

Impact of emotionality and locus of control on athletes' motivation for success achievement and failure avoidance in individual sports

IHOR POPOVYCH¹, YULIIA BOKHONKOVA², HANNA SOKOLOVA³, OLHA FOROSTIAN⁴,
IRYNA RODCHENKOVA⁵, YAROSLAVA YURKIV⁶, INOKENTII KORNIENKO⁷

¹Kherson State University, Kherson, UKRAINE

¹Mykola Yarmachenko Institute of Special Pedagogy and Psychology, NAPS of Ukraine, Kyiv, UKRAINE

^{2,5}Volodymyr Dahl East Ukrainian National University, Kyiv, UKRAINE

^{3,4}South Ukrainian National Pedagogical University named after K. D. Ushynsky, Odessa, UKRAINE

⁶Taras Shevchenko Luhansk National University, Poltava, UKRAINE

⁷Mukachevo State University, Mukachevo, UKRAINE

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Abstract:

This study aimed to identify statistically significant parameters regarding the influence of emotionality and locus of control on athletes' motivation for success achievement and failure avoidance in individual sports. The sample consisted of athletes participating in individual sports ($n = 123$) with a mean age of 23 ($Me = 23$; $M = 23.19$; $SD = \pm 2.92$), representing disciplines such as artistic gymnastics, track and field, weightlifting, freestyle wrestling, and boxing. Among the participants were medalists and winners of regional, national, international, and Olympic sports competitions. **Methods.** The methods verified in sports studies allowed measuring a number of parameters of emotionality and locus-control, and also two dependent variables – motivation for achieving success and avoiding failure. Statistically significant differences were identified by standard coefficients. **Results.** It was empirically established that both dependent variables have a considerable number of statistically significant correlations ($p \leq .050$; $p \leq .010$): motivation for achieving success has eight correlations, motivation for avoiding failure has seven correlations. It was found that three parameters – “athletes' emotional stability”, “area of athletes' achievements” and “athletes' health and illnesses” correlate significantly with both motivations: motivation for achieving success (MAS) and motivation for avoiding failure (MAF). Diametrically opposite correlations of the parameters “athletes' interpersonal relationships” with MAS ($r_{xy} = -.235$; $p = .041$) and MAF ($r_{xy} = .215$; $p = .045$) and “athletes' sporting activities” with MAS ($r_{xy} = .623$; $p = .041$) and MAF ($r_{xy} = -.238$; $p = .042$) were established. **Discussion and conclusions.** It was generalized that emotional stability (ES) and emotional arousal (EA) are important parameters of athletes' emotionality, whose constructive realization is within the scope of emotional intelligence (EQ) and has a statistically significant impact on motivation and achievement of victory. It was explained that support for emotional positive relationships in domination of motivation for achieving success can have a negative effect on athletes' concentration. Such relationships can be a defense mechanism, emotional comfort and psychological relief in difficult situations of sporting activities in case of domination of motivation for avoiding failure. It was proved that emotionality and locus-control affect motivation for achieving success and avoiding failure of athletes in individual sports. The obtained results are characterized by scientific novelty and can arouse interest in everyone who is involved in training and competition processes of athletes in individual sports.

Keywords: emotional stability, emotional intelligence, mental health, competitiveness, identity, self-actualization.

Introduction

Continuous dynamic changes occurring in social and political areas have a direct impact on subjects of sporting activities. Sport is an essential part of social life. Athletes cannot be isolated from these events and remain uninvolved, in spite of mottos that sport is beyond politics. To some extent, the public are interested in opinions of their sports heroes. They even require them to speak about different events happening in the world, to express publicly their approval or condemnation. It stimulates athletes to be completely aware of social life, be knowledgeable and diplomatic. Under the current conditions, abilities of self-control and self-command under changed and extreme conditions of sporting activities start coming to the fore. An athlete's self-regulation potential makes the core of their resourcefulness. Ability and readiness to switch from everyday problems to training and competitions, to demonstrate optimal results and achieve victory are not characteristic of everyone. Such articulation of the outlined problem makes the research on the impact of correlations between the parameters of emotionality and locus of control on motivation for achieving success and avoiding failure highly topical.

