

Self-efficacy of future athletes with different levels of psychological safety

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Abstract

The article examines the relationship between self-efficacy and psychological safety in future athletes. The purpose is to determine the characteristics of self-efficacy of future athletes with different levels of psychological safety. An empirical study was conducted in a sample of students of the faculty of physical education and sports. The following psychodiagnostic methods were used: “Psychological safety of the educational environment” (I. A. Baeva, 2011), “World Assumptions Scale” (R. Janoff-Bulman, 1989), “Generalized self-efficacy scale” (R. Schwarzer, M. Jerusalem, 1992; adapted by V. Romeka, 1996). Results. The correlation between the level of general self-efficacy and the parameters of psychological security is established. This is, first, with the parameters of psychological security of the educational environment that affect self-rating, self-esteem ($p < .05$); second, with satisfaction with the level and quality of interpersonal relationships with mentors and other participants ($p < .05$). It is proved that the indicators of psychological safety of the individual, specifically, which are related to the awareness of their ability to control the events of the world, i.e. the level of self-control, and are interrelated with the level of general self-efficacy. It is proposed to optimize the parameters of psychological safety, which will increase the level of self-efficacy of athletes in the following aspects: 1) Development of readiness for psychologically safe interaction between the subjects of the educational process (motivational aspect); 2) Modeling of psychologically safe educational environment at the university (organizational aspect); 3) Development of communicative competence as the ability to communicate effectively (communicative aspect); 4) Creating conditions that are aimed at self-realization of personal resources, maintaining a positive image of “Self” (self-rating aspect). The obtained results can be operationalized in the psychological and tactical training of future athletes.

Key words: self-realization in sports, psychological safety of the educational environment, personal self-efficacy, psychological well-being, relationships.

Introduction

The basis of self-realization of the individual in sports activities are individual characteristics and abilities of a person, his/her knowledge and skills, moral and physical qualities, as well as the orientation of the personality. The source of self-realization is the contradiction between opportunities, combining human abilities, and the extent to which he/she can realize them in activities. That is, successful self-realization depends on the extent to which a person, having a certain potential and abilities, is able to embody them in a real result. Self-efficacy is the construct that provides a person with confidence that he/she is able to perform the tasks that arise.

Self-realization in sports is the realization of one’s potential in the process of achieving sports results on the basis of self-improvement. In conditions of high competition, sports activity has clear criteria for evaluating results, a high level of motivation and is an area of activity where young people can demonstrate their ability to achieve significant results (Dumchene & Ginkevichene, 2017).

The problem of improving the efficacy and safety of human life, including sports, requires for its solution to involve new concepts and constructs that relate to all aspects of its behavior. “Self-efficacy” is such a concept. It helps to increase positive judgments, determines the strength and stability of motivation to achieve the goal. People with high self-efficacy take responsibility for everything they do and understand that much in life depends on their decisions and actions. People with low self-efficacy explain their failures by the influence of external circumstances (Bandura, 1995; Erturan et al., 2020; Pogorelov, 2012).

The development of self-efficacy affects human behavior, because it is important to have a successful human experience to form certain beliefs or attitudes about their ability to solve problems of any intricacy. The studied mental states of expectation of victory in sports (Popovych et al., 2019b; 2020) and other types of human activity (Popovych et al., 2019c) indicate a connection between effective patterns of behavior and the expected image of the individualities under study.

In addition to the “self-efficacy”, the scientific sources use the concepts of “self-attitude”, “self-rating”, “self-acceptance”, “sense of self-competence” et. al. (Usher & Pajares, 2006; Wang et al., 2010; Zimmerman, 2000). These concepts are sometimes identified and used in different meanings. There is a conception that it is confidence in one’s own capabilities, in the ability to change something, as an idea of one’s own productivity in the planned activity.

Self-efficacy studies have demonstrated a link between self-efficacy and motivational processes, emotional excitement, and psychological well-being (Malinauskas & Stankevicius, 2013; Pogorelov, 2012; Loshchakova, 2015). It was also found that self-efficacy affects goal setting, the choice of task complexity (Malinauskas & Brusokas, 2010; Katz-Navon et al., 2007), persistence in task performance, and emotional reactions. General self-efficacy allows you to overcome various stressful situations. Emotional intelligence, self-efficacy and psychological well-being influence the attitudes and behavior of athletes (Cheban et al., 2020a; 2020b; Strikalenko et al., 2019; 2020), and are also psychological determinants of success in educational and professional activities (Popovych & Blynova, 2019a; 2019b; Popovych et al., 2019c). By increasing self-efficacy, we can intensify acceptable behaviors and positive attitudes to learning activities (Zimmerman, 2000). In the context of our scientific research, the trust spectrum within sports team (Jozefowicz, 2020) deserves attention.

