self-confidence reflected in the setting of more adequate and realistic goals.

Keywords: achievement motivation, sport, physocal education, students.

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1. Introduction

Currently, one of the key factors of long-term achievement motivation, regardless of the type of sport and its achievement level, is the ability and possibility of self-knowledge, whose interpretive competences are limited by the level of knowing the interrelationships of variables participating in achievement. In the case of the evaluation of sports achievement, it is necessary at least to know the approximate extent to which individual factors contribute to it. Achievement can be affected by age, health status, level of physical abilities, degree of acquisition of sports equipment or, in the case of team sports, of social relationships (Austin, 2004).

According to Petrides and Furnham (2006), as the activation gradually increases due to emotional stimulation from the environment or the speed of activity-relevant signals, achievement will also increase. This increase will continue until the optimum is reached, then the range of attention will be narrowed so that even the relevant signals for operation will not be accepted and there will be a decrease in achievement.

The greater the fear of failure, the weaker the motive for achievement. According to Atkinson, there are two achievement orientations in humans – to achieve success and to avoid failure. Conroy et al. (2007) consider the tendency to achieve success and avoid failure as relatively constant dispositions that lead to transititationally consistent behavior. This view has not been confirmed by research, but the truth remains that Atkinson's findings have triggered a number of research activities that persist to this day. The expression of motivational tendencies was experimentally verified by equations, and techniques for determining individual variables were developed. Verification of the relationships and connections of the basic variables of achievement behavior, as well as verification of their connections with other variables, is the main goal and problem for many researches.

Equally inspiring is the McClelland concept, which understands achievement motivation as a relatively constant predisposition of an individual - the expectation of certain affective changes in relation to achieving or failing a goal (this is the motivational effect of hope on success and fear of failure). All people desire success, but they differ in the strength of the motive of achievement, which is given by the ratio of the desire for success and the fear of failure (the greater this fear, the weaker the motive of achievement).

The role of emotions in choosing the difficulty of the goal is described by Goleman (2017), who claims that emotional intelligence not only helps to achieve ever better achievement, but also inspires to start an activity, with enthusiasm, even if it is an extremely challenging task. Another category supporting the interconnection of achievement motivation and emotional intelligence is Atkinson's assumption that goal setting depends on two variables: the probability of achieving the success – expectation (achievement motive decreases with decreasing probability of success) and the value of the goal achieved (attractive goal = strong motivation).

The concept of achievement motivation has been supplemented by various authors with other point of view. An important role in them was played by de Charms' personal causality (1976), Heider's concept of causal attributes (1958), Escalon's and Festinger's concept of the resulting valence (Anshel, 1996) etc. At present, Heckhausen 's model of self-evaluation is one of the most comprehensive views of achievement motivation and appears to be very close to Meyer' s concept of self-talent, which is related to Bandura 's concept of self-efficacy. According to the author, human is not solely motivated by internal forces, nor automatically shaped by the external environment, but he himself contributes to his motivation, activity and development of himself. The perception of self-realization is a flexible system of self-confidence that helps to overcome failure. Confidence in one's own ability is manifested through 4 processes: cognitive processes – high self-confidence affects the structure of thinking, and thus also behavior (high self-evaluation forces us to set higher goals), emotional processes – especially in the area of stress and anxiety (people who believe that they can at least partially control threatening situations, do not feel as strong anxiety as those who experience helplessness), motivational processes – their own efficiency contributes to e.g.perseverance, will processes – it is a choice of challenging but manageable situations and activities (Biddle, 1997).

The role of emotions in the athlete's achievement motivation is undeniable, especially in case of fear and anxiety. The ability to perform successfully under the influence of fear largely determines the course of mental processes. Against the background of a negative mental state, sports performance is subsequently deformed and it often causes an unsuccessful result.

Heckhausen (1980) argues that the fear of failure is not the only inhibitory factor of success-focused activity. This view has also been verified in research by Buckert, Mayer and Schmatt having shown that the fear of failure can inhibit human activity only in conjunction with low appreciation of one's own abilities (Bipp, van Dam, 2014).

