

MODERN SPORTS AS AN EFFECTIVE MEANS OF DEVELOPING MOTOR SKILLS AND THE FORMATION OF APPLIED SKILLS IN HIGHER EDUCATION

AUTHORSHIP

Mykhailo Liannoi 

Department of the Theory and Methods of Physical Culture, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.

ORCID: <https://orcid.org/0000-0002-3833-2890>

E-mail: Liannoi@hotmail.com

Olesia Dyshko 

Department of Physical Education, Municipal Higher Educational Institution «Lutsk Pedagogical College» of the Volyn Regional Council, Ukraine.

ORCID: <https://orcid.org/0000-0002-1310-6950>

E-mail: Dyshko@hotmail.com

Serhii Melnyk 

Department of Theory and Methods of Physical Culture, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.

ORCID: <https://orcid.org/0000-0002-7742-0690>

E-mail: Melnyk@hotmail.com

Mykola Chckailo 

Department of the Theory and Methods of Sport, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.

ORCID: <https://orcid.org/0000-0002-7368-5202>

E-mail: Chckailo@hotmail.com

Andrii Hrybinichenko 

Cycle Commission of Physical Education and Protection of Ukraine, Sumy Building College, Ukraine.

ORCID: <https://orcid.org/0000-0002-9186-4255>

E-mail: Hrybinichenko@hotmail.com

Mykhailo Liakh 

Cycle Commission of Physical Education and Protection of Ukraine, Sumy Building College, Ukraine.

ORCID: <https://orcid.org/0000-0003-3702-4340>

E-mail: Liakh@hotmail.com

Anatolii Illiashenko 

Cycle Commission of Physical Education and Protection of Ukraine, Sumy Building College, Ukraine.

ORCID: <https://orcid.org/0000-0002-4119-6818>

E-mail: Illiasenko@hotmail.com

Received in:

2021-03-10

Approved in:

2021-06-15

DOI: <https://doi.org/10.24115/S2446-622020217Extra-B972p.568-574>

INTRODUCTION

In the conditions of modern hybrid war with the aggressor, the combat activity of the servicemen of the Armed Forces (AF) of Ukraine takes place in extreme environmental conditions, in the presence of significant physical and psychological stresses, increasing fatigue and other adverse factors of combat activity.

Specialists of the Air Defense of the Land Forces of Ukraine play a particularly important role in the deadly confrontation. Among the main tasks of the Air Defense Forces: repelling enemy air aggression (during hostilities in eastern Ukraine, first of all, is the destruction of enemy drones, planes and helicopters); destruction of military equipment, enemy manpower and other ground and surface targets; covering the movement or deployment of their troops; timely warning of an enemy air attack; control over the use of state airspace. Professional activity of Air Defense specialists is characterized by significant stress (constant being under enemy fire), physical activity (deployment of anti-aircraft systems and preparing them for fire, performing duties in full gear), low physical activity during combat duty, irregular, and recreation. The result of the battle depends on the quick and coordinated actions of the Air Defense specialists, their comprehensive professional training, courage, and determination.

The conditions of the combat situation require the specialists of the Air Defense of the Armed Forces of Ukraine to show psychological stability, proper level of development of physical and volitional qualities, military-

applied motor skills, as well as sufficient reserves of physiological capabilities acquired during training in military institutions of higher education. Compliance of the level of psychophysical training of cadets with the specified requirements is promoted by employment in military-applied sports in the process of physical education, among which military pentathlon occupies a significant place.

Military pentathlon is an applied sport that includes five different disciplines (military-applied exercises): machine gun shooting, overcoming the obstacle course, swimming with obstacles, throwing grenades (range and accuracy), cross-country, which makes it one of the most meaningful and interesting modern military sports all-around. Military pentathlon is part of the International Military Sports Council's competition program; of this kind are held world championships and the World Games among servicemen, which contributes to its high popularity among servicemen, especially cadets. Classes in military sports promote the development of general and special physical qualities and applied skills, education of moral

and volitional qualities in servicemen. Endurance, strength, speed, agility, determination, courage, ability to control themselves and navigate in difficult conditions, purposefulness and perseverance - these are the qualities that develop in servicemen during military pentathlon and on which depends the effectiveness of modern military-professional (combat) activities of specialists of the Air Defense of the Armed Forces of Ukraine.