Thus, self-efficacy affects the subject's ability to adapt and overcome difficult life situations, the ability to experience failure. Many studies have found interconnection between self-efficacy and psychological well-being, psychological safety of the individual and the environment. In addition, general self-efficacy is associated with a person's settings to safe behavior in situations that are risky. Special safety self-efficacy (Katz-Navon et al., 2007) affects the safe performance of work.

Applied research has shown that high self-efficacy has positive social consequences. It is associated with higher performance, better social integration and psychological well-being, comfort of human existence in the social environment, a sense of psychological safety in society, support from others, which, in turn, intensifies confidence in own abilities (Blynova et al., 2018). It has been proven that the self-efficacy of the future athlete, both in training and competitive activities, will increase in a psychologically safe educational environment (Blynova et al., 2020a).

Let’s analyze the essence of the concepts “safety” and “psychological safety” in relation to the educational process in a sports institution. Since safety is one of the main criteria for the development of personal and social potential, without satisfying the need for safety, positive personal development is impossible.

In general, human safety means the general life protection, respect for rights and freedoms, quality of life, a sense of safety, as well as opportunities for development and self-realization. Psychological safety of the individual is considered in connection with the mobilization of resources of the human psyche in difficult and extreme conditions. The realization of the need for safety is seen as the preservation of the psychological integrity of the individual, the presence of a sense of satisfaction with the present and confidence in the future, a sense of protection of interests and values, involvement in the surrounding reality (Baeva et al., 2011; Chirkina et al., 2015).

External unstable influences of the socio-economic situation increase threats to the educational environment, disrupt safety and lead to a lack of psychological safety. This determines the reduction of adaptation of future athletes, the development of social incompetence, violation of group involvement (desire to be with everyone), expectations of social rejection, feelings of loneliness, lack of inner position about themselves (desire for uniqueness). Thus, the violation of safety leads to the destruction of all basic parameters of the organization of effective development and existence of the personality, including affecting a person's confidence, the ability to achieve significant results, i.e. its self-efficacy.

A psychologically safe educational environment can be considered one in which the following characteristics are present: positive attitude to the educational environment on the part of most participants, high level of satisfaction with the significant characteristics of the educational institution environment (relationships with lecturers, with other students, the opportunity to express their views, self-respect, preservation of personal dignity, the opportunity to seek help, to show initiative, activity, taking into account personal problems and complications); high level of protection against psychological violence in interaction (protection from humiliation and threats, from being forced to do something against one's will, from ignoring (social isolation), protection from hostility (Baeva et al., 2011).

Hypothesis. The authors suggest that 1) a high level of psychological safety of the educational environment affects the self-efficacy of future athletes; 2) there are differences in self-efficacy in individuals under study with high and low levels of psychological safety.

Purpose. It is to determine the features of self-efficacy of future athletes with different levels of psychological safety.

Material and methods

Participants. The sample consisted of students of 3-4 courses of the faculty of physical culture and sports of Kherson State University in the amount of 38 people, including 17 female (44.74%) and 21 male (55.26%). The choice of senior students is due to the fact that they are already familiar with all types of educational activities of

the university, its environment and internal atmosphere. These students have both experience of performances at national and international tournaments and significant sporting achievements.

Organization of research. The following methods were chosen for the empirical study:

1) Assessment of the psychological safety of the educational environment of the university was carried out using a specially adapted questionnaire “Psychological safety of the educational environment” (Baeva et al., 2011). The questionnaire is based on a conceptual approach to the empirical criteria for assessing the psychological safety of the educational environment I. Baeva (2011). Based on the theoretical analysis of the phenomenology of the concepts “educational environment”, “psychological safety of the educational environment”, the author conceptually identifies the following empirical criteria of psychological safety: attitude to the educational environment (positive, neutral or negative), measuring cognitive, emotional and behavioral components; significant characteristics of the educational environment and satisfaction with them, which is computed as a total score of satisfaction with certain characteristics of social interaction in the university environment.

2) “World Assumptions Scale”(“WAS”) of (R. Janoff-Bulman, 1989) is used to measure a person’s sense of safety. From the author’s point of view, it is based on three categories of basic beliefs that form the core of our subjective world: a) belief that there is more well in the world than ill will. This category includes attitudes toward the world around us in general and attitudes toward people; b) the belief that the world is meaningful (makes sense). As a rule, people tend to believe that events do not happen by chance, but are controlled and obeyed by the laws of justice; c) confidence in the value of one’s “Self”. There are three main aspects: “I am a good person” (self-worth), “I behave correctly” (control) and self-rating.