Rehulkova, Frankova and Osecka (1995) studied the relationship between performance motivation and anxiety while finding that anxiety that inhibits achievement is associated with both state and trait anxiety. Negative trait anxiety is most associated with achievement-inhibiting anxiety. Of all the negative and positive components, negative trait anxiety is used as the only predictor of anxiety inhibiting athletic achievement. Achievement – enhancing anxiety, according to research findings, is not related to status or trait anxiety, but it is related to the positive component of trait anxiety, which means that the happier people students considered themselves to be, the higher was their motivation to achieve.

The positive relationship between achievement motivation and currently experiencing anxiety can be interpreted in two ways. On the one hand, it is possible that high achievement motivation increases the currently experienced feeling of anxiety. On the other hand, it is possible that the currently experienced anxiety can either slow down or support sports achievement. If achievement inhibits, the person has low achievement motivation, and when the achievement supports, the person has high achievement motivation (Weiss, Ferrer-Caja, 2002).

Except for fear and anxiety, joy, happiness, enjoyment, shame, guilt or anger also play an important role in achievement e motivation. Shame and guilt are often the result of failure in a achievement situation. Shame is the result of the attribution of failure due to low abilities, and guilt is the result of the attribution of lack of effort. Shame is evoked by the public characteristic of the self, which is not controllable by the will. Guilt follows a breach of the norm and is caused by a judgment of one's own responsibility. For this reason, shame leads to hopelessness and secretiveness, and guilt encourages behavior leading to modification of action. There is a relationship between the two emotions, which can be interpreted as the fact that both emotions contain negative self-esteem, which is painful, evokes tension, agitation and depression. Hopelessness occurs when individuals are attributed with a low ability or a task that is too demanding. In despair, the stability of the causes is also important. If an individual anticipates that the failure will recur in the future, hopelessness may occur.

Success, from the psychological point of view, means above all the subjective experiencing of success, which is associated with the predominance of positive emotions over negative ones. Adequately processed emotions lead to trust, pride, commitment and thus to the increase of work productivity (Petrides, Furnham, 2001).

Carefully managed emotions can lead to trust, loyalty and commitment, as well as the increased productivity, innovation and success in the individual, team and organizational sphere. The aim of our paper is to point out the share of trait EI in achievement motivation, leading to the achievement of sport success in physical education students.

2. Materials and methods

Participants: The research group was made up of Matej Bel University students who voluntarily participated in our research and were acquainted with its purpose, processing or use of data. The research group consisted of 183 physical education students of various sports specializations with an average age of 22 years old (min. 18 years, max. 26 years). The gender representation was 108 women (59 %) and 75 men (41 %).

Procedure: The main goal of the paper is to examine the achievement motivation and emotional intelligence of adolescents, therefore we look at achievemene motivation in terms of the share of personality in their own achievement, which presupposes a broader understanding of achievement motivation, integrating existing knowledge in this area.

Therefore, we decided to use the LMI Questionnaire (Schuler & Prochaska, translated and edited by Hoskovcová, 2003), which allows us to determine the overall value of motivation to achievement in a sports context. However, it is not limited to sports only, but can be used in all directions where monitored effort to deliver achievement e occurs. The LMI questionnaire contains 170 items, which are assigned to 17 dimensions: perseverance, dominance, commitment, confidence in success, flexibility, flow, fearlessness, internality, compensatory effort, pride in performance, willingness to learn, independence, self-control, status orientation, preference for

complexity, competitiveness and determination. Each dimension consists of 10 items (10 statements), the respondent's task is to indicate the degree of agreement with specific statements on a scale of 1-7 (1 = complete disagreement - 7 = complete agreement). In individual scales, the gross score ranges from min. 10 to max. 70. The gross score of individual 17 scales forms the overall level of performance motivation min. 70 to max. 1190. The reliability of the questionnaire measured by Cronbach's alpha for individual dimensions takes the values .823 - .858, for global performance motivation it is .956.

Because we start from the Model of Trait Emotional Intelligence (Petrides, Furnham, 2001), emphasizing the subjectivity of emotional experience to identify the level of EI as well as its 4 components (well-being, emotionality, sociability and self-control), we used the TEIQue-SF/TEIQue-ASF Questionnaire (Petrides, translated and edited by Kaliska, Nabelkova & Salbot, 2015), which is a short form of the basic TEIQue version. It consists of 30 items, where respondents are asked to answer by indicating the intensity of their agreement (7 – strongly agree) – disagreement (1 – strongly dissagree) on a 7-degree liqueur scale. According to its authors, the short form of the questionnaire works as an indicative assessment of the degree of self-percieving abilities and behavioral dispositions of a person related to emotions. The reliability of the questionnaire measured by Cronbach's alpha for the global EI is .973 and ranges in values from .932 - .974 for the individual components.

