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REVIEW ARTICLE

Formation of Psychophysical Readiness of Cadets for Future Professional Activity

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Abstract:

The experience of combat operations conducting in the eastern part of Ukraine in 2014-2020 convincingly demonstrated the need to increase the requirements for professional training of servicemen of the Armed Forces of Ukraine. Physical training is one of the main subjects of professional training and an important means of psychophysical readiness formation of servicemen of various military specialties for modern extreme professional and combat activities. The aim of the study is to examine the efficiency of the experimental academic program of the discipline of Physical Education, and Special Physical Training concerning the formation of psychophysical readiness of cadets of technical higher military educational institutions for future professional and combat activity. The study was conducted at S. P. Koroliov Zhytomyr Military Institute. 120 male cadets participated in the experiment. An experimental group (EG), which consisted of the cadets who were studying according to the experimental working academic program of the discipline (n=60), and a control group (CG), which included the cadets studying according to the current working academic program of the discipline (n=60) were formed. The criteria of the efficiency of the experimental program are determined to be the indicators of general and special physical fitness of cadets and the level of professionally important psychological qualities. Research methods: theoretical analysis and generalization of scientific and methodical literature, pedagogical observation, pedagogical experiment, methods of mathematical statistics. It was discovered that conducting classes according to the experimental program contributed to the improvement of the level of development of the cadets' special physical qualities, mastering military-applied skills, the formation of professionally important psychological qualities. The most significant changes in EG cadets occurred in overcoming obstacle course, holding the angle on parallel bars, holding the body in a horizontal position, tests for determination of attention distribution and volume, mental performance – at the end of the experiment, and the indicators of EG cadets were significantly ($p < 0.05-0.001$) better than those of CG. It proves the necessity of correcting the academic program of Physical Education and Special Physical Training for senior cadets with the aim of their psychophysical readiness formation for future professional and combat activity.

Keywords: Psychophysical readiness, Physical training, Physical fitness, Psychological qualities, Cadets, Military personnel.

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1. INTRODUCTION

The modern professional activity of military personnel of the Armed Forces of Ukraine takes place in the extreme conditions of the external environment with considerable

physical and mental activities, increased exhaustion and other unfavorable factors of military activity [1 - 5]. The conditions of combat situations require the military personnel to have psychological stability, an adequate development level of professionally important physical and psychological qualities, military-applied motor skills, and also sufficient reserve physiological capabilities of an organism [6 - 11].

Professionally important psychological qualities of military

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personnel include the development of perception, attention, thinking, memory, speed and accuracy of reactions, emotional and volitional stability. The development of psychological qualities contributes to the maximum manifestation of military-professional knowledge, skills and physical qualities of personnel in the most difficult situations of modern combat. The formation of high emotional and volitional stability encourages military personnel to have the courage, resilience, self-control, decisiveness, readiness for self-sacrifice, initiative, purposefulness, *etc.* [12 - 15].

The studies of many scientists [16 - 19] convincingly state that physical training has considerable potential for improving the efficiency of professional activity, the success of training of future specialists, the improvement of their health and working capacity and the development of professionally important psychological qualities. Concerning the variety of means offered, the scientists point out the importance of developing strength, power endurance, general endurance, and static endurance of the trunk muscles for graduates of technical higher military educational institutions (HMEI). According to a number of authors [20 - 22], a high level of physical fitness ensures the improvement of the indicators of attention, memory, coordination, and accuracy of actions, speed of movements and other psychophysiological qualities of the professionals in technical specialties.

The analysis of literary sources [23 - 26] and the results of our previous studies [3, 12, 27, 28] allowed us to determine the main tasks of physical training of the future professionals in technical specialties of the Armed Forces of Ukraine, including the development and improvement of physical qualities that affect the efficiency of future military-professional (combat) activity (strength, power and general endurance, static endurance of the trunk muscles), the formation of psychophysical readiness of graduates for professional activity by the means of special physical training that will provide the improvement of the ability to withstand static loads in the conditions of limited physical activity and closed space, the resistance of mental processes to negative factors and extreme conditions of professional activity, the ability to quickly restore performance in the conditions of disturbance of natural daily rhythm, the formation of psycho-physiological qualities that determine the efficiency of professional activity (concentration, stability, volume and switching of attention, memory functions, mental capacity) and the formation of a high level of working capacity and health promotion to prolongate professional longevity.

