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INFLUENCE OF EMOTIONAL INTELLIGENCE OF ELITE WOMEN'S HANDBALL PLAYERS ON THE CHOICE OF STRESS COPING STRATEGIES

Tetiana V. Petrovska[1], Lilia V. Arnautova[1], Borys I. Palamar[2], Irene V. Khmelnitska[1], Svitlana V. Fedorchuk[1], Tetiana M. Bulhakova[1], Iryna O. Kohut[1]

1 – National University of Ukraine on Physical Education and Sport, Kyiv, Ukraine
2 – Bogomolets National Medical University, Kyiv

Summary

Introduction. The problem of finding optimal strategies for overcoming stress by elite athletes remains relevant. Many authors study the problem of stress resistance in sports from the standpoint of forming a set of athlete's personal qualities. The emotional intelligence is such athlete's personal characteristics that affect the ability to withstand competitive stress.
The aim of the study: to establish a relation between coping strategies and emotional intelligence of elite women's handball players.
Materials and methods: Athletes of the Ukrainian national women's handball team (21 players aged 17 to 28, experience in this sport from 5 to 19 years) took part in the research. The following methods: questionnaire «Ways of coping behaviour» by R. Lazarus, the Nelson-Hall methodology devised to diagnose EI, was used. Data was processed by non-parametric descriptive statistics, Shapiro-Wilk normality test, and correlation analysis.
Results: Strategies using by athletes to increase the ability of the psyche to adapt to anxiety, the level of emotional intelligence and its components, the characteristics of motivation to succeed and motivation to avoid failure have been identified. 61.9 % of elite women's handball players showed a low level of general emotional intelligence; 38.1 % of people showed a middle level. Correlation analysis between athletes' choice of coping strategies and manifestations of emotional intelligence revealed certain patterns. «Confrontational coping» correlated with empathy (r = 0.45). Coping «Distancing» correlated with self-control (r = 0.59) and self-motivation (r = 0.53). Coping «Positive reappraisal» correlated with emotional awareness (r = 0.47), self-emotion management (r = 0.52) and overall emotional intelligence (r = 0.59). Coping «Self-control» had a positive correlation with self-motivation (r = 0.53).
Conclusions: The obtained results give grounds to assert the expediency of applying the correction of emotional intelligence by increasing one in the practice of psychological training of athletes, which will increase their stress resistance.

Key words: **stress, coping strategy, emotional intelligence, motivation, stress resistance**

INTRODUCTION

Qualified athletes face a number of external and internal stressors that affect their performance in a sports career [34]. Too much stress can negatively affect psychological well-being, which, in its turn, can negatively affect athletic performance [30]. If physical activity is heavy and the athlete does not manage his condition well, there is excessive mental stress, which reduces the effectiveness of activities, leads to its disorganization, and as a result to losing, which can lead to self-confidence loss, mental stress, depression and psychosomatic shifts [2, 23, 26]. Working at the limit of one's capabilities constantly creates situations in which the athlete needs to regulate his mental state [20, 35]. The problem of overcoming stress in sports remains relevant for study [9, 11, 21]. Strategies for coping with stress and developing effective techniques for coping with stress in competitive activities are considered by many authors as a guarantee of professional success of athletes [3, 5] and sports coach [4, 24].

Coping is a better strategy than psychological protection and is based on conscious, arbitrary establishment of the desired balance with the environment at the level of energy, emotions and information [26]. Coping behaviour depends not only on the personality of the subject, but also on the situation and can manifest itself on the behavioural, emotional and cognitive levels [3, 21, 28].

The study of modern theoretical and methodological principles on the problem of stress resistance and the use of coping strategies in sports, the formation of a stable psychological profile as a set of personal qualities of the athlete allowed to identify approaches to forming mechanisms of adaptation to stress as personal resources of the athlete in emotional [3], motivational [5], cognitive, behavioural and volitional [10] spheres of personality. Handball is a situational sport with a high risk of injury. Athletes who specialize in extreme sports are heterogeneous in their psychological characteristics, and various factors can influence the formation of their stress resistance.

A number of authors study the coping strategy of athletes in the gender aspect [6, 18]. Many authors study the problem of resistance in sports from the standpoint of forming a stable psychological profile as a complex of personal qualities of the athlete [24, 31, 32, 36]. Aggression, self-esteem and others were studied as personal qualities of an athlete that affect competitive success [25, 26]. Emotional intelligence [9, 22, 27], qualities of perfectionism and motivation to succeed were studied among the athlete's personal characteristics that affect the ability to withstand competitive stress and anxiety. It is important to take into account the level of development of emotional intelligence, its psychological characteristics in athletes of game sports, because understanding and managing their own emotions and emotions of the opponent is a resource for successful team interaction and its victory [8, 29]. Thus, many authors view emotional intelligence as a factor that can affect the stress resistance of athletes [29]. The purpose of the study was to establish a relation between coping strategies and emotional intelligence and avoid the failures of elite women's handball players.

