

Characterization of cadets' psychophysical health in war conditions

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ABSTRACT

Aim: To investigate the impact of various types of motor activity training sessions on the mental and physical health of cadets during their wartime training.

Materials and Methods: The research, conducted during 2023-2024, involved 203 cadets from the 1st to 4th training years (male). There were five groups of cadets engaged in various sports and motor activities. Research methods included bibliosemantic, psycho-diagnostic, medical and biological, and mathematical statistics methods.

Results: In the groups of cadets who systematically practiced the chosen sport during training (groups 1-4), mental and physical health indicators at the end of the research were better than in the cadets who practiced according to the current method of motor activity (group 5). The levels of stress resilience, nervous and emotional tension, reactive anxiety, emotional state, body mass index, vital index, strength index, and Robinson's index were significantly ($p \leq 0.05-0.001$) better in groups 1-4 compared to group 5. Instead, no significant difference was found between the indicators of groups 1-4 ($p > 0.05$). The most important effect of different types of motor activity was found in the indicators of the emotional state, cardiovascular and respiratory systems of cadets.

Conclusions: This suggests that conscious training in any motor activity is effective in reducing stress, nervous tension, and anxiety, while restoring emotional balance and improving physical health indicators in cadets during wartime training.

KEY WORDS: physical health, mental health, motor activity, stress, cadets, war

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INTRODUCTION

The educational and service activities of cadets of higher educational institutions with specific learning environment (HEIs with SLE) during the war, accompanied by the negative impact of several stressors, led to the emergence of stress in cadets, which is reflected in the deterioration of their psychophysical health, the emergence of several diseases and the decline of the quality of their educational activities and the effectiveness of their performance of service tasks [1, 2]. Bressler R. A., et al. [3] note that psycho-emotional tension, which accumulates in the body under the influence of negative emotions and other stressors, leads to an increase in the level of cortisol and adrenaline hormones secreted by the adrenal glands. In small quantities, these hormones help the body cope with the adverse effects of stressful situations; however, their excess can lead to various diseases affecting different systems and bodily func-

tions [4]. Stress manifests in multiple forms and causes a range of symptoms at both mental (emotional and intellectual) and physiological (behavioral) levels [5, 6]. The psychological symptoms of stress range from irritability, anxiety, anger, and hostility to feelings of fear, panic, disturbance, and insomnia. Psychological stress also leads to the manifestation of physical symptoms: headaches, neck and back pain, muscle strain, intestinal disorders, increased heart rate and breathing, and others. Scientists [7] note that the physiological reaction to stress can be so strong that it causes additional mental tension, closing the cause-and-effect circle.

Blumberg D. M., et al. [8] emphasize that the primary approach to counteracting stress is its prevention, which involves a preventive set of measures aimed at preventing the occurrence and spread of stress, eliminating its risk factors, mitigating its negative manifestations, and enhancing the body's stress resilience. The analysis of

the works of many scientists [9, 10] has shown that one of the simple, affordable, and, at the same time, effective means of preventing stress in cadets of HEIs with SLE, restoring their psycho-emotional state during training in war conditions, is motor activity and sports. Physical exercises are considered one of the non-drug methods of self-soothing, reducing cortisol (a stress hormone) and adrenaline in the body, while stimulating the production of endorphins, which are natural painkillers responsible for improving one's mood [11, 12]. At the same time, the issue of identifying the most effective types of motor activity to prevent stress in cadets and enhance their mental and physical well-being during wartime training remains insufficiently addressed.

AIM

The aim is to investigate the impact of various types of motor activity training sessions on the mental and physical health of cadets during their wartime training.

MATERIALS AND METHODS

PARTICIPANTS

The research involved 203 male cadets from the Lviv State University of Internal Affairs (LSUIA, Lviv, Ukraine), majoring in the specialty referred to as "Law Enforcement." To achieve the research aim, five groups of cadets from the 1st to the 4th training years depending on the type of motor activity during the hours of their sporting and mass participation events (SMPE) were formed: Group 1 (n=33) – cadets who were engaged in game-oriented sports (football, volleyball, basketball); group 2 (n=25) – cadets who attended strength-oriented sports clubs (arm wrestling, powerlifting, kettlebell lifting); group 3 (n=29) – cadets who attended martial arts (boxing, combat sambo, mixed martial arts); group 4 (n=27) – cadets who attended field-events (running at different distances, cross-country, functional all-around); group 5 (n=89) – cadets who did not participate in any of the NAIA sports clubs, and during SMPE hours were trained under the guidance of unit commanders according to existing options (accelerated movement, strength exercises on gymnastic apparatus). Group 5 consisted of equal numbers of cadets from each training year (1st-4th) with one study group per year in equal proportion. The number of hours spent on motor activity was the same in all groups. The research was conducted during the academic year 2023-2024: the beginning – September 2023, the end – June 2024.