2. MATERIALS AND METHODS

The aim of the study is to examine the efficiency of the experimental academic program of the discipline of Physical Education, Special Physical Training concerning the formation of psychophysical readiness of cadets of technical higher military educational institutions for future professional and combat activity.

We substantiated and developed an experimental working academic program of the discipline (WPD) of Physical Education, Special Physical Training for the bachelor's and master's degrees, which has a logical structure and provides:

- For the 1st-2nd-year cadets – an increase in the level of general physical fitness, the formation of the basic level of physical fitness for the introduction of the means of special physical training;
- For the 3rd-5th-year cadets – an increase in the level of special physical fitness with an emphasis on the significant physical qualities for future professionals in technical specialties of the Armed Forces of Ukraine.

The current curriculum of the discipline of physical education, Special Physical Training for the bachelor's and master's degrees aims to educate cadets to master the theoretical knowledge, physical exercises, techniques and actions, organizational and methodological skills and abilities to manage physical development and improvement of servicemen by certain means, as well as the application of acquired values in everyday service.

The organization of the educational process is carried out according to the credit-module system in accordance with the requirements of the Bologna process and in accordance with the Order of the Minister of Defense of Ukraine from 20.07.2015, № 346 “On approval of the Regulations of higher military educational institutions of Ukraine”. The work program contains 598 hours, of which 10 hours - lectures, 588 hours - practical classes. Two practical classes under the guidance of a teacher for 2 hours each (4 hours a week during school hours) are conducted every week. The educational process contains 10 semesters of study, at the end of each cadet pass the control standards for the studied exercises during tests (odd semester) or exams (even semester). Physical training is divided into general and special. General physical training is aimed at achieving the optimal level of development of cadets' general physical qualities for further successful mastering of special physical qualities and military-applied skills, improvement of physical development, health promotion through systematic exercises in gymnastics, athletics, swimming, skiing and sports games. Special physical training is aimed at developing special physical qualities, mastering cadets of military-applied skills, education of moral and volitional qualities, achieving combat cohesion of units, through the systematic comprehensive performance of special physical and applied exercises in athletic training, accelerated movement, overcoming obstacles, hand-to-hand combat, military-applied swimming, *etc.* Cadets are trained on the following topics: gymnastics and athletic training (10%); accelerated movement and athletics (10%); overcoming obstacles (10%); hand-to-hand combat (15%); sports games (5%); applied swimming (5%); ski training (5%); complex classes (40%). The main means of physical training in accordance with these topics are: running short and long distances, exercises on crossbars, exercises with their own weight and weights, exercises on simulators, sports games, hand-to-hand combat techniques and others. In general, the ratio of general and special training according to the current program in senior courses is as follows: 50% - general physical training, 50% - special physical training. As a result of mastering the discipline of Physical Education, Special Physical Training, cadets must endure long-term various physical activities associated with the performance of official

duties; have the knowledge and skills to organize physical training and sports and mass work in the unit.

Classes on the experimental work program differed from the current only in the content of the classes themselves. Among the main means of the special physical training that formed the basis of the experimental academic program are the 5 and 10 km forced march with overcoming natural and artificial obstacles; overcoming general, special, tactical and psychological obstacle courses; hand-to-hand training; tactical techniques with weapons on the basis of Combat Army System; military-applied navigation; the standards of physical training; CrossFit complexes; power exercises for strengthening the muscular corset; the elements of mountain training; the 1-3 km cross-country movement with full armor; militarized cross with fighting and throwing grenades; the 1-3 km run overcoming obstacle course; summer military biathlon; exercises with logs; the 6x100 m shuttle running with an assault rifle. The ratio of general and special training according to the experimental program in senior courses is as follows: 10% - general physical training, 90% - special physical training. The level of general physical fitness of senior cadets was maintained during morning physical exercises, sports-mass activities, self-training and accompanying training in the process of training and combat activities. All 100% of the training sessions on the experimental program were comprehensive.

In order to check the efficiency of the experimental academic program of the discipline of Physical Education, Special Physical Training, we conducted a pedagogical experiment at S. P. Koroliov Zhytomyr Military Institute in the 8th term for the 4th-year cadets who were the cadets of the Faculty of Technical Types of Intelligence and Information Confrontation (2019). 120 male cadets participated in the experiment. An experimental group (EG), which consisted of the cadets who were studying according to the experimental WPD ($n=60$), and a control group (CG), which included the cadets studying according to the current WPD ($n=60$), were formed. The EG included cadets of the 1st platoon of the 4th year of the Faculty of Technical Types of Intelligence and Information Confrontation, the CG - cadets of the 2nd platoon of the same course, which were formed during the entry into the HMEI. That is, we did not carry out any special selection of cadets in EG and KG. All 100% of cadets EG and CG during the experiment did not miss a single lesson and reached the end of the experiment.