MATERIALS AND METHODS

Participants: Athletes of the Ukrainian national women's handball team (21 players aged from 17 to 28, experience in this sport from 5 to 19 years) took part in the study. The consents of data use for scientific research according to recommendations of biomedical research ethics committee were received from all of athletes. The research was conducted in preparation period for the play-off qualifiers for the World Handball Championship. The research was conducted on the basis of the Research Institute of National University of Ukraine on Physical Education and Sport. *Procedure:* The questionnaire «Ways of coping behaviour» by R. Lazarus was used to study the perceived strategies for coping with stress. The Nelson-Hall methodology devised to diagnose EI was used to determine the level of emotional intelligence.

Statistical analysis: Non-parametric descriptive statistics were used for data procession [1]. Shapiro-Wilk normality test confirms the normal distribution of the following indicators of handball players' psychological diagnosis: confrontational coping, self-control, seeking for social support, escape-avoidance, problem-solving planning, positive reappraisal, emotional awareness, self-motivation, empathy, managing the emotions of others, emotional intelligence. Because 3 of the 14 indicators of handball players' psychological diagnosis did not meet the law of normal distribution, we used non-parametric statistics. The following statistical parameters: arithmetic mean, standard deviation S, median, lower and upper quartiles Me (25 %, 75 %) were determined.

Correlation analysis was used to determine the relationship between the indicators of psychological diagnosis of handball players. Pearson's correlation coefficient was used for normal indicators; otherwise the relationship was determined using the non-parametric Spearman correlation coefficient. The significance of the correlation coefficients relative to zero was determined on a bilateral criterion at the level of $p = 0.05$. Mathematical and statistical data processing and analysis were performed using the computational and graphical capabilities of the application packages «Statistica» (StatSoft, version 14.0) and Microsoft Excel 2010.

RESULTS

Studies with athletes of the Ukrainian national women's handball team have identified a number of indicators: strategies used by athletes to increase the ability of the psyche to adapt to anxiety, the level of emotional intelligence and its components (Table 1).

The athlete opposes herself to the situation, perceives it as threatening under the using confrontational coping. Confrontation involves clashes, aggressive struggle with an external object, includes offensive actions, manifestations of anger about what directly created the problem. Almost all women's handball players, 90.5 %, have an average level of manifestation of this strategy. 4.8 % of players have a high level, and 4.8 % have a low level, which is considered an adaptive version of this strategy.

Distancing determines the individual's attempts to protect themselves from problems that have arisen, to forget about them. The positive side of the strategy is the ability to cope with stressful situations; the negative side is the devaluation of one's own feelings about the traumatic situation. A high level of this coping strategy was found in 9.5 % of players. Cognitive efforts separate athletes from the situation and reduce its significance. 90.5 % of players showed an average manifestation of this strategy. Low levels were not found in elite women's handball players (Fig. 1).

Table 1

Indicators of psychological diagnosis of handball female players (n=21)

	Indicator	$\bar{X}$	S	Me	25 %	75 %
1.	Confrontational coping	9.4	2.2	9	8	11
2.	Distancing	9.4	1.9	9	8	10
3.	Self-control	12.8	2.2	12	11	14
4.	Seeking social support	12.3	1.9	12	11	14
5.	Accepting responsibility	8.9	1.8	9	8	10
6.	Escape-avoidance	12.3	3.5	13	9	15
7.	Problem solving planning	13.6	2.1	14	12	16
8.	Positive reappraisal	15.0	2.7	15	13	16
9.	Emotional awareness	9.8	4.3	9	7	13
10.	Managing your emotions	4.0	3.0	3	2	6
11.	Self-motivation	7.1	2.9	6	5	9
12.	Empathy	7.7	4.6	8	4	11
13.	Managing the emotions of others	7.9	3.9	7	5	10
14.	Emotional intelligence	36.4	11.4	33	29	44