Research methods include bibliosemantic, psycho-di-

agnostic, medical and biological, and mathematical statistics methods. Bibliosemantic method was used to conduct an analytical review of scientific sources on the outlined range of issues (20 sources from MedLine, Scopus, Web of Science, and Index Copernicus were analyzed). The mental health of cadets was assessed by the following indicators: stress resilience (according to the method of S. Cowan and G. Willianson), nervous and emotional tension (according to the method of T. Nemchyn), reactive anxiety (according to the scale of C. D. Spielberger, Yu. L. Khanin), emotional state (according to the method of A. Wessman, D. Ricks) [13]. The physical health of cadets was assessed using body mass index, vital, strength, and Robinson's indexes [14].

The test of self-assessment of stress resistance contains 10 questions, answering which the cadets had to choose one of the proposed answers. The answers for questions 1, 2, 3, 7, 9, and 10 were evaluated as follows: never – 0, rarely – 1, sometimes – 2, quite often – 3, frequently – 4; for questions 4, 5, 6, and 8 – never – 4, rarely – 3, sometimes – 2, quite often – 1, usually – 0. If the sum was 6.8 points or less, the level of stress resistance was considered excellent; 6.9-14.2 – good; 14.3-24.2 – satisfactory; 24.3-34.2 – poor; 34.3 and more – very poor. The method for assessing nervous and emotional stress includes 30 signs of this condition, divided into three degrees of severity (a – low degree (complete absence), b – average degree, and c – high degree). The data were processed by summing the points: for answers a – 1 point, b – 2 points, and c – 3 points. The nervous and emotional stress level was considered low if the cadets scored 30-50 points, average – 51-70 points, and high – 71-90 points. The reactive anxiety scale contains 20 statements with response options, depending on how the respondents felt during testing: no, it is not true; probably true; true; quite true. The points were calculated using the formula: $RA = \Sigma 1 - \Sigma 2 + 50$, where RA is reactive anxiety, $\Sigma 1$ is the sum of the numbers on scale items 3, 4, 6, 7, 9, 12, 13, 14, 17, and 18; $\Sigma 2$ is the sum of the numbers on scale items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20. The level of anxiety was assessed as low with 30 points or less, moderate with 31-45 points, and high with 46 points or more. The emotional state self-assessment method includes four sets of 10 statements each ("Calm – Anxiety," "Energy – Fatigue," "Elevation – Depression," "Self-confidence – Helplessness"), among which in each set, it was necessary to choose the one that reflected the respondent's emotional state at the time of testing. The formula determined the emotional state: $ES = (I1 + I2 + I3 + I4) / 4$, where ES is an integral indicator of the emotional state; I1, I2, I3, and I4 are individual indicators on the respective scales. The emotional state was assessed as very good at 8-10 points, good – 6-7 points, poor – 4-5 points, bad – 1-3 points.

Table 1. Dynamics of mental health indicators in cadets engaged in various types of motor activity (n = 203) during their training in war conditions, points