The number of hours spent on physical training was the same in the EG and CG and was 60 hours

The ratio of the means of general (GPT) and Special Physical Training (SPT) in the EG and CG during the experiment is determined in the following way:

- EG: GPT – 10%, SPT – 90%;
- CG: GPT – 50%, SPT – 50%.

The analysis of the initial level of physical fitness of the cadets of both groups showed that no authentic difference was found between the EG and CG ($p>0.05$) in all the tests conducted. This indicates that the groups were homogeneous and have authentically the same indicators of the development of physical qualities.

At the beginning and at the end of the experiment, testing of indicators of general and special physical fitness and psychological qualities of the EG and CG cadets was conducted. Testing of the level of physical fitness was carried out by the following tests: to check speed qualities – the 100 m run; power qualities – pull-ups, Complex Power Exercise (CPE); endurance – the 3km run; static endurance of the trunk muscles – holding the body in a horizontal position, holding the angle on parallel bars; special physical qualities, coordination skills, agility – overcoming the obstacle course, Complex Agility Exercise (CAE). Exercises were checked by the teaching staff of the Department of Physical Training in accordance with the Provisional Guidelines for Physical Training in the Armed Forces of Ukraine, approved by the order of the Chief of the General Staff of the Armed Forces of Ukraine dated 11.02.2014, N° 35.

The methods used to test professionally important psychological qualities of the future professionals in technical specialties include the test “Finding numbers” (the distribution and volume of attention); Burdon-Anfimov corrective test (the attention span and concentration); the method of examination of visual memory “The method of numbers operation” [29, 30].

Research methods: theoretical analysis and generalization of scientific and methodical literature, pedagogical observation, pedagogical experiment, methods of mathematical statistics. During the researches, the authenticity of the difference between the indicators of cadets by means of the Student’s criterion was determined. The significance was set at $p<0.05$ for all statistical tests.

The researches involving cadets were carried out in compliance with all relevant national regulations and institutional policies (Order of the Minister of Defense of Ukraine “On Approval of the Regulation on the Organization of Scientific, Scientific and Technical Activities in the Armed Forces of Ukraine” dated 27.07.16, No. 385). The informed agreements were received from all people involved in this research.

3. RESULTS

The analysis of the results in the 100 m run showed that, at the beginning and at the end of the experiment, the speed indicators of the EG and CG cadets did not differ authentically ($p>0.05$) (Table 1). During the experiment, the development level of speed qualities of the cadets of both groups was improved: by 0.03 s in the EG, and by 0.11 s in the CG, but no authentic difference in the initial and final indicators was found ($p>0.05$). At the end of the experiment, the average results in the 100 m run correspond to an excellent level in both groups.

Table 1. The dynamics of the indicators of physical fitness of the EG and CG cadets during the pedagogical experiment (Mean±SD).

The Stages of the Experiment	EG (n=60)	CG (n=60)	Significance Value, p
100 m run, s			
The beginning	13.83±0.06	13.84±0.07	>0.05
The end	13.80±0.07	13.73±0.06	>0.05
Pull-ups, reps			
The beginning	17.3±0.62	17.2±0.45	>0.05
The end	17.6±0.59	17.1±0.47	>0.05
3 km run, s			
The beginning	726.8±7.32	724.1±6.31	>0.05
The end	707.9±6.51	719.8±6.18	>0.05
CPE, reps			
The beginning	59.5±1.34	60.1±1.49	>0.05
The end	64.1±1.42	61.9±1.53	>0.05
CAE, s			
The beginning	9.0±0.11	8.8±0.10	>0.05
The end	8.6±0.10	8.8±0.09	>0.05
Overcoming obstacle course, s			
The beginning	128.3±1.74	126.8±1.55	>0.05
The end	119.4±1.63	125.1±1.49	<0.05*
Holding the angle on parallel bars, s			
The beginning	92.1±2.15	91.1±2.06	>0.05
The end	109.3±2.37	92.4±2.22	<0.001*
Holding the body in a horizontal position, s			
The beginning	126.8±3.85	127.9±3.25	>0.05
The end	151.3±4.06	129.1±3.58	<0.001*

Legend: Mean – arithmetical average; SD – standard deviation; p – significance of difference between the indicators of EG and CG due to the t-test; p* – reliably significant «p»

The study of the results in pull-ups indicates that during the experiment, the power indicators were increased by 0.3 times in the EG, and they were not changed and even decreased inauthentically by 0.1 times in the CG ($p>0.05$). The comparison of the results in pull-ups at the end of the experiment shows that, although the power indicators are better in the EG than in the CG by 0.5 times, the difference between them is not authentic ($p>0.05$) (Table 1). The level of power characteristics of the cadets of both groups is rated as excellent.