Watching competitions of representatives of individual sports, we repeatedly observed that some athletes were preparing for contests calmly and intently, while others were preparing expressively and dynamically. Victory does not always determine a single strategy of preparation, since there are many factors and discretionary characteristics affecting success of a sports competition. At the same time, ability to control oneself and raise morale in competitive activity, according to A. Alekseev (2006), can ensure long-term successful results and victories. It is obvious that athletes' dominant mental states, as it was found and substantiated in our previous scientific studies, have a crucial impact on the progress of team competitions and individual performances (Popovych et al., 2021c; 2023b). Studies on psychological content parameters of such states as self-regulation readiness (Popovych et al., 2022f; Prokhorenko et al., 2023), self-regulation development (Halian et al., 2023a; 2023c; Popovych et al., 2022b), expected dispositionality in different activities (Nazarenko et al., 2023; Popovych et al., 2019; Popovych & Blynova, 2019) and risk readiness (Popovych et al., 2022a; Melnychuk et al., 2023; Tavrovetzka et al., 2023) also confirm it. At the same time, locus of control (Rotter, 1966) or the level of subjective control (Bazhin et al., 1984) does not always holds an important place in different types of dominant states. Since excessive self-control, caused by a high level of responsibility and fear to spoil something or do something wrong can be accompanied by excessive reflexivity, constrained and imprecise movements. Excessive reflexivity does not contribute to optimal realization of a tactical-technical component. It is less noticeable against the background of a team game in team sports. Unfortunately, such actions often cause failures or low results of an athlete's performance in individual sports. The empirical research examining dependence of a number of key parameters of handball referees measured before the beginning of a contest is of special scientific interest in the context of retrospective analysis. Among the research parameters there are emotionality and locus of control which can affect the quality and objectiveness of judging. The research allowed establishing and substantiating a number of statistically significant correlations which showed that obtaining a qualification category of a referee requires a high level of the parameters of locus of control by two dimensions: subjective control in the area of labor relations and in the area of achievements. It was found that self-regulation potential is crucial for successful professional activity of a referee (Popovych et al., 2022d). Another comparative research on vitality of representatives of parachuting and joga found and proved that an excessive level of control exhausts parachutists. At the same time, representatives of joga with medium levels of control have considerably higher parameters of dispositional vitality and resilience (Popovych et al., 2020b). The research by I. Günel (2021) on correlations between behavior and locus of control of students seeking a professional qualification of a sports manager did not find any statistically significant impact. It was just noted that the level of theoretical preparation has a positive effect on behavior of sports managers and has no statistically significant impact on external-internal locus of control. Another study made a successful attempt to identify the impact of the level of locus of control on wrestlers beginning their career in sports. Comparison of two groups of respondents who were prize winners and who were not prize winners showed that successful respondents had significantly higher levels of locus of control and better educational achievements (Rutkowska & Gierczuk, 2014). The outlined and analyzed empirical studies do not have a clear solution to the problem of our research.

Another study proves the correlations of mental preparation, emotions and results of athletes. This comparative research evidently demonstrates the above statistically significant correlation (Saint-Martin et al., 2020). Analyzing the phenomenon of emotionality in sports, we accept the content parameters identified by E. Ilyin (2000): arousal, intensity, duration and stability. High indexes of emotional intensity and emotion duration indicate an athlete's emotional reactivity (Ilyin, 2000). At the same time, it is worth noting that emotional stability is one of the indicators of emotional intelligence (EQ). It was found that well-developed emotional intelligence has an impact on efficient competitive activity of forwards and half-backs in football. It was established that development of emotional intelligence also depends on substantial volumes of physical and tactical work (Popovych et al., 2023b). Obviously, a considerable number of probable variants of the development of events and search of an optimal scenario require optimal self-control, emotional stability and moderate parameters of emotional arousal and intensity. Special attention is paid to the outlined problem in psychology of ergatic systems (Nosov et al., 2020; 2021a) in the context of self-control and safety of workspace (Blynova et al., 2022b; Kalenchuk et al., 2023; Masian & Romanenko, 2023; Nosov et al., 2021b; Zinchenko et al., 2020). This study relates to our research issue, since it examines and investigates extreme conditions which are valuable in the dimensions of our research problem (Solovey et al., 2020; Zhuravlova et al., 2023; Zinchenko et al., 2021; 2022; 2023). The impact of emotionality and locus of control on motivation for achieving success and avoiding failure of athletes in individual sports is regarded as causation of successful training, competition and rehabilitation activities of athletes in individual sports.