Groups of cadets	Research stages		Δ	t / p
	The beginning	The end		
Stress resistance				
Group 1 (n=33)	15.6±1.09	14.0±1.05*	+1.6	1.06/>0.05
Group 2 (n=25)	15.8±1.17	14.5±1.14*	+1.3	0.86/>0.05
Group 3 (n=29)	15.9±1.13	14.4±1.12*	+1.5	0.94/>0.05
Group 4 (n=27)	15.7±1.14	14.2±1.10*	+1.5	0.96/>0.05
Group 5 (n=89)	16.2±0.91	17.8±0.93	-1.6	1.25/>0.05
Nervous and emotional stress				
Group 1 (n=33)	51.7±1.74	48.3±1.69**	-3.4	1.41/>0.05
Group 2 (n=25)	52.5±2.05	49.8±2.02*	-2.7	0.94/>0.05
Group 3 (n=29)	52.2±1.98	48.9±1.95*	-3.3	1.19/>0.05
Group 4 (n=27)	51.9±2.04	48.7±2.01*	-3.2	1.12/>0.05
Group 5 (n=89)	52.8±0.88	55.1±0.93	+2.3	1.79/>0.05
Reactive anxiety				
Group 1 (n=33)	39.6±0.86	37.4±0.82***	-2.2	1.85/>0.05
Group 2 (n=25)	40.1±0.94	38.5±0.91**	-1.6	1.22/>0.05
Group 3 (n=29)	40.3±0.90	37.9±0.87***	-2.4	1.92/>0.05
Group 4 (n=27)	38.9±0.92	37.5±0.89***	-1.4	1.09/>0.05
Group 5 (n=89)	41.3±0.79	42.8±0.81	+1.5	1.33/>0.05
Emotional state				
Group 1 (n=33)	6.8±0.23	7.7±0.22***	+0.9	2.83/≤0.05
Group 2 (n=25)	6.2±0.25	7.0±0.23**	+0.8	2.35/≤0.05
Group 3 (n=29)	6.5±0.22	7.2±0.21***	+0.7	2.32/≤0.05
Group 4 (n=27)	6.4±0.24	7.2±0.23***	+0.8	2.71/≤0.05
Group 5 (n=89)	6.1±0.18	5.6±0.19	-0.5	1.91/>0.05

Legend: Δ – difference between the studied indicators; t – value of Student's t-test; p – level of statistical significance of differences; *, **, *** – statistically significant differences between the indicators of groups 1, 2, 3, 4, and group 5 at the levels of $p \leq 0.05$, $p \leq 0.01$, and $p \leq 0.001$

Source: compiled by the authors of this study

Body mass index (BMI) was determined by the ratio of body weight in kg to height in m², vital index (VI) was determined by the ratio of vital capacity of the lungs in ml to body weight in kg, strength index (SI) was determined in % by the ratio of dynamometry of the stronger hand in kg to body weight in kg, Robinson's index (RI) was determined in c. u. as the product of heart rate in beats/min and systolic blood pressure in ml Hg at rest.

STATISTICAL ANALYSIS

The methods of mathematical statistics were used to process the data obtained. The compliance of the sample data distribution with the Gauss' law was assessed using the Shapiro-Wilk W test. The reliability of the difference between the indicators was determined using the Student's t-test. The reliability of the difference was

set at $p < 0.05$. All statistical analyses were performed using SPSS software, version 10.0, adapted for medical and biological research.

ETHICS

The procedure for organizing the study and the topic of the article were previously agreed with the Committee on compliance with Academic Integrity and Ethics of the LSUIA. Also this study followed the regulations of the World Medical Association Declaration of Helsinki. Informed consent was received from all participants who took part in this study.

RESULTS

The results of the mental health indicator assessment for cadets from various groups are presented in Table 1.

The study on cadets' stress resilience levels reveals that during the research period, the cadets in groups 1-4 demonstrated improvements in stress resilience of 1.6, 1.3, 1.5, and 1.5 points, respectively. However, these changes were not statistically significant ($p > 0.05$). In group 5, in contrast to the other groups, the level of stress resilience deteriorated by 1.6 points, with no statistically significant difference ($p > 0.05$). At the end of the research, the cadets of groups 1-4 showed a statistically ($p \leq 0.05$) better level of stress resilience than the cadets of group 5, by 3.3-3.8 points, which indicates a positive effect of various types of motor activity during training to improve the level of cadets' stress resilience. This statement is confirmed by the absence of statistically significant differences ($p > 0.05$) between the indicators of cadets in groups 1-4. At the same time, it should be noted that at the end of the research only cadets of group 1 (sports games) have a good level of stress resilience, and the rest of the groups – satisfactory, which emphasizes the expediency of broader introduction of sports games into the forms of physical education of cadets to improve their psycho-emotional state, increase the level of stress resilience.