The analysis of the 3 km run results showed that, at the end of the study, the experimental WPD contributed to a more efficient endurance development of the EG cadets, in comparison to the CG cadets – an average result of the EG cadets (11 min 48 s) was better than the CG cadets' (12 min 00 s) by 11.9 s, but the difference was not authentic ($p>0.05$) (Table 1). In both groups, the results were rated as excellent. The dynamics of the results in the 3 km run were positive in both groups: the results were improved by 4.3 s in the CG ($p>0.05$), and by 18.9 s in the EG ($p>0.05$) that indicated the efficiency of the classes according to the program presented. The study of the dynamics of the CPE results shows that the indicators were improved inauthentically in both groups ($p>0.05$), although the difference between the indicators at the beginning and at the end of the experiment was 4.6 reps in the EG and 1.8 reps in the CG. Also, at the end of the experiment, the results in CPE did not differ authentically in the EG and CG ($p>0.05$). The analysis of the results in CAE showed

similar dynamics to the CPE results – an inauthentic improvement of the results of the EG cadets during the pedagogical experiment (the agility indicators were improved by 0.4 s ($p>0.05$) in the EG, and they remained unchanged in the CG ($p>0.05$)). However, after the end of the experiment, no authentic difference was found between the results of the EG and CG cadets ($p>0.05$).

According to the study of the indicators of the development of special qualities of cadets in the control exercise on the obstacle course, it was found that the classes according to the experimental program contributed to a more pronounced improvement of the results in overcoming obstacles – the results were significantly improved by 8.9 s ($p<0.001$) in the EG during the experiment, and they accounted for 1 min 59sec that was rated as excellent. The results were also improved by 1.7 s in the CG, but the difference between the initial and final data was not authentic ($p>0.05$); at the end of the experiment, the results accounted for 2 min 05 s and correspond to the good grade in the CG. It should be noted that a comparative analysis of the indicators of the development of special qualities at the end of the experiment showed that the results were significantly better in the EG than in the CG by 5.7sec ($p<0.05$) (Table 1) that showed that the experimental program is superior over the current one.

The most prominent positive effect of the training according to the developed experimental academic program

was found in the indicators of static endurance of the trunk muscles. Thus, an average result in holding the angle on the parallel bars was increased authentically by 17.2 s ($p < 0.001$) in the EG, and only by 1.3 s ($p > 0.05$) in the CG during the experiment. The cadets' indicators of holding the body in a horizontal position were improved by 24.5sec in the EG ($p < 0.001$), and by 1.2 s in the CG ($p > 0.05$) (Table 1). At the end of the experiment, the indicators of the development of the muscular corset of the EG cadets accounted for 1 min 49 s and were authentically better than in the CG (1 min 32 s) by 16.9 s ($p < 0.001$) concerning the exercise of holding the angle on parallel bars; by 22.2 s ($p < 0.001$) concerning the exercise of holding the body in a horizontal position that confirmed our previous conclusions on the positive impact of the classes according to the experimental program on the professionally important physical qualities of the future professionals in technical specialties of the Armed Forces of Ukraine.

The study of the dynamics of professionally important psychological qualities of the EG and CG cadets showed that all the studied indicators did not differ authentically at the beginning of the experiment that indicated the uniformity of the samples. At the end of the experiment, the indicators of the distribution and volume of attention studied by the test of finding numbers proved to be significantly better for the EG cadets by 0.79 points than for the CG cadets ($p < 0.01$) (Table 2).

The analysis of the visual memory indicators showed that there was an improvement in both groups during the experiment, but the difference between the data at the beginning and at the end of the experiment was not authentic in both groups ($p > 0.05$). At the end of the study, the EG cadets' memory performance was better than the CG cadets' by 0.14 points, but the difference was not authentic ($p > 0.05$) (Table 2).