Hypothesis. We assume that: 1) the research parameters will have statistically significant correlations with motivation for achieving success/avoiding failure; 2) the parameters of emotionality and locus of control will have a statistically significant impact on motivation for achieving success; 3) the parameters of emotionality and locus of control will have a statistically significant impact on motivation for avoiding failure.

Aim. To establish statistically significant parameters of the impact of emotionality and locus of control on motivation for achieving success and avoiding failure of athletes in individual sports.

Methods

Methodology. Methodological foundation of the research consists of the main ideas of the concept of an individual's self-regulation (Boryshevskiy, 2012) and emotion regulation of activity (Budnik-Przybylska et al., 2022; Chebykin, 2023; Zhuravlova & Chebykin, 2021). Forecasting and prognostic components of sporting activities examined in the studies by V. Plokhikh (2023), I. Halian (2023), I. Popovych et al. (2020a; 2021a; 2021b) and N. Zavatska et al., (2023) were also considered. The results of the contemporary studies on transformed and changed conditions of social reality (Hudimova et al., 2021; Kobets et al., 2021; Kovtunyk et al., 2023; Kozmenko et al., 2023; Luzik et al., 2023; Mialkovska et al., 2023) were analyzed and implemented in the research. Since sporting activities are accompanied by excessive emotional, intellectual, physical and mental loads, we also paid attention to cause-effect relationships in the studies on mental resources of athletes (Kurova et al., 2023; Los et al., 2023; Popovych et al., 2022c; 2022e; 2023a; Romaratezabala et al., 2020; Strykalenko et al., 2019; 2020), adaptation potential (Blynova et al., 2022a; Bokhonkova et al., 2023), coping-strategies (Bondarchuk et al., 2023; Stelmashchuk et al., 2023), mental well-being (Karpenko & Klympush, 2023), traumatic experience (Kuzikova et al., 2023), exhaustion (Ferraz et al., 2011), age-related (Popovych et al., 2021d) and mental-physiological conditions of sporting activities (Cretu et al., 2021; Marques et al., 2011).

Participants. The research sample involved athletes in individual sports (n=123) representing artistic gymnastics, track and field, weight-lifting, freestyle wrestling and boxing. Among the participants there was almost even distribution by gender differentiation: males (n=63; 51.22%) and females (n=60; 48.78%). Age parameters by descriptive frequency characteristics were as follows: $M=23.19$; $SD=\pm 2.92$; $Me=23$. Among the participants there were medalists and prize-winners of regional, national, international and Olympic competitions.

Procedures and instruments. In order to examine the phenomenon of emotionality, we applied relevant psycho-diagnostic instruments tested in sports studies by the method "Characteristic of Emotionality" ("ChE") in the author's version of E. Ilyin (2000). The following dimensions of emotionality were identified: athletes' emotional arousal (AEA), athletes' emotional intensity (AEI), athletes' emotion duration (AED) and athletes' emotional stability (AES). Combination of the scales "Athletes' Emotional Intensity" and "Athletes' Emotion Duration" allows characterizing emotional reactivity of the respondents. A medium level of Cronbach's alpha ($\alpha_{XE}=.845$) was obtained.

In order to measure the levels of locus of control, we used the version of the psycho-diagnostic instrument "Level of Subjective Control" ("LSC") (Bazhin et al., 1984) modified and tested by I. Popovych et al. (2022d). The method allowed finding internalization by five areas: the area of athletes' achievements (AAA), the area of an athletes' failures (AAF), athletes' interpersonal relationships (AIR), athletes' sporting activities (ASA) and athletes' health and illnesses (AHI). The integral scale of internalization was not used. According to the research methodology, internal locus of control is an important component of an individual's self-control, which outlines contours of a respondent's subjectivity. The suggested method contains the bipolar seven-point Likert scale and showed itself as a reliable instrument in sports empirical studies. This instrument allowed retreating from the traditional external/internal locus of control and specifying it by the most important areas regarding the sports sample. A high level of Cronbach's alpha ($\alpha_{LSC}=.911$) was obtained.

The final research parameters were found by the method "Motivation for Achieving Success and Avoiding Failures" ("MAS & AF") of the same name (Elers, 2002). This psycho-diagnostic instrument is widely used in sports psychological studies. Acceptable levels of Cronbach's alpha were obtained by two parameters: ($\alpha_{MAS}=.786$) and ($\alpha_{MAF}=.812$).