At present, the issue of development of motor skills and formation of military-applied motor skills of cadets of the Air Defense Forces - future specialists of the Air Defense of the Armed Forces of Ukraine by means of military pentathlon remains poorly studied. The analysis of the current system of physical training in the Air Defense, which trains Air Defense specialists, showed that the percentage of time for special physical training of senior cadets is insufficient for the full formation of military-applied motor skills, and when organizing various forms of physical training pedagogical influence. The urgency of the question determines the choice of the topic of the article.

METHODS

The experience of fighting in eastern Ukraine has shown that the winner in combat is the one who uses his weapons more effectively, who has a higher level of moral and volitional qualities, who is better prepared for combat psychologically and physically, who is able to quickly navigate the situation, analyze her and make the right decisions in a flash. That is why in the structure of combat training the determining component is high-quality physical and psychological training of personnel.

Analysis of literary sources witnesseth that modern battle activity of servicemen is accompanied безліччю factors that on the nature are stress and that negatively influence on the psyche of warriors, causing in them sense of fear, strong psychical tension, uncertainty in own forces, tiredness. By the stress determinatives of battle activity scientists distinguish: the realized feeling of threat to own life, so-called biological fear of death, wound, pain, disability; death of comrades on own eyes or necessity mortally to stagger an enemy; deficit of time, acceleration of rates of actions, suddenness, vagueness, novelty (factors of battle situation); absence of valuable dream, feature of the mode of hygiene, feed; tiredness and other. From data of (YURIEV et al., 2019) and other scientists, in the state of stress there are considerable changes in motive activity of servicemen; they begin to produce actions uneconomy, with considerably more than usually, by efforts; a serviceman begins to assume considerably anymore run-time errors those or other military-professional tasks. Considerably the high level of stress can result in his complete inability to own by a soba, react on requirements and orders of commanders, operate according to a situation. On such conditions stress can become reason of complete battleworthiness of serviceman, and sometimes and by reason of destruction of servicemen or subdivision.

From data of many scientists, important role in forming of psychological readiness of servicemen the actions in extreme terms, increase of them psychological firmness physical preparation plays to battle stress. It is conditioned by those facilities of physical preparation provide development and perfection of not only physical but also psychical nature of man. At their correct application facilities of physical preparation allow considerably to improve all constituents of morally psychological readiness of servicemen: morale, volitional qualities, emotional firmness, mental capacity (RUSANIVSKYI et al., 2021).

According to (YURIEV et al., 2019) efficiency of physical preparation from forming of necessary physical and psychological qualities for specialists depends on the variety of the applied facilities, their volume and orientation. Realization of employments after complex combination of different divisions of physical preparation and use of the special facilities promotes physical and psychological readiness of servicemen implementation of professional tasks on purpose.

The questions of development of physical qualities, forming of the military-applied skills and professionally important psychological qualities for servicemen in the process of physical preparation were investigated in works of many scientists. Yes, the aspects of perfection of the system of physical preparation of bread-winners of MEHE and servicemen of Ground forces of

Ukraine of different soldiery specialities are presented in dissertation works of (YURIEV et al., 2019). Forming of readiness of future officers to professional activity in the process of physical preparation of scientific search of Yuriev et al., 2019). Tangentially problems of preparation of bread-winners of MEHE to future professional activity by facilities of physical The special attention in the context of our research is deserved by result of dissertation works in that influence of the military-applied types of sport is presented on educational and future professional activity of bread-winners of MEHE: that investigated the different aspects of application in an educational process from physical preparation of bread-winners of all-round of military sport complex; that exposed advantages of weight sport for preparation of future specialists; (Rusanivskyi, Kruk, Oleksiychyk, Lysyk, Shtoma, Yuriev, 2021), in research of that positive influence of employments of пентатлоном is well-proven on efficiency of implementation of tasks secret service agents on purpose.