The study of the dynamics of indicators of nervous and emotional tension shows that during the research period, the level of nervous and emotional tension in the cadets who attended sports clubs, which had no statistical differences between the groups at the beginning of the research ($p > 0.05$), decreased by 2.7-3.4 points ($p > 0.05$). The level of nervous and emotional tension increased by 2.3 points ($p > 0.05$) in the cadets who practiced the current method for sporting and mass participation events. At the same time, the level of nervous and emotional tension in all groups was initially assessed as average at the beginning of the research. By the end of the research, groups 1-4 had shown a low level, which remained unchanged, and at an average level in group 5. It has also been stated that at the end of the research, in all groups of cadets who were involved in sports, the level of their nervous and emotional tension was statistically better compared to the group of cadets who did not additionally attend sports clubs training sessions by 5.3-6.8 points ($p \leq 0.05$ -0.01). This suggests that any type of motor activity is effective in preventing stress, reducing nervous tension and anxiety, and restoring the emotional state of cadets in wartime conditions.

The study of the dynamics of reactive anxiety shows that during the research, the level of anxiety in the cadets engaged in various sports significantly decreased (by 1.4-2.4 points). Still, no statistically significant differences were found ($p > 0.05$). The level of reactive anxiety in the cadets who trained according to the current

sporting and mass participation events methodology did not change statistically ($p > 0.05$). Still, it tended to deteriorate – the difference between the initial and final data of the research was 1.5 points. At the beginning of the research, there were no statistically significant differences among the groups ($p > 0.05$). At the end, in groups 1-4, the level of anxiety was statistically lower compared to group 5, by 4.3-5.4 points ($p \leq 0.01$ -0.001), indicating a positive impact of training sessions in the chosen sport on reducing anxiety in cadets.

Evaluation of the emotional state of cadets reveals that this indicator exhibits the most pronounced positive dynamics during training in the chosen sport. Thus, the indicators of emotional state statistically improved among the cadets of groups 1-4 by 0.7-0.9 points ($p \leq 0.05$). In group 5, the indicators tend to deteriorate: the difference between the indicators at the beginning and the end of the research was 0.5 points, but it was not statistically significant ($p > 0.05$). It was found that at the end of the research, the cadets in groups 1-4 did not show statistically significant differences in the indicators of emotional state ($p > 0.05$), which confirms the effectiveness of any sport in improving the emotional state. However, compared to group 5, cadets in groups 1-4 showed statistically better indicators of emotional state by 1.4-2.1 points ($p \leq 0.001$). The best level of emotional state at the end of the research was recorded in the cadets who participated in sports games (7.7 points), which suggests that sports games can be an effective means of improving the emotional state of cadets and restoring mental energy during training in war conditions.

The study of physical health indicators in the cadets from different groups reveals that at the beginning of the academic year, there were no statistically significant differences among them in any of the studied indices. During the research period, the cadets who were additionally engaged in sports (groups 1-4) showed improvements in all indices. In contrast, group 5 showed a tendency to stabilize and, in some cases, deteriorate physical health indices (Table 2).

The BMI indices of the cadets who participated in sports games, martial arts, and all-around athletics improved by 0.19, 0.09, and 0.12 kg/m², respectively; however, no statistically significant differences were found ($p > 0.05$). The cadets who participated in strength sports and those who participated in the current methodology for sporting and mass participation events experienced a slight deterioration in their BMI, by 0.33 and 0.38 kg/m², respectively ($p > 0.05$). It was found that at the end of the research, the cadets in groups 1, 3, and 4 had a statistically better BMI than those in group 5 by 0.77-1.05 kg/m² ($p \leq 0.01$); no sta-

Table 2. Dynamics of physical health indicators in cadets engaged in various types of motor activity (n = 203) during their training in war conditions