Organization of Research. The complex research strategy combined summative and comparative elements. Empirical data were collected at three stages from October, 2022 to May, 2023. 23 sessions of purposeful observation were conducted with entering data in standard protocol forms. The purpose of observations was to identify indicators of emotionality and internality/externality during the preparation of athletes in individual sports for performances. The consent to conduct the research was obtained by the Ethics Committee. Collection of empirical data was approved by administrations and coaching staffs. The athletes were informed in advance, therefore they participated voluntarily in the research. The research complied with confidentiality and ethical standards in the work with the respondents.

Statistical Analysis. Empirical data were processed using the computer software "IBM SPSS Statistics" version 29.0.0.0 (241), and also, in some cases, using the program "MS Excel". The program "MS Word" was applied to visualize the research results. The initial data were presented through descriptive frequency characteristics in order to ensure replication and accuracy of the empirical research. Standard coefficients were used to establish statistically significant parameters: Cronbach's alpha, Mann-Whitney (U) test, the correlation coefficient of Karl Pearson (r_{xy}) and Student's t-test. The levels $p\leq.050$; $p\leq.010$ were considered statistically significant.

Results

The first important step in applying the complex research strategy was to present the empirical data through descriptive frequency characteristics. Tabl. 1 gives the processed results of the empirical measurement through

the key descriptive characteristics of distribution (M – the arithmetic mean, SD – the mean squared deviation and *Me* – the median) by all the psycho-diagnostic instruments: “Characteristic of Emotionality” (“ChE”) (Ilyin, 2000), “Level of Subjective Control” (“LSC”) (Bazhin et al., 1984), “Motivation for Achieving Success and Avoiding Failures” (“MAS & AF”) (Elers, 2002).

Table 1. Descriptive frequency characteristics of the empirical results by the psycho-diagnostic methods (n=123)

Scale	Arithmetic mean (M)	Mean squared deviation (SD)	Median (<i>Me</i>)
“Characteristic of emotionality” (“ChE”) (Ilyin, 2000)			
AEA	4.12	±.93	4.00
AEI	5.33	±1.41	5.50
AED	3.49	±.91	3.50
AES	3.65	±.89	3.50
“Level of Subjective Control” (Bazhin et al., 1984)			
AAA	56.44	±7.93	56.50
AAF	46.23	±8.49	46.00
AIR	41.02	±6.90	41.00
ASA	39.57	±5.87	40.00
AHI	17.38	±4.32	17.00
“Motivation for Achieving Success and Avoiding Failures” (Elers, 2002)			
MAS	21.43	±3.41	21.50
MAF	14.22	±1.89	14.00

Note: AEA – athletes’ emotional arousal; AEI – athletes’ emotional intensity; AED – athletes’ emotion duration; AES – athletes’ emotional stability; AAA – the area of athletes’ achievements; AAF – the area of athletes’ failures; AIR – athletes’ interpersonal relationships; ASA – athletes’ sporting activities; AHI – athletes’ health and illnesses; MAS – motivation for achieving success; MAF – motivation for avoiding failure.

There were no statistically significant differences between the obtained empirical results determined by Student’s t-test and the data obtained by the method “ChE” (Ilyin, 2000) in other sports studies (Popovych et al., 2022d). However, there was a tendency of higher values in the parameters of athletes in individual sports by arousal, intensity and duration of emotions unlike the handball referees. At the same time, the handball referees had an insignificant advantage by emotional stability. No statistically significant differences were found by the specified dimensions of locus of control of the modified method “LSC” (Bazhin et al., 1984) by Student’s t-test. Interestingly that the empirical results obtained by the method “MAS & AF” (Elers, 2002) are inferior to athletes with special needs in motivation for achieving success and have an advantage over these athletes by motivation for avoiding failure (Prokhorenko et al., 2023). We highlight that the registered data are just tendencies and there are no statistically significant differences.