The analysis of literary sources showed that effective facilities of physical preparation of servicemen are the military-applied types of sport, that, from one side, envisage the high general level of physical preparedness of servicemen, and from other, form the military-applied skills and abilities that are necessary in a modern fight. Yes, influence of engaging in military all-rounds and military-applied types of sport is analysed on work of the systems of organism of servicemen and dependence is educed between the features of military-professional activity of servicemen and their results in execution exercises of military all-rounds. Characteristic influences of separate types of sport and exercises of military all-rounds are reasonable authors on the organism of servicemen of different types of AF of Ukraine (GROELLER et al., 2015).

Conception of development of physical preparation and sport in the Armed Forces of Ukraine on a period 2020 to, ratified by the order of Secretary of defence of Ukraine from 13.05.2016 № 257, that is created taking into account experience of conduct of the battle operating on East of Ukraine, standards of NATO and vector of euro integration of Ukraine, envisages approaching of maintenance of physical preparation to battle activity. Asserts the decision of this task it is possible through introduction and development of the military-applied types of sport.

About efficiency of the military-applied types of sport on the whole and military sport all-rounds in particular in forming of readiness of servicemen battle activity the researches of scientists, conducted as early as 70-80th of past century, testify. (DRAIN et al., 2015) accented attention on importance of introduction of the military-applied types of sport to the system of physical preparation of air forces. Novels mark those physical exercises alike after the influence on professional actions and physical activities of servicemen of different soldiery specialities can serve as the important means of perfection of them the special physical preparedness. Scientists specify farther, that among facilities, that assist to development of necessary physical and psychological qualities, forming of the applied skills, with great success exercises of the military-applied types of sport, sport all-rounds can be used.

They allow in the conditions of specific physical and psychological activities (during competitions) to perfect military-professional mastery and field teaching. In the book of "Military of war triathlon"(1988) specifies that in the difficult terms of battle situation on a background a considerable physical tiredness and high nervous tension from a serviceman the high level of all-round physical preparedness is required; he must be able to be quickly commuted from one type of activity, investigating the problem of perfection of physical preparation of multiathlons of military sport complex, asserts about high efficiency of this military-applied type of sport in forming of physical readiness of bread-winners to professional activity and mark close intercommunication of maintenance of complex with programmatic-normative bases of population of Ukraine. Worked out scientifically methodical bases of forming of normative base in the all-round of military sport complex. An author marks actuality of preparation of multiathlons in the conditions of MEHE from the amount of breadwinners among that most popularity is used by sport all-rounds.

Analysing the analysis of influence of poliathlon on professional performance of servicemen and workers of law enforcement authorities' indicators, (GROELLER et al., 2015) set him high efficiency as the applied type of sport. Authors consider that summer poliathlon, contention

exercises of that contain a sprint (depending on age and sex), throwing of grenade, hurried on long distances and power exercises (undercutting or bending and unbending of hands in support, lying), in case of application of him during military sport work, will assist the considerable improvement of physical preparedness of servicemen.

(DRAIN et al., 2015) investigated development of military sport all-round (a division is battle two fight) in Ukraine and set that modern methodologies and systems (hand-to-hand preparation, sport two fight, battle army system) that is maximally adapted to the real terms of fight, not only promote the level of physical preparedness of servicemen, and assist also the improvement of them the morally-psychological state on a battle-field. (YURIEV et al., 2019) consider that ability of future officers of aircrafts of AF of Ukraine quickly to make decision on a background maximum physical activities, exactly oriented in unknown locality, skilfully to move in difficult terms, overcome artificial and natural obstacles effectively formed in the process of engaging in a sport orientation. (Melnykov et al., 2018) grounded and inculcated to the educational process from physical preparation of bread-winners of the Zhytomyr military institute of the name of S.P. Koroleva complex facilities, that is sent to forming of psychical physical readiness of graduating students of MEHE to future professional activity, among that: complex exercise from overcoming of water obstacles and transference of burdens in composition subdivision, cross on 10 kilometres on a cross-country with overcoming of natural and artificial obstacles in composition subdivision, complex exercise on the psychological stripe of obstacles, complexes of exercises by system of "Krossfit" and other Authors mark the important value of facilities of the special physical preparation in relation to forming not only physical, but also psychological readiness bread-winner to battle activity.