The investigation of attention span and concentration showed that the EG cadets had an authentic improvement in the attention indicators during the experimental period ($p < 0.001$), and the CG cadets had an inauthentic improvement ($p > 0.05$),

but, although the EG cadets' indicators were found to be better than the CG cadets' by 1.11% at the end of the experiment, the difference between them was not authentic ($p > 0.05$). The dynamics of mental performance indicators of the cadets of both groups was positive – the indicators were improved by 138.19 c.u. in the EG ($p < 0.001$), and by 41.18 c.u. in the CG ($p > 0.05$). At the end of the pedagogical experiment, an authentic difference between the indicators of mental capacity of the EG and the CG cadets was found; it accounted for 71.96 c.u. ($p < 0.01$) that indicated that the experimental academic program prevails over the current one.

4. DISCUSSION

Modern combat is a rigorous test of the physical and mental power of military personnel, their ability to actively resist the effects of extremal unfavorable factors, to maintain the will and decisiveness, and to complete the assigned combat tasks [6, 11, 18]. Military activity includes many factors that are stressful and negatively affect the psychics of military personnel, causing feelings of fear, intense mental stress, self-doubt, and exhaustion. It is proved that only 25% of military personnel who are engaged in combat for the first time respond adequately to the combat environment and are able to conduct operations actively; the rest has disorganized mental activity, in some cases, even pathological reactive states are developed [13, 14, 31]. The scientists [21, 32] state that the very fact and thought of the coming combat cause changes in the psychological activity of personnel: discomfort, fear, anxiety and depression. The psychological stress causes uncertainty in weapons, military equipment, commanders, friends, *etc.* The determining psycho-traumatic factors of combat are the threat to life or injury, death, the killing of personnel and civilians, the unpredictability of the situation, and the possibility of being captured, and extremely high physical activity. The combined effect of negative factors significantly reduces the efficiency of the combat activities of specialists [28, 29]. According to the scientists [20, 31], 80-90% of participants feel the fear that prevents them from using their weapons effectively.

Table 2. The dynamics of the professionally important psychological qualities of the EG and CG cadets during the pedagogical experiment (Mean±SD).

The Stages of the experiment	EG (n=60)	CG (n=60)	Significance Value, p
Attention distribution and volume, points			
The beginning	7.19±0.22	7.16±0.20	>0.05
The end	8.17±0.20	7.38±0.19	<0.01*
Visual memory, points			
The beginning	7.31±0.23	7.37±0.21	>0.05
The end	7.70±0.20	7.56±0.18	>0.05
Attention span and concentration, %			
The beginning	90.51±0.52	91.97±0.48	>0.05
The end	94.36±0.45	93.25±0.47	>0.05
Mental performance, c.u.			
The beginning	1209.38±17.25	1234.43±16.18	>0.05
The end	1347.57±16.92	1275.61±16.25	<0.01*

Legend: Mean – arithmetical average; SD – standard deviation; p – significance of difference between the indicators of EG and CG due to the t-test; p* – reliably significant «p»

Scientists [13, 32] divide the factors of combat conditions into general and specific. Among general factors, the author distinguishes constant danger and considerable physical activity. The threat to the lives of personnel, the danger captures their attention, minimizing the limits of their perception, the elements of self-preservation are more often revealed in a dangerous situation, so the behavior of military personnel depends on the state of the psychics, its regulatory features, moral and psychological resistance to the influence of psychological and physical activities, the level of the unity of military personnel, the confidence in commanders, military skills and abilities to act in the conditions of combat, a dangerous situation. The specific factors are characteristic for a specific type of combat and combat conditions – the duration of combat; the distortion and suppression of information on the course of operations in general and the course of a particular battle; climatic conditions; high physical activity; poor conditions for living; the threat of attack of enemy sabotage groups, guerrilla units; the lack of knowledge of psychology, customs, ethno culture, religious traditions of the population, *etc.*; the negative information and psychological impact of the enemy; the widespread use of the technical means of propaganda, printed materials, spreading rumors and gossips; limited contacts, long expectation of danger; the lack of experience in combat; the lack of support of the local population, insufficient fulfillment of social needs, the inadequate use of the material and moral stimulation.

The scientists [2, 4, 30] conventionally distinguish three types of reactions of military personnel to psycho-traumatic factors: easy – military personnel feel the excitement, irritability, inability to focus; average – apathy or hysteria; hard which is characterized by a loss of contacts between military personnel, inappropriate behavior of individuals.