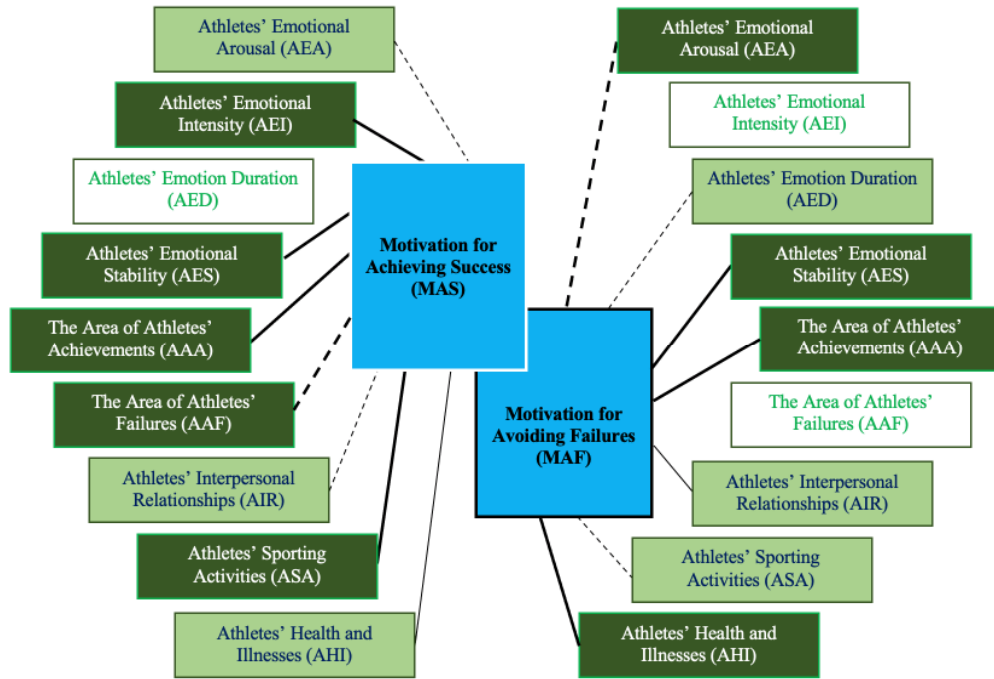
The next important step in applying the complex research strategy was to establish all possible correlations with dependent variables: motivation for achieving success (MAS) and motivation for avoiding failure (MAF). It allowed obtaining results within the first hypothesis of our research. Bivariate correlations were established by Pearson coefficient (r_{xy}). Tabl. 2 presents a correlation matrix.

Table 2. Correlation matrix of the research parameters determined by Pearson correlation coefficient (r_{xy})

Parameters	Pearson coefficient	Dependent variables	
		MAS	MAF
Athletes’ Emotional Arousal (AEA)	r_{xy}	-.229*	-.439**
	<i>p</i>	.042	.000
Athletes’ Emotional Intensity (AEI)	r_{xy}	.442**	.103
	<i>p</i>	.000	.419
Athletes’ Emotion Duration (AED)	r_{xy}	.093	-.208*
	<i>p</i>	.425	.049
Athletes’ Emotional Stability (AES)	r_{xy}	.432**	.333**
	<i>p</i>	.000	.003
The Area of Athletes’ Achievements (AAA)	r_{xy}	.845**	.409**
	<i>p</i>	.000	.000
The Area of Athletes’ Failures (AAF)	r_{xy}	-.579**	.089
	<i>p</i>	.000	.431
Athletes’ Interpersonal Relationships (AIR)	r_{xy}	-.235*	.215*
	<i>p</i>	.041	.045
Athletes’ Sporting Activities (ASA)	r_{xy}	.623**	-.238*
	<i>p</i>	.000	.042
Athletes’ Health and Illnesses (AHI)	r_{xy}	.245*	.365**
	<i>p</i>	.039	.001

Note: MAS – motivation for achieving success; MAF – motivation for avoiding failure; r_{xy} – the correlation coefficient of Karl Pearson; *p* – the level of significance; * – $p < .050$; ** – $p < .010$.

Fig. 1 presents graphical visualization of bivariate correlations by Pearson correlation coefficient (r_{xy}) given as a correlation pleiade.



Note: - - - negative correlations with $p \leq .010$; ····· negative correlations with $p \leq .050$; ——— positive correlations with $p \leq .010$; ····· positive correlations with $p \leq .050$; Sb – subject-directed motivational orientation.