“World Assumptions Scale” combines eight categories based on three basic beliefs: 1) Benevolence of World (BW); 2) Benevolence of People (BP); 3) Justice (J); 4) Control (C); 5) Randomness (R); 6) Self-Worth (SW); 7 Self-Control (SC); 8) Luckiness (L) (Padun, & Kotel’nikova, 2008).

“World Assumptions Scale” contains 32 statements. Respondents need to choose one of the suggested answer options for each statement: “strongly disagree”, “disagree”, “rather disagree”, “rather agree”, “agree”, “completely agree”.

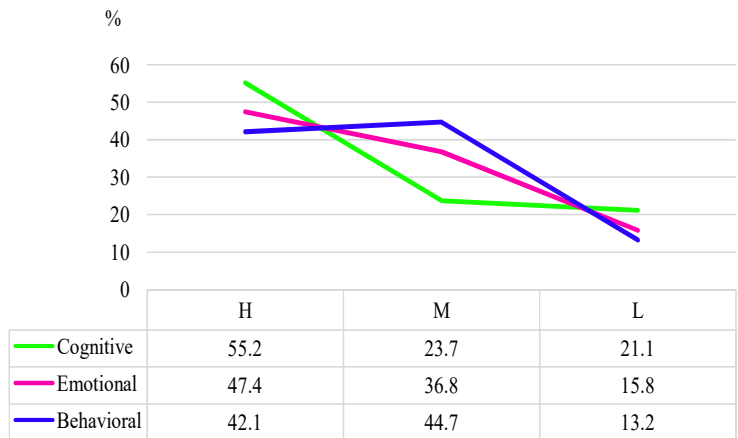
3) “Generalized self-efficacy scale” (“GSES”) of (R. Schwarzer, M. Jerusalem, 1992; adapted by V. Romeka, 1996) aims to measure the subjective sense of personal effectiveness. The scale contains 10 points, according to which the individual under study determines the degree of agreement on a 4-point scale, so the range of the total score is from 10 to 40 points (Schwarzer et al., 1996).

Statistical analysis. Statistical processing of empirical data was performed using statistical programs “SPSS” (version 23.0) and “MS Excel”. Spearman's correlation coefficient was used to calculate the correlation coefficients. The Mann–Whitney U-test was used to determine the differences between the two groups in the level of the indication being measured.

Results and Discussion

The attitude to the educational space is assessed according to the questionnaire, based on which answers prevail: positive, neutral or negative. The obtained results indicate that the respondents have a positive attitude to the educational environment, namely: with a high level – 52.6% of the sample; the medium level – 34.2%, and the low level – 13.2%.

We will clearly present the components of psychological safety of the educational environment – cognitive, emotional, behavioral of the studied sample of athletes by percentage distribution (see Fig. I).



Note: H – high level; M –medium level; L – low level.

Figure I. Percentage distribution of respondents by components of psychological security (n = 38)

It should be noted that athletes in the study sample have high scores on the components of psychological safety assessment of the educational environment, namely: 55.2% of respondents have a high level of cognitive component, 47.4% of emotional component, and 42.1% of behavioral component of the sample. Respondents' indicators of emotional and behavioral components are lower than the corresponding indicator of the cognitive component. These results can be explained by the fact that athletes emotionally feel much less comfortable in the university environment than in cognitive terms; the emotional component, in turn, is reflected at the behavioral level. This indicates that the peculiarities of the interaction of participants in the educational process with each other need attention.

Student satisfactions with the main characteristics are at medium and high levels according to all indicators (see Tabl. 2).

Table 2. Arithmetic mean values and mean square deviations of indicators of satisfaction with the educational environment according to the questionnaire “Psychological safety of the educational environment”(n = 38)

Satisfaction indicators	M	SD
Assistance in choosing one’s own decision	3.62	.56
Attention to requests and suggestions	3.81	.49
Taking into account personal problems and difficulties	3.54	.53
Opportunity to show initiative, activity	4.12	.71
Opportunity to ask for help	4.07	.68
Preservation of personal dignity	3.79	.84
Respectful attitude	3.63	.73
Opportunity to express own opinion	3.87	.67
Emotional comfort	3.52	.76
Relationships with other participants	3.67	.81
Relationships with mentors	3.59	.63

Note: M – arithmetic mean; SD – mean square deviation.