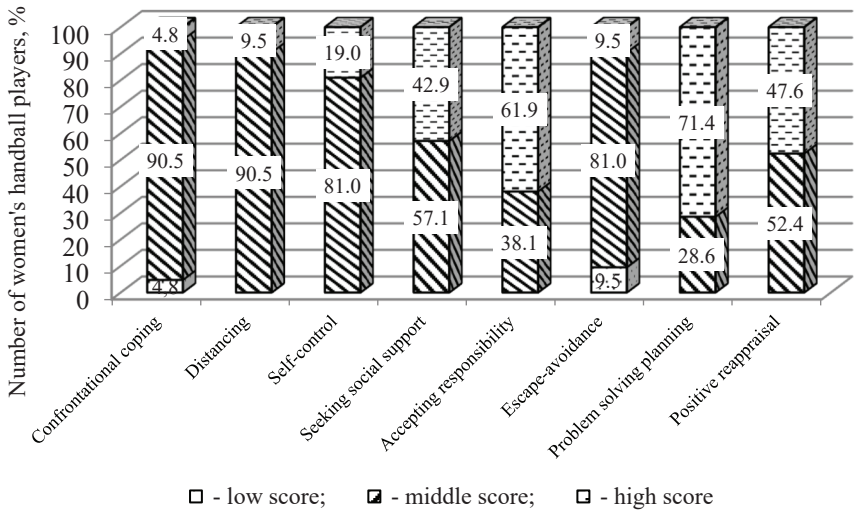

Fig. 1. Distribution of women's handball players according to the score obtained in the questionnaire «Ways of power behaviour» by R. Lazarus, n = 21

Strategy of self-control is the desire to regulate their feelings and actions. 19.0 % of women's handball players show a high level and most of them, 81.0 %, show the middle level. This demonstrates the high level of this strategy using by athletes.

Seeking social support is the desire of athletes to find any informational or emotional help in the social environment. 42.9 % of elite women's handball players have a high level of social support and 57.1 % have a middle level.

Acceptance of responsibility is manifested in the recognition of their own role in the problem and the desire not to repeat past mistakes and solve them on their own. 61.9 % of women's handball players have a high level and 38.1 % have a middle level.

The strategy of escape-avoidance is the desire of athletes to get rid of the situation and get out of it. 9.5 % of athletes show a high level and 81.0 % a middle level of manifestation of this strategy, which indicates a desire to avoid difficult situations of sports activities. 9.5 % of players have a low level on this scale. Thus, this strategy does not allow to solve the problem and with its frequent use there is a high probability of internal personal problems.

The strategy of planning to solve the problem is to develop an action plan and further adhere to it. Most athletes, 71.4 %, have a high level of this strategy using, 28.6 % of athletes have a middle level. This strategy demonstrates that most athletes tend to analyze options to solve problems.

Positive reappraisal is a strategy that consists of an individual's efforts to bring a positive character to what is happening, an attempt to overcome difficulties by analyzing the situation in a positive way. 47.6 % of elite women's handball players have a high level and 52.4 % have a middle level. Athletes make their efforts to create positive meaning by focusing on growing their own personality.

Thus, research has shown that skilled women's handball players use all coping strategies, which in most cases are represented by a middle and high level of manifestation of each strategy. Low level of use of confrontational coping was demonstrated by 4.8 % and escape-avoidance coping by 9.5 % of athletes, respectively. It should be noted that the athletes demonstrated a high level of coping strategies using, which can be interpreted as the predominant coping strategies. 4.8 % of athletes showed a high level of «confrontational coping»; 9.5 % – high level of «distancing»; 19 % – high level of «self-control»; 42.9 % – high level of «seeking social support»; 61, 9 % – high level of «acceptance of responsibility»; 9.5 % – high level of «escape-avoidance»; 71.4 % – high level of «problem solving planning»; 47.6 % – high level of «positive reappraisal».

N. Hall's method allowed to determine the components of emotional intelligence: emotional awareness, self-emotion management, self-motivation, empathy, recognition of other people's emotions (Fig. 2).

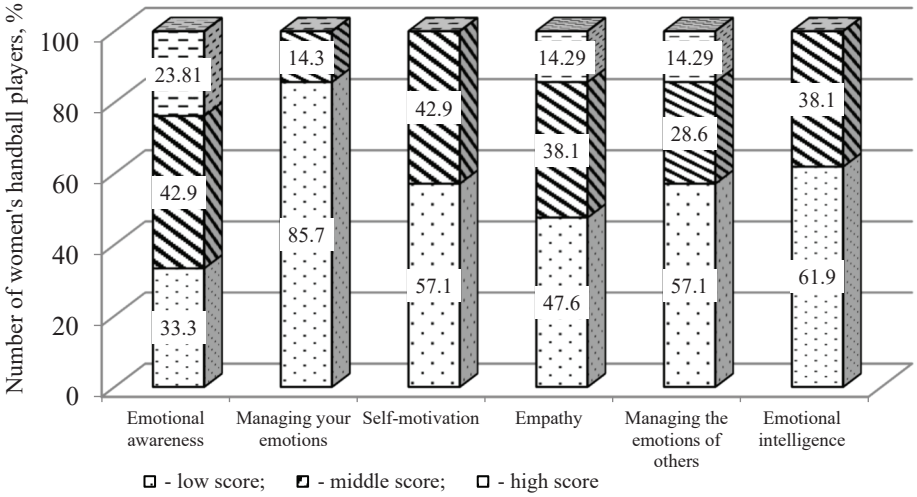

Fig. 2. Distribution of women's handball players according to the score obtained in the Hall Emotional Intelligence Test (EQ Test), n = 21

The scale of emotional awareness is the awareness and understanding of one's emotions, the constant replenishment of one's own vocabulary of emotions. A high level of emotional awareness was found in 23.8 % of athletes; middle level of emotional awareness – in 42.9 % of athletes; low level on this scale was found in 33.3 % of elite women's handball players.