Figure 1. Correlation pleiade of the research parameters of the impact and the dimensions of motivation for achieving success and avoiding failure ($n=123$)

We can see that both dependent variables have a considerable number of statistically significant correlations that allows stating that the first hypothesis is confirmed. At the same time, eight significant correlations ($p \leq .050$; $p \leq .010$) were registered in motivation for achieving success and seven correlations ($p \leq .050$; $p \leq .010$) in motivation for avoiding failure. It was found that the parameter of “athletes’ emotional stability” has positive significant correlations with MAS ($r_{xy}=.432$; $p=.000$) and MAF ($r_{xy}=.333$; $p=.003$). Moreover, the parameter “the area of athletes’ achievements” has positive significant correlations with MAS ($r_{xy}=.845$; $p=.000$) and MAF ($r_{xy}=.409$; $p=.000$) and the parameter “athletes’ health and illnesses” – with MAS ($r_{xy}=.245$; $p=.039$) and MAF ($r_{xy}=.365$; $p=.001$). There was a statistically significant correlation of the parameters “athletes’ emotional arousal” with MAS ($r_{xy}=.845$; $p=.000$) and MAF ($r_{xy}=.409$; $p=.000$). There were negative statistically significant correlations in the following parameters: “athletes’ interpersonal relationships” with MAS ($r_{xy}=-.235$; $p=.041$) and MAF ($r_{xy}=.215$; $p=.045$) and “athletes’ sporting activities” – with MAS ($r_{xy}=.623$; $p=.041$) and MAF ($r_{xy}=-.238$; $p=.042$). We registered presence and absence of correlations with dependent variables in the parameters: “athletes’ emotional intensity” with MAS ($r_{xy}=.442$; $p=.000$); “athletes’ emotion duration” MAF ($r_{xy}=-.208$; $p=.049$); “the area of athletes’ failures” with MAF ($r_{xy}=-.579$; $p=.000$).

According to our research strategy, we turned to the final empirical stage. In order to do this, the sample was divided into two groups: with a low level of motivation for achieving success (Group 1) and with a high level of motivation for achieving success (Group 2). Distribution was performed by the median (Me). The parameter of distribution of MAS was ($Me = 21.50$). Group 1 consisted of respondents with a low level of motivation for achieving success ($Me > 21.50$), Group 2 comprised respondents with a high level of motivation for achieving success ($Me \leq 21.50$). The coefficient of Mann-Whitney (U) was used to find statistical significance of the measurements (Tabl. 3).

Table 3. Results of statistically significant differences between the research parameters in Group 1 and Group 2

Mann-Whitney U-test	Parameters								
	AEA	AEI	AED	AES	AAA	AAF	AIR	ASA	AHI
U	584.000	184.000	497.500	128.000	132.000	667.500	628.000	112.000	434.000
p	.112	.000	.091	.000	.000	.138	.124	.000	.062

Note: U – Mann-Whitney test; p – the level of significance; AEA – athletes’ emotional arousal; AEI – athletes’ emotional intensity; AED – athletes’ emotion duration; AES – athletes’ emotional stability; AAA – the area of athletes’ achievements; AAF – the area of athletes’ failures; AIR – athletes’ interpersonal relationships; ASA – athletes’ sporting activities; AHI – athletes’ health and illnesses; level of significance given in **bold type** – $p \leq .050$; $p \leq .010$.

It was found that Group 2 with a high level of motivation for achieving access ($Me \leq 21.50$) has a number of differences in the research parameters at the level $p \leq .050$ and $p \leq .010$: AEI ($U=184.000$; $p=.000$); AES ($U=128.000$; $p=.000$); AAA ($U=132.000$; $p=.000$) and ASA ($U=112.000$; $p=.000$). Group 1 does not surpass Group 2 in any parameter. We can state that the second hypothesis was confirmed, the differences between the groups with a low level and a high level of motivation for achieving success are statistically significant by the respondents' emotional intensity and stability and also by internal locus of control in the area of achievements and attitude towards sporting activities.

The next stage meant dividing the sample into a group with a low level (Group I) and a group with a high level (Group II) of motivation for avoiding failure. Distribution was performed by the median (Me). The parameter of distribution of MAF was ($Me = 14.00$). Group I comprised respondents with a low level of motivation for avoiding failure ($Me > 14.00$). Group II consisted of respondents with a high level of motivation for avoiding failure ($Me \leq 14.00$). The coefficient of Mann-Whitney (U) was used to find statistical significance of the measurements (Tabl. 4).

Table 4. Results of statistically significant differences between the research parameters in Group I and Group II

Mann-Whitney U-test	Parameters								
	AEA	AEI	AED	AES	AAA	AAF	AIR	ASA	AHI
U	132.000	654.000	442.000	224.000	213.000	525.500	145.500	564.500	156.000
p	.000	.136	.089	.000	.000	.072	.000	.073	.000

Note: U – Mann-Whitney test; p – the level of significance; AEA – athletes' emotional arousal; AEI – athletes' emotional intensity; AED – athletes' emotion duration; AES – athletes' emotional stability; AAA – the area of athletes' achievements; AAF – the area of athletes' failures; AIR – athletes' interpersonal relationships; ASA – athletes' sporting activities; AHI – athletes' health and illnesses; level of significance given in **bold type** – $p \leq .050$; $p \leq .010$.