Informed consent: Informed consent has been obtained from all individuals included in this study.

Ethical approval: The research related to human use has been complied with all the relevant national regulations, institutional policies and in accordance with the tenets of the Helsinki Declaration (WMA Declaration of Helsinki, 2016).

Statistical analysis: The research data were processed using the SPSS Statistics program, version 19. The univariate and bivariate descriptive analysis were followed by inferential statistical procedures. We evaluated the normality of variables distribution based on the description of the distribution form (skewness, kurtosis) and, as seen on chart 1, none of the coefficients indicates significant deviations from the normal distribution. We used Pearson's correlation coefficient to analyze the interrelationships.

3. Results and discussion

Table 1 presents descriptive statistics of trait EI variables and dimensions of achievement motivation students of physical and sports education.

Table 1. Descriptive statistics of trait EI variables and dimensions of achievement motivation students of physical and sports education

	AM	Mdn	SD	Min	Max	Skewness	Kurtosis
wellbeing	5.31	5.0	.84	2.8	7.0	-.574	-.081
self-control	4.26	4.0	.45	2.5	6.9	.083	-.541
emotionality	5.62	5.5	.38	2.4	7.0	-.385	-.034
sociability	4.76	4.5	.67	2.2	7.0	-.046	.298
TEIQ	4.32	4.0	.55	2.2	6.9	.014	-.119
endurance	4.11	4.0	.69	2.9	6.8	.132	.502
dominance	4.26	4.0	.84	3.2	6.5	.155	-.191
commitment	3.28	4.0	.99	2.4	6.9	.197	.536
confidence in success	4.16	4.0	.43	2.8	6.7	.035	.421
flexibility	4.48	4.5	.67	1.6	6.7	.351	.246
flow	4.83	4.0	.74	2.5	6.8	.185	-.397
fearlessness	3.97	4.0	.89	1.0	6.8	.239	-.221
internality	4.86	4.0	.46	3.5	6.3	.214	-.049
compensatory effort	4.33	4.0	.75	1.5	6.9	-.118	-.055

pride of achievement	5.16	4.5	.38	3.8	7.0	-.229	-.417
willingness to learn	4.95	4.5	.58	2.8	6.5	.142	-.177
difficulty preference	3.14	3.5	.64	1.7	6.3	-.025	.395
self-activity	4.25	4.5	.36	2.9	6.4	.264	.231
self-control	4.12	4.0	.83	2.6	6.6	.213	-.487
status orientation	4.81	4.0	.21	2.3	6.9	.161	-.384
competition	4.69	4.0	.98	3.9	6.8	-.285	-.155
sense of purpose	4.74	4.0	.65	4.4	6.4	-.095	-.413
achievement motivation	4.89	4.5	.49	6.4	7.0	.423	.041

As we can see, we found significant relationships between the global level of trait EI and almost all categories involved in achievement motivation. The only exceptions were the categories of commitment and competition. We found moderately close relationships between trait EI and endurance (r = .494 ***), dominance (r = .467 ***), fearlessness (r = .442 ***), internality (r = .375 ** *), pride of performance (r = .444 ***), willingness to learn (r = .396 ***), self-control (r = .345 ***). We found a strong relationship between the trait EI and confidence in success (r = .528 ***), flexibility (r = .511 ***) and the global level of achievement motivation (r = .541 ***).

Table 2 presents correlations between the variables of trait EI and dimensions of achievement motivation students of physical and sports education.