The scale of managing your emotions shows the ability to use the information provided by emotions, to evoke emotions or abstract from them, depending on their informativeness or usefulness. No women's handball players with a high level on this scale were found. 14.3 % and almost all athletes have a middle level; 85.7 % – low level of emotion management.

Self-motivation is the management of one's behaviour through the management of emotions. 42.9 % of athletes have a middle level of self-motivation; 57.1 % – a low level of self-motivation. High level was not found in women's handball players.

According to the empathy scale, 14.3 % of athletes with a high rate were identified; 38.1 % of athletes have a middle level of empathy; 47.6 % – a low figure on this scale. Managing the emotions of others is the ability to influence the emotional state of others. 14.3 % of athletes showed a high level, 28.6 % – a middle level and 57.1 % – low scores on this scale. A high-level of emotional intelligence was not found in any athlete according to the scale of the integrated indicator; 38.1 % of athletes were found to have a middle level of emotional intelligence; and 61.9 % have low levels of emotional intelligence.

A study of motivation to succeed found 23.8 % of athletes with extremely high levels of this indicator; 52.4 % showed a high rate of motivation to succeed; 23.8 % – the middle level of motivation. No low level was found in the athletes. Such results can be explained by the high level of athletes' qualification and the period in which the survey was conducted, namely before the responsible competitions.

DISCUSSION

In sports psychology, it is natural to study the search for the influence of psychological factors on the results of athletes [7, 14, 15, 22], the influence of psychological factors on overcoming competitive stress [14, 15, 21]. Goal planning and mental training are also part of a set of characteristics that allow the athlete to improve and cope with difficult situations. Athletes who set goals and followed the instructions of their coaches had the best results [19]. It can be assumed that athletes with a high level of emotional intelligence are characterized by a strong ability to understand the emotions of their own and others, which leads to higher adaptability and efficiency in communication and activities. As a result,

a person with a developed emotional intelligence develops inner harmony and high stress resistance, the ability to build and maintain relationships, a constructive position in resolving conflicts, and so on. Determining the correlations between competitive anxiety of athletes and emotional intelligence allowed us to establish that the level of empathy and understanding of other people's emotions is one of the factors regulating the level of competitive and situational anxiety [12, 27]. Our researches also confirm the impact of a high level of athlete's emotional intelligence on the ability to manage the level of stress and anxiety and conclude about the relationship between an athlete's emotional intelligence and sports performance [13, 16]. In football players, competitive activity correlates with sufficiently developed emotional intelligence [29]. We share the opinion of the authors that the high level of emotional intelligence of athletes is the basis of stress resistance [29]. In studies with the women's National handball team, strategies to overcome distancing and escape-avoidance were positively correlated with anxiety traits [18]. Our research complements information on the correlations between coping strategies of the women's national handball team and the components of emotional intelligence.

Studies on gender differences in the coping strategies of sport players [6] report that female athletes are more likely than males to avoid avoidance and seeking social support. In our research, more than 50 % of athletes demonstrated a high level of strategies: «acceptance of responsibility»; «problem solving planning». Therefore, research and psych diagnostics are needed for each individual sample of athletes to implement psychological training programs [9].

The study of correlations between athletes' choice of coping strategies and manifestations of emotional intelligence revealed certain patterns (Table 2).

Table 2

Correlation matrices between the indicators of psychological diagnosis of handball female players (n=21)