It was found that Group II with a high level of motivation for avoiding failure ($Me \leq 14.00$) has differences by two research parameters at the level $p \leq .010$: AEA ($U=132.000$; $p=.000$) and AHI ($U=132.000$; $p=.000$). In Group I there were differences by three parameters at the level $p \leq .010$: AES ($U=224.000$; $p=.000$); AAA ($U=213.000$; $p=.000$) and AIR ($U=145.500$; $p=.000$). We can state that the third hypothesis was also confirmed, the differences between the groups with a low level and a high level of motivation for avoiding failure are statistically significant by the respondents' emotional arousal and stability and also by internal locus of control in the area of achievements, interpersonal relationships and attitude towards their mental state, health and illnesses.

Discussion

We analyzed and generalized a huge volume of scientific sports studies which directly relate to the research subject, indirectly concern the parameters and conditions of impact or contain new empirical models for search of statistically significant correlations or differences. However, the phenomena of emotionality and locus of control are still topical scientific problems in many areas of human activity. Sporting activity, in terms of its form and content, considers their interdependence in the dimensions of sport results. Empirical studies prove that an individual who achieves something always risk the most precious things (Mamenko et al., 2022; Tavrovetska et al., 2023). Definitely, it also concerns sporting activities. If an individual stops taking a risk and tries to avoid failure, they do not exist, as S. Freud (1989) believed. The dependent values – motivation for achieving success (MAS) and motivation for avoiding failure (MAF) – are a resultant component in our empirical research. Both dimensions are represented in each respondent. Both motivations usually have a number of factors including personal experience, individual psychological, socio-psychological and other discretionary factors. Our purposeful observations confirmed that, in the proposed dichotomy of dependent variables, one of the parameters of motivation usually dominates whereas parity is rarely observed. It is widely believed that motivation for achieving success dominates in sporting activities. If it is considered in the context of a strategy of individual performances, it may dominate, but observations of a number of individual competitions allow stating that it is not always true. There are competitions in which athletes just participate, focusing on performing some tactical-technical actions, testing elements of a performance program and not on general sporting success. These indicators rather signalize domination of motivation for avoiding failure. Probably, the work aimed at rehabilitation after trauma or planned sporting rehabilitation, is orientation towards a procedural component of sporting activities. We can assume that orientation towards a procedural component can result in success and bring a desirable sport result in a long term perspective. At the same time, orientation towards achievement of success does not mean ignoring avoidance of failure and, vice versa, orientation towards avoidance of failure does not rule out success. This combination of factors is important for developing tactics and strategies of an individual performance. Therefore, an athlete's self-regulation ability (Boryshevskyi, 2012) and mental resource (Popovych et al., 2022e) partly come to the front and ensure their efficient competitive advantage over competitors.

For the first time, we made a successful empirical attempt to identify the impact of the parameters of emotionality and locus of control on athletes' motivation for achieving success and avoiding failure. Division of