Table 2. Correlations between the variables of trait EI and dimensions of achievement motivation students of physical and sports education

	wellbeing	sebakontrola	emocionalita	sociabilita	TEIQ
endurance	.240**	.225*	.264*	.390***	.494***
dominance	.329***	.119*	.105*	.596***	.467***
commitment	.169	.049	.184	.076	.149
confidence in success	.522***	.312***	.247**	.414**	.528***
flexibility	.423***	.398***	.124***	.211***	.511***
flow	.118	.125	.149	.054	.178*
fearlessness	.169*	.332**	.155	.134**	.442***
internality	.243**	.214*	.317***	.025	.375***
compensatory effort	.189*	.084	.192	.114	.222**
pride of achievement	.322**	.027	.353***	.284	.444***
willingness to learn	.282*	.214*	.375**	.295*	.396***
difficulty preference	.012	.174	.218	.137**	.230**
self-activity	.076	.259	.139	.376***	.276**
self-control	.111**	.215**	.345***	.264**	.345***
status orientation	.243*	.155	.125	.038	.193*
competition	-.048	-.267*	-.091	.084	-.064
sense of purpose	.227**	.017	.171	.111	.249**
achievement motivation	.327**	.234**	.331**	.377***	.541***

Table 3 presents the results of a linear regression analysis where the global level of achievement motivation was the dependent variable and the global level of trait EI was the independent variable.

Table 3. Regression analysis of trait EI as a predictor of achievement motivation of students physical and sports education

Model	Coefficient determination R^2	Adj.R^2	β	F
1	.291	.283	.741	69.219***

As part of our research goal, we decided to explore the causal influence of the global level of trait EI on the global level of achievement motivation in active achievement athletes studying physical and sports education at university, where we found several significant, variously strong relationships between its specific categories and trait EI.

Therefore, we decided to subject them to a regression analysis, aiming at examining how the variability of one variable (Y, predictor) is explained by the variability of another/other variables (explanatory variables). In our case, we created one regression model, where the global level of achievement motivation was a dependent variable and the global level of trait EI was the independent variable.

After checking the assumptions (normality of the residue distribution, testing of multicollinearity, homoscedasticity, removal of outliers, etc.), we decided on the method of multiple linear regression. Analysis of variance shows that the regression result is statistically significantly different from zero (F 69.219 ***).

Therefore, our findings are not the result of chance and are consistent with the alternative hypothesis that the trait EI is a significant predictor of achievement motivation. Chart 3 presents the values of *R Square (R^2)* and *Adjusted R Squarre*. *R^2*, which tell how much variance of the dependent variable is explained by the independent variables. In our case, R^2 = .291, i.e. 29.1 % of the dependent variable variance is explained by independent variables, and thus the remaining 71.9 % of the variability should be sought in different factors.

However, we take into account the *Adjusted R Square* data, because the value of R^2 can be artificially increased by the number of variables entering the analysis (the more independent variables, the higher R^2). *Adjusted R Square* takes into account the number of variables and adjusts the value of R^2 accordingly. In our case, the independent variables explain 28.3 % of the dependent variable. The beta coefficient reaches .741, which means that increasing the score by one unit in trait EI will increase the score in achievement motivation by .741 points.

The impact of emotions on any human activity is undeniable. All people long for success, but they differ in the strength of the achievement motive, which is given by the ratio of the desire for success and the fear of failure (the greater this fear, the weaker the motive of achievement).

The role of emotions in choosing the difficulty of the goal is described by Goleman (2017) according to whom, emotional intelligence not only helps to achieve ever better achievement, but also inspires to start an activity with enthusiasm, even if it is an extremely challenging task.

An interesting point of view is brought by Ruiz and Casado (2012), who consider the so-called balance of life areas very important, which reports on the ability to simultaneously balance the time demands of work and personal life. The above-mentioned author carried out research, whose aim was to examine and specify the relationship between the balance of life areas, life satisfaction and stress.

4. Conclusion

The study confirmed a presumed positive relationship between the balance of life areas and life satisfaction. The balance of life areas stood in a positive relationship with life satisfaction, while the fulfillment of achievement needs and affiliation mediated this relationship. In addition, a negative relationship between balance and stress was found. The results point out the importance of time balance and the fulfillment of this time in terms of meeting the social needs associated with individual areas of life.

Our research findings clearly show the key role of human emotionality – not only at the level of perception and orientation in one's own emotions, but also their management or management for

achieving sports success. If a person is unable to process his emotions properly, he does not have the opportunity to focus on the implemented activity for a long time, he cannot constructively solve the problems that have arisen, which affects his further decisions and the overall quality of life.

4. Conflict of interest

The authors declare that there is no conflict of interest.

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