Indicator	Confrontational coping	Distancing	Self-control	Seeking social support	Accepting responsibility	Escape-avoidance	Problem solving planning	Positive reappraisal	Emotional awareness	Managing your emotions	Self-motivation	Empathy	Managing the emotions of others	Emotional intelligence
Confrontational coping	1.00	0.09	0.16	0.16	0.37	0.74	0.12	0.09	-0.24	-0.12	0.21	**0.45**	-0.07	0.09
Distancing	0.09	1.00	**0.59**	-0.12	-0.02	0.08	-0.24	0.15	0.08	-0.18	**0.53**	-0.14	-0.21	-0.01
Self-control	0.16	0.59	1.00	-0.01	0.04	0.09	0.12	0.28	0.41	-0.01	**0.53**	0.11	0.20	0.40
Seeking social support	0.16	-0.12	-0.01	1.00	0.02	0.18	0.08	0.21	0.01	-0.04	-0.12	0.24	0.36	0.19
Accepting responsibility	0.37	-0.02	0.04	0.02	1.00	**0.46**	0.15	0.37	0.05	-0.26	0.15	0.26	0.13	0.14
Escape-avoidance	**0.74**	0.08	0.09	0.18	**0.46**	1.00	-0.08	0.08	-0.13	-0.08	0.09	0.21	0.03	0.05
Problem solving planning	0.12	-0.24	0.12	0.08	0.15	-0.08	1.00	0.33	0.36	0.24	-0.06	0.36	0.29	0.43
Positive reappraisal	0.09	0.15	0.28	0.21	0.37	0.08	0.33	1.00	**0.47**	0.06	0.29	0.36	**0.52**	**0.59**
Emotional awareness	-0.24	0.08	0.41	0.01	0.05	-0.13	0.36	**0.47**	1.00	0.25	0.07	0.16	**0.66**	**0.76**
Managing your emotions	-0.12	-0.18	-0.01	-0.04	-0.26	-0.08	0.24	0.06	0.25	1.00	**-0.53**	0.08	0.18	0.32
Self-motivation	0.21	**0.53**	**0.53**	-0.12	0.15	0.09	-0.06	0.29	0.07	**-0.53**	1.00	0.16	0.10	0.24
Empathy	**0.45**	-0.14	0.11	0.24	0.26	0.21	0.36	0.36	0.16	0.08	0.16	1.00	**0.44**	**0.68**
Managing the emotions of others	-0.07	-0.21	0.20	0.36	0.13	0.03	0.29	**0.52**	**0.66**	0.18	0.10	**0.44**	1.00	**0.85**
Emotional intelligence	0.09	-0.01	0.40	0.19	0.14	0.05	0.43	**0.59**	**0.76**	0.32	0.24	**0.68**	**0.85**	1.00

Note: Statistically significant coefficient of correlation at $p<0.05$ level is bold text

«Confrontational coping» correlates with empathy ($r = 0.45$, $p<0.05$). Coping «distancing» is related to the components of emotional intelligence, self-control ($r = 0.59$, $p<0.05$) and self-motivation ($r = 0.53$, $p<0.05$). Coping «positive reappraisal» has positive correlations with emotional awareness ($r = 0.47$, $p<0.05$), self-emotion management ($r = 0.52$, $p<0.05$) and overall emotional intelligence ($r = 0.59$, $p<0.05$). Coping «self-control» has a positive correlation with self-motivation ($r = 0.53$, $p<0.05$). The following coping strategies have a positive effect on each other: «confrontational coping» is related to the «escape-avoidance» strategy ($r = 0.74$, $p<0.05$);

«escape-avoidance» and «acceptance of responsibility» ($r = 0.46$, $p<0.05$).

Interesting in the study are the results of the lack of positive correlations between the components of emotional intelligence and those coping strategies, the manifestation of which has a high level of manifestation in the vast majority of athletes, namely: seeking social support (42.9 %), problem solving planning (71.4 %), acceptance of responsibility (61.9 %). The obtained results give reasons to assert the expediency of applying the correction of emotional intelligence by increasing one in the practice of athlete's psychological training, which will increase their stress resistance [17, 29].

CONCLUSIONS

1. Qualified women's handball players use all coping strategies, which represented in most cases are by the middle and high level of manifestation of each strategy.

2. The majority of women's handball players showed low (61.9 %) and middle (38.1 %) levels of general emotional intelligence. The low level was revealed by indicators: emotional awareness in 33.3 % of athletes, management of their emotions – 85.7 %, self-motivation – 57.1 %, empathy – 47.6 %, recognition of other person's emotions – 57.1 % of athletes.

3. Manifestation of stress management strategies correlates with emotional intelligence. No correlations have been identified between emotional intelligence and those coping strategies, the manifestation of which has a high level of manifestation in the vast majority of athletes: «seeking social support», «problem solving planning», and «acceptance of responsibility».

4. The obtained results give grounds to assert the expediency of applying the correction of emotional intelligence by increasing one in the practice of psychological training of athletes, which will increase their stress resistance.

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COMPLIANCE WITH ETHICAL REQUIREMENTS

The consents of data use for scientific research according to recommendations of biomedical research ethics committee were received from all of athletes.