Let’s pay attention to those scales on which respondents have high values: “Opportunity to show initiative and activity” (M = 4.12; SD = .71); “Opportunity to express own opinion” (M = 3.87; SD = .67); “Opportunity to ask for help” (M = 4.07; SD = .68). All other scales have the meanings “medium” and “above medium”, namely: “Assistance in choosing one’s own decision” (M = 3.62; SD = .56); “Attention to requests and suggestions” (M = 3.81; SD = .49); “Taking into account personal problems and difficulties” (M = 3.54; SD = .53); “Preservation of personal dignity” (M = 3.79; SD = .84); “Respectful attitude” (M = 3.63; SD = .73); “Emotional comfort” (M = 3.52; SD = .76); “Relationships with other participants” (M = 3.67; SD = .81); “Relationships with mentors” (M = 3.59; SD = .63).

We present the results according to the method of “World Assumptions Scale”. Note that the original version of the method does not provide for the calculation of the index of psychological safety. However, S. Bogomaz and A. Gladkih conducted a study in which they proved the possibility of calculating the total index “Psychological Safety (PS)” as the arithmetic mean of adding indicators of all eight subscales. The subscale “Randomness” (R) is taken with a minus sign (Bogomaz & Gladkih, 2009).

The average values of indicators that characterize the level and perceptions of respondents about psychological safety are presented in Tabl. 3.

Table 3. Arithmetic mean values and mean square deviations according to the scales of the method “World Assumptions Scale” (n = 38)

Scale	M	SD
Benevolence of World (BW)	3.84	
Benevolence of People (BP)	4.03	.68
Justice (J)	3.81	.96
Control (C)	3.17	.64
Randomness (R)	4.52	1.23
Self-Worth (SW)	4.12	.39
Self-Control (SC)	3.54	.76
Luckiness (L)	3.76	.78
Psychological Safety (PS)	3.84	.54

Note: M – arithmetic mean; SD – mean square deviation.

Based on the empirical results obtained in the study of the “World Assumptions Scale”, it is shown that the average values of all indicators that characterize the perception and level of psychological safety of respondents are presented at medium and above medium level and meet the standards. The highest indicators were found on the scales: Benevolence of World (BW) (M = 04.03; SD = .71); Self-Worth (SW) (M = 4.12; SD = .39). The data on the attitude of the respondents to the possibility of controllability of the world, which is mostly external, turned out to be interesting. These are the scales –Control (C) (M = 3.17; SD = .64); Randomness (R) (M = 4.52; SD = 1.23); Self-Control (SC) (M = 3.54; SD = .76); Luckiness (L) (M = 3.76; SD = .78).

Respondents' evaluation of the Benevolence of World (BW) ($M = 3.84$; $SD = .68$) and Justice (J) ($M = 3.81$; $SD = .96$) are slightly above medium.

Thus, the conceptions of the respondents are characterized by positivity in relation to the friendliness of the world, to themselves, to others. There is also medium (with a tendency to high) activity, a good ability to establish and maintain social contacts, satisfaction with the world and own safety. Researchers note that the world around them is non-discriminatory, events can be controlled. Respondents are characterized by a positive view of human nature. They believe in people and in human capabilities. They are satisfied with themselves, their lives, their safety, safety in interpersonal relationships, and safety of the surrounding world. The total index of psychological safety is higher than the medium level ($M = 3.84$; $SD = .54$).

Thus, the respondents of the studied sample are characterized by: high social activity, ability and readiness for self-development, developed self-regulation, setting on conscious construction of own life; obtaining social and general psychological maturity, the formed ability to see their lives in a certain perspective; self-confidence and prediction of success. The "Generalized self-efficacy scale" ("GSES") of (R. Schwarzer, M. Jerusalem, 1992; adapted by V. Romeka, 1996) obtained the arithmetic mean value of the sample ($M = 29.72$; $SD = 4.81$), which meets regulatory standards. Correlation analysis was used to determine the interconnection between the "self-efficacy" indicator and the parameters of psychological safety of the personality and the educational environment (see Tabl. 4).

Table 4. Correlation between "GSES" general self-efficacy and psychological safety parameters ($n = 38$)

Parameters of psychological safety	General self-efficacy
Opportunity to show initiative, activity (IA)	.381*
Preservation of personal dignity (PD)	.316*
Respectful attitude (RA)	.332*
Opportunity to express own opinion (OO)	.374*
Relationships with other participants (RP)	.337*
Relationships with mentors (RM)	.329*
Justice (J)	.351*
Control (C)	.363*
Self-Worth (SW)	.396*
Self-Control (SC)	.384*

Note: statistically significant correlation coefficients are entered into the table; * - $p < .05$.