Scientists assert that most influence physical exercises carry out on will and emotional firmness of servicemen. Volitional qualities that are most essential for the actions of servicemen in near accidents are: boldness, decision, initiativeness, shrewdness, ingenuity, persistence, zeal, self-control, self-possession, confidence in own forces. From data of (Groeller et al., 2015) with coauthors, boldness and decision are brought up at implementation of exercises, that contain the elements of novelty, risk and danger: walking on logs, stumps; overcoming of pitch obstacles; jumping over of trenches, fences; climbing is up high obstacles; there are dives, overcoming of water obstacles. The initiativeness, shrewdness and ingenuity is most effectively worked off at the use of exercises that require the acceptance of independent decisions: overcoming of areas of the reserved space; diving is in length in an uniform; hand-to-hand fight. A persistence and ardour are brought up by a way to applications of exercises during implementation of that to the serviceman test large and protracted physical activities and psychical tensions: cross with the passing overcoming of obstacles; of transporting injured; transference of boxes, overtightening of sacks; crawling over in difficult weather terms. Self-control and self-possession are worked off at implementation of exercises on exactness of motion in the conditions of physical activities and psychical tensions that constantly change and become complicated: overcoming of elements of psychological stripe of obstacles; working off actions in water during overcoming of water obstacle; swimming in an equipment and with a weapon; a breath-holding is under water; a stay is long time in cold water.

Research of advanced experience of organization of physical preparation in the armies of leading countries-members of NATO (The USA, Germany) and France, testifies that the aim of physical preparation in the armed forces of these countries are the done early achievement and permanent maintenance of complete physical readiness of personnel to participating in battle actions under act of physical and psychical stress. The system of physical preparation of the armed forces of the USA carries the clearly expressed military-applied orientation. Combat training of the armed forces of the USA, is conducted with the observance of principles of maximal naturalization. For their realization on employments after all divisions of physical preparation terms that after physical and psychical activities maximally approach really battle are designed. The command of the armed forces of the USA counts application of high, close to maximal, loading, leading to of personnel to complete exhaustion by the wonderful means of not only physical but also psychological tempering (DRAIN et al., 2015).

On employments after a speed-up movement the protracted marches are used on a strongly cross-country, on bogs, in an inclement weather and with exposition that must exaggerate

complete battle. On employments after overcoming of obstacles simulants are widely used: fire, smokes, explosions, firing, naturalistic plaster casts of the distorted dead bodies, blood, smells. Purposeful and all-round influence on the psyche of warriors has for an aim done early their adaptation to stress at a fight and forming for them of confidence in a soba and habit rationally to operate in the conditions of danger. The basic task of the combat, physical and psychological training of the French servicemen education of capacities is considered for mobilization of all forces for the decision of certain tasks. The basic means of education of such capabilities, in opinion of the French specialists, the systematic going in for sports and participating are in competitions. In the army of France sport serves to the military-applied aims. From data of scientists, conception of physical preparation of Germany is based mainly on facilities and methods of the sport training. The aim of physical(sport) preparation in Germany is educator influence on integral personality of serviceman by studies to motions, strengthening of health and rational use of spare time. The high level of physical development of servicemen the commands of Germany is examined as a necessary condition of successful realization by them military-professional activity (YURIEV et al., 2019).