Special physical training plays an important role in forming the psychophysical readiness of military personnel to act in extreme conditions, increasing their psychological stability. The physical improvement is closely related to the psychological stability of military personnel and the development of their professionally important psychological qualities. In order to form them, it is necessary to simulate extreme conditions of combat activity during special physical training. Psychophysical readiness is formed in the process of performing actions related to exercises in the state of fatigue, which is achieved by repeated performance of exercises, techniques, and actions in the classes with short rest intervals, and also using the competitive method. The modeling of difficulties is also achieved through the use of simulation means (explosions, firing, smoke, screams), performing exercises at height, in bad weather, in the dark, *etc.* [29].

With the beginning of hostilities in eastern Ukraine in 2014, graduates of the S. P. Koroliov Zhytomyr Military Institute began to receive an assignment for further service in combat units of various types and branches of the Armed Forces of Ukraine. Their activities were diverse and, despite the specialty they acquired at the military institute (specialists in technical types of intelligence and information confrontation), they had to perform a variety of combat tasks in extreme environmental conditions in the presence of adverse

combat factors: from long combat duty in a confined space (checkpoints, dugouts, checkpoints, military equipment), which were accompanied by low motor activity, neuro-emotional and physical stress, stress to the implementation of long marches in full gear, accelerated movement with additional load (equipment, ammunition, wounded), manual execution of a large amount of work, loading on ammunition, overcoming artificial and natural obstacles, *etc.* That is, the modern combat activity of the graduate is characterized by diversity, tension and specificity, significant physical and mental stress, which in general leads to high requirements for psychophysical readiness of cadets - readiness to act in any conditions, environment and time of day.

The above, as well as the experience of participation of graduates of the S. P. Koroliov Zhytomyr Military Institute in the fighting in eastern Ukraine for its independence, showed the need to amend the work program of the discipline of Physical Education and Special Physical Training in senior courses to form psychophysical readiness of future officers to act in various extreme conditions of modern combat. With this in mind, we developed an experimental work program of the discipline and organized a pedagogical experiment, which provided the implementation of the developed program in the educational process in the 8th semester (4th year). The developed program was also based on the experience of combat operations by the armies of the world's leading countries and NATO. The experimental program differed from the current program in the content of physical training classes - all means of general physical training were replaced by means of special physical training. The number of hours for training in EG and CG did not differ. Testing the effectiveness of the experimental program showed its more positive impact on improving the level of development of special physical and psychological qualities in EG cadets. The results obtained complement and extend the findings of many studies [6, 18, 24, 33, 34].

CONCLUSION

The results of the pedagogical experiment showed that conducting classes for the cadets of the 4th year of study according to the developed experimental academic program of the discipline contributed to the improvement of the level of cadets' special physical qualities development, mastering of military-applied skills, formation of professionally important skills, that generally ensured the formation of psychophysical readiness of future specialists to perform assigned tasks. The most significant changes in EG cadets occurred in overcoming obstacle course, holding the angle on parallel bars, holding the body in a horizontal position, tests for determination of attention distribution and volume, mental performance – at the end of the experiment, the indicators of EG cadets were significantly ($p < 0.05-0.001$) better than those of CG cadets. In overcoming obstacle course, the difference is 5.7 s, holding the angle on parallel bars – 16.9 s, holding the body in a horizontal position – 22.2 s, attention distribution and volume – 0.79 points, mental performance – 71/96 c. u.

The level of general physical fitness was not decreased and remained at a high level that confirms the efficiency of the

suggested program of general physical fitness formation of the Armed Forces of Ukraine future officers. The lack of a significant difference in the indicators of general physical fitness of EG and CG cadets at the end of the experiment is explained by the fact that the EG cadets level of basic physical qualities development was maintained during other forms of physical training in HMEI: morning physical exercises, sports-mass activities, self-training, *etc.* The research proves the necessity of changing the academic program of Physical Education and Special Physical Training for senior cadets taking into account the experience in combat activity in the East of Ukraine and the requirements for the future military-professional (combat) activity of the professionals in technical specialties of the Armed Forces of Ukraine.

We see prospects for further research in the development of an experimental work program of the discipline of Physical Education and Special Physical Training for the formation of psychophysical readiness of female cadets in senior courses for future professional combat activity, its introduction into the HMEI educational process and testing its effectiveness.

CONSENT FOR PUBLICATION

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CONFLICT OF INTEREST

The author declares no conflict of interest, financial or otherwise.

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