Groups of cadets	Research stages		Δ	t / p
	The beginning	The end		
BMI, kg/m ²				
Group 1 (n=33)	23.27±0.22	23.08±0.21**	+0.19	0.62/>0.05
Group 2 (n=25)	23.56±0.25	23.89±0.26	-0.33	0.91/>0.05
Group 3 (n=29)	23.31±0.21	23.22±0.21**	+0.09	0.30/>0.05
Group 4 (n=27)	23.06±0.24	22.94±0.23**	+0.12	0.56/>0.05
Group 5 (n=89)	23.61±0.14	23.99±0.15	-0.38	1.85/>0.05
VI, ml/kg				
Group 1 (n=33)	58.11±0.68	59.34±0.66***	+1.23	1.30/>0.05
Group 2 (n=25)	57.67±0.71	58.42±0.72*	+0.75	0.74/>0.05
Group 3 (n=29)	57.85±0.69	59.21±0.70**	+1.36	1.38/>0.05
Group 4 (n=27)	58.32±0.67	59.57±0.67***	+1.25	1.32/>0.05
Group 5 (n=89)	56.84±0.53	55.87±0.55	-0.97	1.27/>0.05
SI, %				
Group 1 (n=33)	63.78±0.58	63.93±0.59	+0.15	0.18/>0.05
Group 2 (n=25)	64.21±0.64	65.08±0.63*	+0.87	0.97/>0.05
Group 3 (n=29)	63.87±0.61	64.19±0.59	+0.32	0.38/>0.05
Group 4 (n=27)	63.72±0.63	63.86±0.64	+0.14	0.16/>0.05
Group 5 (n=89)	63.55±0.42	63.14±0.45	-0.41	0.67/>0.05
RI, c. u.				
Group 1 (n=33)	85.67±0.55	84.13±0.53***	+1.54	2.02/≤0.05
Group 2 (n=25)	86.12±0.59	85.47±0.58*	+0.65	0.79/>0.05
Group 3 (n=29)	85.78±0.57	84.65±0.55**	+1.13	1.43/>0.05
Group 4 (n=27)	85.31±0.56	83.69±0.54***	+1.62	2.08/≤0.05
Group 5 (n=89)	86.73±0.43	87.25±0.45	-0.52	0.94/>0.05

Legend: Δ – difference between the studied indicators; t – value of Student's t-test; p – level of statistical significance of differences; *, **, *** – statistically significant differences between the indicators of groups 1, 2, 3, 4, and group 5 at the levels of $p \leq 0.05$, $p \leq 0.01$, and $p \leq 0.001$

Source: compiled by the authors of this study

tistically significant differences were found between groups 3 and 5 ($p > 0.05$). The deterioration of the BMI in the cadets of group 5, as well as in group 3, is due to an increase in body weight; however, if in the cadets of group 3 this increase was due to an increase in muscle mass, in group 5, it was due to the rise in body fat mass. In groups 1, 3, and 4, the body weight of cadets undergoing intensive training aimed at developing endurance, speed, and agility tends to decrease during the training process.

The dynamics of the VI also tends to improve in the cadets of groups 1-4 due to the improvement of the functional capabilities of the respiratory system, as well as a decrease in body weight: the differences between the indicators at the beginning and the end of the research were 1.23, 0.75, 1.36 and 1.25 ml/kg, respectively, but were not statistically significant ($p > 0.05$). In group 5, in contrast to groups 1-4, there was a deterioration in the VI by 0.97 ml/kg. Statistically better indicators of the VI

at the end of the research in groups 1-4, compared with group 5, were noted as 3.47 ($p \leq 0.001$), 2.55 ($p \leq 0.05$), 3.34 ($p \leq 0.01$), and 3.70 ($p \leq 0.001$) ml/kg, respectively. This confirms the more pronounced effectiveness of training in any consciously chosen sport to improve the respiratory system in cadets.

The SI indicators also tend to improve during the training process in the cadets of groups 1-4: the differences between the beginning and the end of the research were 0.15, 0.87, 0.32, and 0.14 %, respectively, but these differences were not statistically significant ($p > 0.05$). In group 5, there was a deterioration in the SI by 0.41 %, and the difference was also not statistically significant ($p > 0.05$). It was found that at the end of the research, the highest level of strength capabilities was observed in the cadets from group 2 who were engaged in strength sports (65.08 %). This value is better compared to groups 1-4 ($p > 0.05$) and group 5 ($p \leq 0.05$). In groups 1, 3, and 4, the SI indicators at the

end of the research were also better than in group 5; however, no statistically significant differences were recorded ($p > 0.05$).