Thus, the increase of military sport of physical preparation in the armies of countries of NATO comes true due to an increase in the programs of amount of the military-applied exercises and creation from them of the specialized complexes. At the increase of military sport of physical preparation the special attention is spared to development of major for implementation military-professional actions of physical and psychical qualities - endurance, firmness, boldness, solidarity. For development of the indicated qualities exercises and actions implementation of that is related to the danger and risk, command, and individual types of sport, are used. The unitization of physical preparation in the armed forces of countries of NATO comes true both at the level of separate countries and all block. The basic means of unitization is sport. Numeral competitions are on championship of the armed forces of block, that is conducted on only rules, are considered the effective means of preparation of servicemen battle activity.

Summarizing it is higher expounded, it is possible to conclude, that with the aim of forming of physical readiness of future specialists to professional activity effective is introduction in an educational process from physical preparation of MEHE of the military-applied types of sport, in particular military sport all-rounds. One of modern military sport all-rounds, that uses high popularity among the breadwinners of MEHE.

RESULTS AND DISCUSSION

«Theoretical bases of physical qualities development and formation of the military-applied skills of cadets, who are the future specialists in Air Defense, in the process of physical education» reveals the peculiarities of the physical education system functioning at military higher educational institutions, presents the requirements of modern professional military (combat) activity for physical readiness of future experts in Air Defense, describes applied military sports as effective means of motor qualities development and the formation of applied skills in cadets of military higher educational institutions, defines the scientific and methodological foundations of military pentathlon and its place in the system of physical education of cadets. «Scientific and theoretical substantiation and practical development of the methodology for the motor skills.

development of the cadets of military higher educational institutions by means of military pentathlon» describes the scientific methods and organization of the study, examines the motivational attitude of cadets to the need to introduce military pentathlon to physical education at military higher educational institutions, presents the results of the initial stage of the pedagogical experiment concerning the impact of military pentathlon training on the level of physical qualities development, morpho-functional state, health and volitional qualities of cadets in the process of studying.

On the basis of the conducted researches, the methodology of development of motor qualities of cadets of military higher educational institutions by means of military pentathlon in the process of physical education is grounded. In the third chapter «Experimental testing of the efficiency of the methodology for the motor skills development of the cadets of military higher educational institutions by means of military pentathlon» substantiates the criteria of the

assessment of the academic achievements of cadets and presents the results of the formative stage of the pedagogical experiment (YURIEV et al., 2019).

Checking the efficiency of the developed methodology showed its more positive effect, in comparison to the traditional system of physical education, concerning the improvement of the indicators of physical fitness, morphofunctional state, health, psycho-emotional state, and volitional qualities of cadets, their acquisition of health and fitness competences.

CONCLUSION

Thus, today clearly clear that fight - it not only concerted after an aim, by a mestome and sometimes shots, fire and manoeuvre, and foremost is hard opposition of purposeful, intellectual people, that have necessary abilities and skills, will. From that, at that from counteractive parties physical and morally psychological qualities will be better formed, mobilized, adequate to the requirements of modern fight, her victory - result of fight will depend largely on.

All of it testifies to actuality of ground and introduction to the educational process of breadwinners of military pentathlon, as effective means of development of them motive qualities, forming of the military-applied skills and psychological readiness to future military-professional(battle) activity in subdivisions of air Ukraine. It was found that one of the modern military sports all-around, which is very popular among servicemen of the Armed Forces of Ukraine, especially among cadets, is military pentathlon. It is determined that the introduction of military pentathlon in the educational process of physical education in its diverse content, variability of means and methods of motor skills development, high popularity and applied value can have broad prospects for the training of highly qualified officers.

REFERENCES

DRAIN, J. et al. The effectiveness of basic military training to improve functional lifting strength in new recruits. *Journal of Strength and Conditioning Research*, 29 (Suppl.11), 73-77, 2015. Available at: <https://pubmed.ncbi.nlm.nih.gov/26506184>. Access: Jan. 21, 2021.

GROELLER, H. et al. How effective is initial military-specific training in the development of physical performance of soldiers? *Journal of Strength and Conditioning Research*, 29 (Suppl.11), 158-162, 2015. Available at: <https://pubmed.ncbi.nlm.nih.gov/2650618>. Access: Jan. 21, 2021.