Based on the correlation analysis, statistically significant interconnections were obtained between self-efficacy and parameters of psychological safety of the educational environment. They are related to the respondent's self-rating, level of self-worth, self-confidence, certitude in positive evaluation of his personality and sports achievements by others:

"Opportunity to show initiative, activity" ($r_s = .381$; $p < .05$); "Preservation of personal dignity" ($r_s = .316$; $p < .05$); "Respectful attitude" ($r_s = .332$; $p < .05$); "Opportunity to express own opinion" ($r_s = .374$; $p < .05$).

Also, interesting and quite expected were statistically significant correlations with the parameters of psychological safety of the educational environment of the university, which reflect the successfulness and productivity of interpersonal communication of athletes: "Relationships with other participants" ($r_s = .337$; $p < .05$); "Relationships with mentors" ($r_s = .329$; $p < .05$). That is, the level of self-efficacy as confidence in their ability to perform tasks increases with the presence of social support, understanding with lecturers and other students. The results of the "World Assumptions Scale" ("WAS") of (R. Janoff-Bulman, 1989) clearly show that a sense of one's ability to control events, to plan one's activities, to adjust and to predict a certain outcome, take responsibility for their achievements, determine the growth of the personality self-efficacy. Correlations of self-efficacy with the following parameters were revealed: Justice (J) ($r_s = .351$; $p < .05$); Control (C) ($r_s = .363$; $p < .05$); Self-Worth (SW) ($r_s = .396$; $p < .05$); Self-Control (SC) ($r_s = .384$; $p < .05$). At the next stage of the study, the sample was divided into two subgroups according to the general self-efficacy index R. Schwarzer, M. Jerusalem, 1992; adapted by V. Romeka, 1996): Group 1 (17 people) – high level of self-efficacy; Group 2 (8 people) – low level of self-efficacy. The Mann-Whitney U-test was used to compare the results between the groups according to the parameters of psychological safety (see Tabl. 5).

Table 5. Comparison of data on psychological safety parameters between groups of athletes with high Group 1 and low Group 2 level of self-efficacy

Parameters of psychological safety	Mann-Whitney U-test	Level of significance
Respectful attitude (RA)	31.28	$p < .05$
Control (C)	36.43	$p < .05$
Self-Control (SC)	34.19	$p < .05$
Relationships with other participants (RP)	35.46	$p < .05$
Relationships with mentors (RM)	37.52	$p < .05$

Note: the table presents only statistically significant comparison results.

Statistically significant differences were obtained between the studied groups in the following parameters of psychological safety: “Respectful attitude” ($U_{emp.} = 31.28$; $p < .05$); “Relationships with other participants” ($U_{emp.} = 35.46$; $p < .05$); “Relationships with mentors” ($U_{emp.} = 37.52$; $p < .05$). Such data show that the most important thing is the feeling of respect from others, which allows you to maintain a high level of self-esteem. Also interesting is the result of the internal position about yourself, your place in the world, the ability to plan the main events of your own life and take responsibility for them. Differences between groups showed the following scales: Control (C) ($U_{emp.} = 36.43$; $p < .05$); Self-Control (SC) ($U_{emp.} = 34.19$; $p < .05$).

The obtained data allow us to state the relationship between the self-efficacy of the individuals under study and the psychological safety of the educational environment of the university where they study. It can be assumed that the goal-seeking impact on the optimization of psychological safety parameters will help increase the level of self-efficacy of students. So, it is important to update activities aimed at the psychological safety of the educational environment in the following aspects:

- 1) Development of readiness for psychologically safe interaction between the subjects of the educational process (motivational aspect);
- 2) Modeling of psychologically safe educational environment at the university (organizational aspect);
- 3) Development of communicative competence as the ability to communicate effectively (communicative aspect);
- 4) Creating conditions that are aimed at self-realization of personal resources, maintaining a positive image of “Self” (self-rating aspect).

Conclusions

1) Self-efficacy is considered as the confidence of the personality in his/her ability to achieve the goal, to perform the tasks, which is the basis for successful self-realization of the individual in the activity. Self-efficacy is an important factor in performance in sports.

2) The following statistically significant interconnections between the level of general self-efficacy and parameters of psychological safety were stated: firstly, with the parameters of psychological safety of the educational environment that affect self-rating, self-esteem of the personality ($p < .05$); secondly, with satisfaction with the level and quality of interpersonal relationships with mentors (lecturers, coaches) and other participants.

3) It is proved that the indicators of psychological safety of the personality, namely, which are related to the awareness of their ability to control the events of the world and the level of self-control, affect the level of general self-efficacy of the individual.

Conflict of Interest. The authors declare that there is no conflict of interest.

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