The study of the dynamics of the RI shows an improvement in the functional capabilities of the cardiovascular system in the cadets who participated in sports club training sessions by 1.54, 0.65, 1.13, and 1.62 c.u., but statistically significant differences were found only in groups 1 and 4 ($p \leq 0.05$). The most pronounced changes and the best indicators of the RI at the end of the research were found in the cadets who participated in field events (group 4; 83.69 c.u.) and sports games (group 1; 84.13 c.u.). Among the cadets participating in motor activities during their sporting and mass participation events, according to the current methodology, the indicators of the RI tend to deteriorate (by 0.52 c.u.). Still, statistically significant differences between the indicators at the beginning and the end of the research in group 5 were not observed ($p > 0.05$). Comparing the indicators of the RI in groups 1-4 and group 5 at the end of the research, we found that in all groups where cadets were additionally engaged in sports, the indicators were statistically better than in group 5 by 3.12 ($p \leq 0.001$), 1.78 ($p \leq 0.05$), 2.60 ($p \leq 0.01$) and 3.56 ($p \leq 0.001$) c. u. This once again proves the effectiveness of physical exercises in wartime conditions in improving not only the mental but also the physical health of cadets.

DISCUSSION

Prevention of stressful conditions involves a systemic impact on the emotional, motivational, volitional, and behavioral components of cadets' personalities, aiming to mitigate the adverse effects of stressors and prevent the development of stressful conditions [15]. The works of scientists [16] reveal measures of primary, secondary, and tertiary stress prevention. In primary prevention, measures are taken to reduce the likelihood of external stressors. Primary prevention is a mass-based approach aimed at maintaining psychological stability and is implemented in work with individuals who are conditionally healthy [17]. The purpose of secondary prevention is to prevent the transition of a stressful state into a chronic condition, to change unconstructive behavior into constructive behavior, and to prevent stress-related disorders. In this case, various methods are employed, including training sessions and role-playing games, which facilitate effective coping with stressful situations [2, 18]. Tertiary stress prevention includes a system of measures aimed at reducing the risk of recurrence of stress disorders, post-traumatic stress disorders, and related behavioral disorders, activation of personal resources that contribute to adaptation to new envi-

ronmental conditions, and the formation of adequate behavioral strategies [6].

According to scientists [19], a person's stress resilience is primarily based on their lifestyle. The basic principles of a healthy lifestyle, the observance of which contributes to the prevention of stress, according to experts [9], include good sleep, balanced nutrition, motor activity, positive emotions, communication with loved ones, etc.

In the context of the educational process in HEIs with SLE in wartime, the most effective means of preventing stress in cadets is motor activity [7]. During physical load, cadets abstract themselves from intellectual activity, unpleasant sensations, fear, excessive worry, anxiety, and entirely focus on the correctness of their physical exercises. Thanks to this switch, the nervous system remains relatively calm, which reduces the body's stress response [8].

Scientists emphasize the potential benefits of training and the health effects of physical activity on the human body; engaging in motor activity helps to alleviate stress and mitigate its impact. Statistically significant correlations have been found between the level of motor activity and the intensity of stress reactions in higher education students [20]. According to experts [11, 12], regular physical activity causes psychological relaxation. It helps overcome emotional overload, serving as a guarantee of psychophysical well-being and an essential factor in ensuring the successful assimilation of knowledge and the development of an adequate level of stress resilience among young people. Our research revealed positive dynamics in mental and physical health indicators among cadets who consciously practiced various sports during wartime training, compared to the group of cadets who practiced according to the traditional sporting and mass participation events methodology. Our results confirm the conclusions of many scientists about the effectiveness of conscious motor activity in improving the mental and physical health of young people during war.

CONCLUSIONS

The research shows that in groups where the cadets systematically practiced the chosen sport during training (groups 1-4), at the end of the research, better indicators of mental and physical health were found than in the cadets who practiced the current methodology for physical activity during sporting and mass participation events (group 5). Thus, the levels of stress resilience, nervous and emotional tension, reactive anxiety, emotional state, body mass index, vital index, strength index, and Robinson's index are significantly better in groups 1-4 compared to group 5. Instead, no significant difference

was found between the indicators of groups 1-4. At the same time, groups 1-4 showed a more pronounced improvement in all the studied indicators compared to group 5. This suggests that conscious training in any type of motor activity is effective in preventing stress, reducing nervous tension and anxiety, restoring emotional balance, and improving physical health indicators among cadets during their training under war conditions. The most significant effect of training in various types of mo-

tor activity was found in the indicators of the emotional state, cardiovascular, and respiratory systems of cadets.

PROSPECTS FOR FURTHER RESEARCH

It is planned to investigate the level of stress and the frequency of its symptoms manifestation in cadets who were engaged in various types of motor activity during their training in war conditions.

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CONFLICT OF INTEREST

The Authors declare no conflict of interest

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