REFERENCES:

1. Antomonov M.J., Korobeynikov G. V., Khmelnitsky I. V., Kharkovlyuk-Balakina N. V. (2021). Matematychni metody obroblennia ta modeliuvannia rezultativ eksperymentalnykh doslidzhen [Mathematical methods of processing and modeling the results of experimental research]: a textbook. K. 216 p.
2. Arnautova L, Petrovska T, Hanaha O, Fedorchuk S. (2022). Stresovi sytuatsii ta psykhichni stany kvalifikovanykh handbolistok u riznykh periodakh sportyvnoi diialnosti [Stressful situations and mental states of elite handball players in different periods of sporting activity]. Theory and Methods of Physical education and sports. 1, 73-80. DOI: 10.32652/tmfvs.2022.1.73-80
3. Arnautova L, Petrovska T. (2019). Coping-strategies for stress overcoming by athletes. [Kopinh-stratehii podolannia stresu sportsmenamy.] Theory and methodics of physical education and sport. 2, 104-12. DOI: 10.32652/tmfvs.2019.2.105-113
4. Aronen A, Kokkonen M, Hintsa T. Association of emotional intelligence with resilience and work engagement in sports coaches. Contribution of emotional intelligence to Taekwondo athlete's performance. Journal of Physical Education and Sport, (JPES). Vol. 21 (issue 6), Art 462: 3411-3419. DOI: 10.7752/jpes.2021.06462
5. Belem, I. C., dos Santos, V. A. P., Caruzzo, N. M., Rigoni, P. A. G., Both, J., & Vieira, J. L. L. (2017). Quais estratégias de enfrentamento sao utilizadas por atletas de MMA mais resilientes ao estresse? Journal of Physical Education, 28 (1), e-2843. DOI: 10.4025/jphyseduc.v28i1.2843
6. Bojkowski L, Kalinowski P, Kalinowska K, Jerszynski D. (2020). Coping with stress among women and men training team sports games. Journal of Physical Education and Sport (JPES).Vol. 20 (issue 2): 1230-1234. DOI: 10.7752/jpes.2020.s2171
7. Castro-Sanchez M, Zurita-Ortega F, Chacon-Cuberos R, Lopez-Gutierrez CJ, & Zafra-Santos E. (2018). Emotional Intelligence, Motivational Climate and Levels of Anxiety in Athletes from Different Categories of Equations. International Journal of Environmental Resources and Public Health. 15 (5). DOI: 10.3390/ijerph15050894
8. Chernyavska T. (2022) Emotsiinyi intelekt yak resurs konkurentnospromozhnosti u sportyvnii ihrovii diialnosti. [Emotional intelligence as a resource of