MELNYKOV, A. et al. Factors that influence change in cadets' physical preparation during the first half of study at the military academy. *Journal of Physical Education and Sport*, 18(2), 781-786, 2018. Available at: <https://www.efsupit.ro/images/stories/iunie2018/Art%20115.pdf>. Access: Jan. 21, 2021.

RUSANIVSKYI, S. et al. Health status of instructional staff of higher education institutions with special training conditions. *Wiadomości Lekarskie*, 74 (1), 122-127, 2021. Available at: <https://wiadlek.pl/wp-content/uploads/archive/2021/WLek202101124.pdf>. Access: Jan. 21, 2021.

YURIEV, S. et al. Dynamics of respiratory system indices of cadets of higher military educational institutions during kettlebell lifting training. *International Journal of Applied Exercise Physiology*, 9(1), 16-24, 2020. Available at: <http://www.ijaep.com/index.php/IJAE/article/view/707>. Access: Jan. 21, 2021.

YURIEV, S. et al. Experimental verification of the effectiveness of the pedagogical conditions for the training of self-education of cadets. *Revista Dilemas Contemporáneos: Educación, Política y Valores*. Año: VII, Número: Edición Especial, Artículo no.:82, Período: Noviembre, 2019. Available at: [https://dilemascontemporaneoseducacionpoliticayvalores.com/_files/2000062586ef056ef08/EE%2019.11.82%20Verificaci%C3%B3n%20experimental%20de%20la%20efectividad%20e%20las%20condiciones....%20\(4\).pdf](https://dilemascontemporaneoseducacionpoliticayvalores.com/_files/2000062586ef056ef08/EE%2019.11.82%20Verificaci%C3%B3n%20experimental%20de%20la%20efectividad%20e%20las%20condiciones....%20(4).pdf). Access: Jan. 21, 2021.

YURIEV, S. et al. Formation of cadets' psychological readiness for professional practice during sport activities. *Revista Dilemas Contemporáneos: Educación, Política y Valores*. Año: VII, Número: Edición Especial, Artículo no.:116, Período: Diciembre, 2019. Available at: https://dilemas-contemporaneos-educacio.webnode.es/_files/2000065222407124073/EE19.12.116%20Formaci%C3%B3n%20de%20la%20preparaci%C3%B3n%20psicol%C3%B3gica%20de%20los%20cadetes.....pdf. Access: Jan. 21, 2021.

Modern sports as an effective means of developing motor skills and the formation of applied skills in higher education

O esporte moderno como meio eficaz de desenvolvimento de habilidades motoras e formação de habilidades aplicadas no ensino superior

El deporte moderno como medio eficaz para desarrollar la motricidad y la formación de habilidades aplicadas en la educación superior

Resumo

O significado prático do trabalho é desenvolver e implementar a metodologia para o desenvolvimento das qualidades motoras dos cadetes de instituições militares de ensino superior por meio do pentatlo militar; os critérios para avaliar o desempenho acadêmico dos cadetes durante a educação física em instituições militares de ensino superior.

Palavras-chave: Educação Física. Pentatlo militar. Desenvolvimento de qualidades motoras. Competências de saúde e fitness. Cadetes.

Abstract

The practical significance of the work is to develop and implementation the methodology for the motor qualities development of the cadets of military higher educational institutions by means of military pentathlon; the criteria for assessing the academic achievements of cadets during physical education at military higher educational institutions.

Keywords: Physical Education. Military pentathlon. Motor qualities development. Health and fitness competences. Cadets.

Resumen

El significado práctico del trabajo es desarrollar e implementar la metodología para el desarrollo de las cualidades motoras de los cadetes de las instituciones militares de educación superior a través del pentatlón militar; criterios para evaluar el desempeño académico de los cadetes durante la educación física en instituciones de educación superior militar.

Palabras-clave: Educación Física. Pentatlón militar. Desarrollo de calidades motoras. Competencias en salud y fitness. Cadetes.