the sample into groups with a low level and a high level of development of the dependent variable by the median (*Me*) seems to be convincing. This division possesses high ecological validity, since there are no formative interventions which cannot be isolated from other impacts, therefore, the current formation of the investigated phenomenon is examined in such variants. In our variant, analysis of the results of comparison (see Tabl. 3 and Tabl. 4) showed a number of regularities. In particular, the parameters which have statistically significant correlations with two motivations (see Tabl. 2 and Fig. I) at the level $p \leq .010$ have corresponding statistically significant differences in the groups. However, there is an exception in the first compared pair (by motivation for achieving success) – the parameter AAF ($r_{xy} = -.579$; $p = .000$), in the second compared pair (by motivation for avoiding failure) – the parameter AIR ($r_{xy} = .215$; $p = .045$). The obtained result has a somewhat expected tendency, but the mentioned differences should be taken into consideration in sporting activities of individual sports. The fact of a statistically significant correlation of the parameter “athletes’ emotional arousal” with MAS ($r_{xy} = .845$; $p = .000$) and MAF ($r_{xy} = .409$; $p = .000$) is of a special scientific interest. This correlation can be explained by the fact that an athlete’s emotional arousal and emotional stability, internalization of achievements and attitude towards traumas, health and illnesses are equally important in terms of the level of significance to achieve success or avoid failure. A diametrically opposite situation can be observed in correlations of the following parameters: “athletes’ interpersonal relationships” with MAS ($r_{xy} = -.235$; $p = .041$) and MAF ($r_{xy} = .215$; $p = .045$) and “athletes’ sporting activities” with MAS ($r_{xy} = .623$; $p = .041$) and MAF ($r_{xy} = -.238$; $p = .042$) (see Tabl. 2 and Fig. I). It can be explained by the fact that maintenance of positive emotional relationships can have a negative impact on athletes’ concentration. It is evident in individual sports. Observations of athletes’ behavior showed that they are partly closed, do not try to build and maintain a considerable number of interpersonal relationships. At the same time, when motivation for avoiding failure dominates, such relationships can be a defense mechanism, emotional comfort and psychological relief in difficult situations of sporting activities. It is obvious that a high level of athletes’ internalization incentivizes them to take a risk and achieve success. We can observe in the third variant of correlations (see Tabl. 2 and Fig. I) that there are no correlations in one of the variables, and there are positive or negative significant correlations in others. In particular, the parameter “athletes’ emotional intensity” has one positive correlation with MAS ($r_{xy} = .442$; $p = .000$), the parameter “athletes’ emotion duration” has one negative correlation with MAF ($r_{xy} = -.208$; $p = .049$) and the parameter “area of athletes’ failures” also has one negative significant correlation with MAF ($r_{xy} = -.579$; $p = .000$). The difference in content loading of the investigated dependent variables can account for such a variety. We state that the correlation matrix (see Tabl. 2) and correlation pleiade (see Fig. I) demonstrated a number of indicators which have numerous determinants and require comprehensive explanation and substantiation in certain situations of sporting activities.

It is obvious that emotionality and locus of control affect motivation for achieving success and avoiding failure of athletes in individual sports. It is evident in the obtained results. The correlations established in the research (the first hypothesis was confirmed) and the identified statistically significant differences (the second and third hypotheses were confirmed) are important empirical facts which possess scientific novelty. The obtained results should be implemented into tactical training for athletes in individual sports.

Conclusions

1. It was substantiated that the impact of emotionality and locus of control on motivation for achieving success and avoiding failure of athletes in individual sports is regarded as causation of successfulness of training, competition and rehabilitation activities of athletes in individual sports.

2. The results of correlation analysis showed that emotional stability (ES) and emotional arousal (EA) are important parameters of athletes’ emotionality whose complete realization is within the scope of emotional intelligence (EQ) and has a statistically significant impact on motivation and achievement of victory.

3. It was empirically established and substantiated that both dependent variables have a considerable number of statistically significant correlations ($p \leq .050$; $p \leq .010$): motivation for achieving success has eight correlations, and motivation for avoiding failure has seven correlations. It was found that three parameters – “athletes’ emotional stability”, “the area of athletes’ achievements” and “athletes’ health and illnesses” have significant correlations with both motivations: motivation for achieving success (MAS) and motivation for avoiding failure (MAF).

4. Diametrically opposite correlations of the parameters – correlations of “athletes’ interpersonal relationships” with MAS ($r_{xy} = -.235$; $p = .041$) and MAF ($r_{xy} = .215$; $p = .045$) and “athletes’ sporting activities” with MAS ($r_{xy} = .623$; $p = .041$) and MAF ($r_{xy} = -.238$; $p = .042$) – were explained by the fact that maintenance of positive emotional relationships can have a negative impact on athletes’ concentration, and when motivation for avoiding failure dominates, such relationships can be a defense mechanism, emotional comfort and psychological relief in difficult situations of sporting activities.

5. It was proved that emotionality and locus of control affect motivation for achieving success and avoiding failure of athletes in individual sports, and the obtained results should be implemented into tactical training for athletes.

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МУКАЧІВСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ

89600, м. Мукачево, вул. Ужгородська, 26

тел./факс +380-3131-21109

Веб-сайт університету: www.msu.edu.ua

E-mail: info@msu.edu.ua, pr@mail.msu.edu.ua

Веб-сайт Інституційного репозитарію Наукової бібліотеки МДУ: <http://dspace.msu.edu.ua:8080>

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