competitiveness in sports games]. Odessa National University named after Mechnikov I. I. Sportyvni ihry. 2 (24): 82-90. DOI: 10.15391/si.2022-2.9
9. Cosma G, Chiracu A, Raluca S, Cosma A, Nanu C, Păunescu C. (2020). Impact of coping strategies on sport performance. Journal of Physical Education and Sport, (JPES). 20 (3): 1380-1385. DOI: 10.7752/jpes.2020.03190
10. Cowden R, Meyer-Weitz A, Asante K. (2016). Mental toughness in competitive tennis: relationships with resilience and stress. Front Psy [Internet]. [cited 2018 Sep 28]. 7: 1-9. Available from: https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00320/full DOI: 10.3389/fpsyg.2016.00320
11. Dailey JT. (2022). Stress, Resilience, and Coping Resources as Predictors of Mental Health among Collegiate Athletes [PhD Thesis. Doctoral dissertation on the internet]. Phoenix, Arizona: Grand Canyon University. [cited 2022 Jan 07] https://www.proquest.com/openview/053c6a789f9d658d75dadc8e67847f6c/1?pq-origsite=gscholar&cbl=18750&diss=y
12. Fernandez MM, Bello DF, Barreto LBM, Brito CJ, Miarka B, DÍaz-De-Durana AL. (2019). State-trait anxiety and reduced emotional intelligence in combat sport athletes of different genders and competitive levels. Journal of Physical Education and Sport ® (JPES). 19 (2): 363-368. Available from: http://www.efsupit.ro/images/stories/februarie2019/Art54.pdf DOI:10.7752/jpes. 2019. S. 2054.
13. Fernandez MM, Perez DIV, Aedo-MuÑoz E, Barreto L, Brito CJ, De Brito MA, Miarka B, De Durana AL. (2022). Emotional intelligence contributes to increased ranking in combat athletes with anxiety disorders. Journal of Physical Education and Sport, (JPES). 22 (2): 331-336. Available from: https://www.efsupit.ro/images/stories/februarie2022/Art%2042.pdf DOI: 10.7752/jpes.2022.02042.
14. Fletcher D, Sarkar M. (2012). A grounded theory of psychological resilience in Olympic champions. Psychology of Sport and Exercise. 13(5): 669-678. DOI: 10.1016/j.psychsport.2012.04.007.
15. Galli N, Gonzalez S. (2015). Psychological resilience in sport: A review of the literature and implications for research and practice. International Journal of Sport and Exercise Psychology. 13 (3): 243-57. DOI: 10.1080/1612197X.2014.946947
16. Gatsis G, Strigas A, Ntasis L. (2021). Contribution of emotional intelligence to Taekwondo athlete's performance. Journal of Physical Education and Sport, (JPES). 21 (3): 1976-1980. DOI: 10.7752/jpes.2021.s3251
17. Heras-Fernandez RDL, Espada M, Garcia-Coll V, Anguita J. (2020). Emotional intelligence of Spanish dancers and its relationship with personality traits Journal of Physical Education and Sport ® (JPES). 20 (5): 2586-2594. DOI:10.7752/jpes.2020.05353.
18. Ivaskevych D, Borysova O, Fedorchuk S, Tukaiev S, Kohut I, Marynych V, Petrushevskyi Y, Ivaskevych O, Mihaila I. (2019). Gender differences in competitive anxiety and coping strategies within junior handball national team. Journal of Physical Education and Sport (JPES). 19 (2): 1242-1246. DOI: 10.7752/jpes.2019.02180
19. Kaplanova A. (2019). Personality of gymnasts and coping strategies to manage stress. Science of Gymnastics Journal. 11(2): 255-265. DOI: 10.52165/sgj.11.2.255-265
20. Kellmann M. (2010). Preventing Overtraining in Athletes in High-Intensity Sports and Stress/Recovery Monitoring. Scandinavian Journal of Medicine & Science in Sports. Journal of Medicine & Science in Sports. 20 (S2): 95-102. DOI: http://dx.doi.org/10.1111/j.1600-0838.2010.01192.x.
21. Tetiana Petrovska, Lilia Arnautova, Borys Palamar, Irene Khmelnitska, Svitlana Fedorchuk, Olha Hanaha, Iryna Kohut. (2023). Correlation between indicators of balance of nervous processes with localization of control in high skilled women handball players. Clinical and Preventive Medicine. 25 (4): 96-103. 2023. DOI: 10.31612/2616-4868.4(26). 2023.14
22. Petrovska T, Kulish, N, Kostiukevych V, Sluhenska R, Reshetilova N, Yerokhova A. (2021). Research of Emotional Intelligence as a Psychological Resource of an Athlete. Sport Mont. 19 (S2): 57-61. DOI: 10.26773/smj.210910
23. Petrovska T, Potop V, Sova V, Perepelytsia A, Bulhakova T, Folvarochnyi I, Korobeynikova L, Tolkunova I, Konyayeva L. (2021). Manifestations of aggression in elite athletes. Journal of Physical Education and Sport (JPES). 21(2):797-802. DOI: 10.7752/jpes.2021.02099.
24. Petrovska T, Sova V, Khmelnitska I, Borysova O, Imas Y, Malinovskyi A, Tereschenko L. (2020). Research of football coach's professionally important qualities in football player's perception. Journal of Physical Education and Sport, (JPES). 20 (1): 435-440. DOI: 10.7752/jpes. 2020. s1063.
25. Petrovska T, Sova V, Voronova V, Khmelnitska I, Borysova O, Kurdybakha O. (2022). Features of self-esteem and level of ambition in athletes of different qualifications. Journal of Physical Education and Sport (JPES). 22(3): 593-599. DOI: 10.7752/jpes.2022.03074.
26. Petrovska TV, Voronova VI, Grin OR at all.; for the editorial staff of Petrovskaya T. (2021). Technologies of psychological and pedagogical support and development of subjects in sports activity: kol. monograph. K: Vidavets Pozdnishev. 165 p.
27. Petrovskaya T.V. (2014). Emotional intelligence and competitive anxiety in athletes. Science in Olympic sports, 4, 60-63. Available from https://sportnauka.org.ua/wp-content/uploads/nvos/articles/ 2014.4_9.pdf.

28. Popovych I, Halian I, Pavliuk M, Kononenko A, Hrys A, Tkachuk T. (2022). Emotional quotient in the structure of mental burnout of athletes. Journal of Physical Education and Sport ® (JPES), 22 (2), 337-345. DOI: 10.7752/jpes.2022.02043.
29. Popovych I, Plokhikh V, Hrys A, Pavliuk M, Nosov P, Zinchenko S. (2023). Operationalization of footballers' emotional intelligence in the dimensions of motivational orientation: analysis based on the basic positions. Journal of Physical Education and Sport ® (JPES). 23 (3): 772-781. DOI: 10.7752/jpes. 2023.03095.
30. Reardon CL, Hainline B, Aron CM, Baron D, Baum AL, Bindra A, et al. (2019). Mental health in elite athletes: International Olympic Committee consensus statement. Br. J. Sports Med. 53 (11): 667-699. Available from: https://bjsm.bmj.com/content/bjsports/53/11/667.full.pdf DOI: 10.1136/bjsports-2019-100715
31. Richardson GE. (2002). The Metatheory of Resilience and Resiliency. Journal of Clinical Psychology [Internet]. 58 (3): 307-21. Available from: https://www.researchgate.net/publication/11523616_The_Metatheory_of_Resilience_and_Resiliency. DOI: 10.1002/jclp.10020
32. Sarkar M. (2017). Psychological Resilience: Definitional Advancement and Research Developments in Elite Sport. International Journal of Stress Prevention and Wellbeing [Internet]. 1 (3):1-4. Available from: http://www. stressprevention.net/wp-content/uploads/2017/04/IJSPW-1-3.pdf. DOI: 10.1002/jclp.10020
33. Shinkaruk O, Lysenko E, Fedorchuk S. (2017). Stress and its impact on competitive and training activities of athletes. Physical culture, sports and health of the nation: a collection of scientific papers, 3 (22), 469-476. Available from: https://www.researchgate.net/publication/323366029_Stres_ta_jogo_vpliv_na_zmagalnu_ta_trenuvalnu_dialnist_sportsmeniv
34. Staal A. (2004). Stress, Cognition, and Human Performance: A Literature Review and Conceptual Framework. California: National Aeronautics and Space Administration, NASA/TM. 168 p. Available from: https://ntrs.nasa.gov/api/citations/20060017835/downloads/20060017835.pdf
35. Tukayev S, Dolgova O, Van Den Tol AJM, Ruzhenkova A, Lysenko O, Fedorchuk S, Ivaskevych D, Shynkaruk O, Denysova L, Usychenko V, Iakovenko O, Byshevets N, Serhiyenko K, Voronova V. (2020) Individual psychological determinants of stress resistance in rock climbers. Journal of Physical Education and Sport, 20 (1), 469-476. Available from: https://efsupit.ro/images/stories/februarie2020/Art%2069.pdf. DOI: 10.7752/jpes. 2020. s1069.
36. Tukayev SV, Dolgova EN, Ruzhenkova AO, Lysenko EN, Fedorchuk SV, Gavrilets YD, Rizun VV, Shinkaruk OA. (2017). Typological and personal determinants of stress resistance in athletes of extreme sports. Sports Medicine and Physical Rehabilitation, 2, 8-15.

Резюме

ВПЛИВ ЕМОЦІЙНОГО ІНТЕЛЕКТУ КВАЛІФІКОВАНИХ ГАНДБОЛІСТОК НА ВИБІР СТРАТЕГІЙ ПОДОЛАННЯ СТРЕСУ

Тетяна В. Петровська[1], Лілія В. Арнаутова[1], Борис І. Паламар[2], Ірина В. Хмельницька[1], Світлана В. Федорчук[1], Тетяна М. Булгакова[1], Ірина О. Когут[1]

1 – Національний університет фізичного виховання і спорту України, м. Київ, Україна
2 – Національний медичний університет імені О. О. Богомольця, м. Київ, Україна

Вступ. Проблема пошуку оптимальних стратегій подолання стресу спортсменами високої кваліфікації залишається актуальною. Багато авторів вивчають проблему стресостійкості в спорті з позицій формування комплексу особистих якостей спортсмена. Емоційний інтелект – це така особистісна характеристика спортсмена, яка впливає на здатність протистояти змагальному стресу.
Мета дослідження: встановити зв'язок між стратегіями опанування та емоційним інтелектом елітних гандболісток.
Матеріали та методи. В дослідженні взяли участь спортсменки жіночої збірної України по гандболу (21 гравець у віці від 7 до 28 років, стаж занять даним видом спорту від 5 до 19 років). Використані методи: опитування з використанням опитувальника Р. Лазаруса, методика Нельсона-Холла, розроблена для діагностування ЕІ. Отримані дані оброблялися за допомогою непараметричної описувальної статистики, теста нормальності Шапіро-Уілка та кореляційного аналізу. Стаття фінансується авторами.
Результати: виявлені стратегії, що використовуються спортсменами для підвищення здатності психіки адаптуватися до тривоги, рівня емоційного інтелекту та його компонентів, особливостей мотивації досягнення успіху та мотивації уникання невдач. 61,9 % елітних гандболісток показали низький рівень загального емоційного інтелекту, у 38,1 % відмічено середній рівень. Кореляційний аналіз між вибором спортсменами копінг-стратегій і проявами емоційного інтелекту виявив певні закономірності. «Конфрантаційний копінг» корелював з емпатією (r = 0,45). Копінг «Дистанція» корелював з самоконтролем (r = 0,59) та самомотивацією (r = 0,53). Копінг «Позитивна переоцінка» корелювала з емоційною обізнаністю (r = 0,47), управлінням емоціями (r = 0,52) та загальним емоційним інтелектом (r = 0,59). Копінг «Самоконтроль» мав позитивну кореляцію з самомотивацією (r = 0,53).
Висновки: отримані результати дають підставу стверджувати про доцільність застосування коррекції емоційного інтелекту шляхом підвищення у практиці психологічної підготовки спортсменів, що дозволить підвищити їх стресостійкість.

Ключові слова: **стрес, копінг-стратегія, емоційний інтелект, мотивація, стресостійкість**