

## PECULIARITIES OF MILITARY OFFICERS' PHYSICAL PERFECTION DURING TROOPS' BEING IN CONDITIONS OF POSITIONAL DEFENSE

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**Abstract.** *Purpose:* to determine demand and opportunities of military officers' physical perfection in conditions of positional defense. *Material:* in research personnel of companies' strong points (n = 32), scouts (n = 26), drivers of military automobile transport (n = 23) participated. *Results:* it was found that 64% of mobilized military officers prefer to practice physical perfection in period of fighting capability's restoration. Only 27% had desire to physically train. 16% practice physical training. 13% of personnel practice physical training from time to time. We found insufficient level of military officers' applied skills. It was determined that key factor in formation of military officers' demand in physical perfection was their inner motivation, based on own experience of sports trainings. *Conclusions:* Troops' being in conditions of positional defense for long time is not an obstacle for realization of military officers' demand in physical perfection. Character of military officers' functioning in zone of conflict permits to organize systemic process of physical training by means of fulfillment of power oriented physical exercises and improvement of some applied skills.

**Key words:** defense, applied skills, power abilities, training, physical fitness.

### Introduction

Theory of physical training (PT) in troops completely describes organization of military officers' physical perfection in time of peace. In conditions of special period PT organization remains out of attention of military authorities and requires solution. The mentioned problem causes justified interest of commanders, PT specialists, and scientists [1–7]. In publications from combat zone (CZ) physical training is given as mean of organization of military officers' leisure and maintaining them in proper condition [8–10].

Domestic specialists actively analyze experience of operations in conflict zone (ATO), study PT potential for ensuring personal safety of military officers [11], give offers on maintaining of military officers' proper physical fitness, improvement of their applied skills [12]. It is stressed that it is purposeful to physically perfect military officers with means of gymnastic and athletics, as well as with hand combat means [13]. Alongside with traditional means of physical perfection it is recommended to use non traditional: breathing gymnastic, Khadu gymnastic, Yoga and etc. [14, pg. 65]. To day's realities require studying and analysis of situation, working out of definite, substantiated offers on organization of military officers' physical perfection in conditions of special period.

### Purpose, tasks of the work, material and methods

*The purpose of the work* is to determine demand and opportunities of military officers' physical perfection in conditions of positional defense.

- For achievement of our purpose we used the following *methods*: analysis of normative documents, which regulate military officers' professional functioning in ATO zone;
- Analysis of scientific and internet sources;
- Observation over professional functioning of military officers of scouts' company, of mechanized battalion from contact line of the parties, drivers of military automobile transport;
- Questioning of combat units' commanders, military officers, having combat experience;
- Stating experiment for determination of formation of military officers' applied skills.

Diagnostic of military officers' loads was fulfilled by their subjective feelings and assessed with 12 points' scale of Borg [15]. The research was conducted in summer time in passive phase of conflict. It was the period of holding of front positions at contact line of parties by units of mechanized brigade in conditions of positional defense.

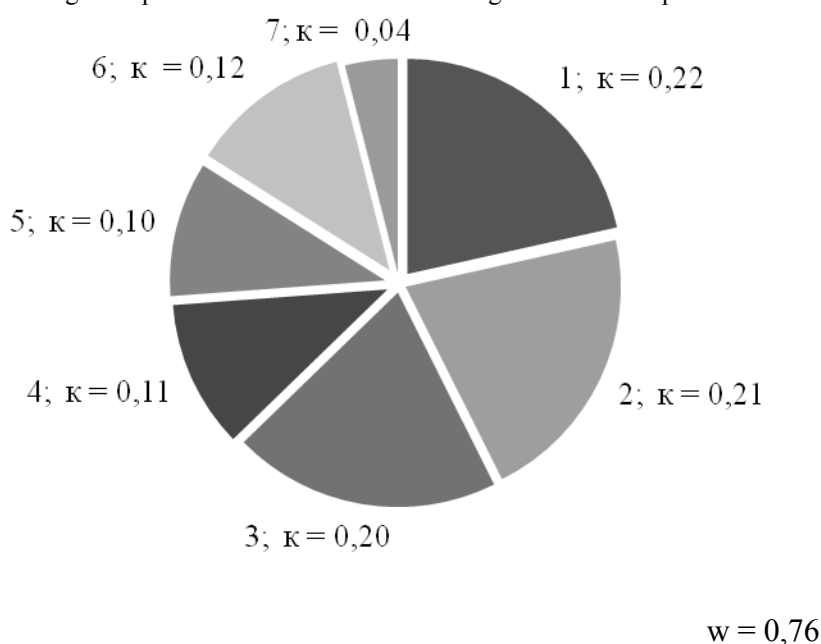
### Results of the research

Construction of ATO defense system envisages involvement of significant part of personnel for servicing at strong points (SP). Main elements of military officers' professional functioning are: continuous observation over assigned for defense sector; determination of targets and their shooting in case of attack on SP; engineering perfection

of SP positions; measures on solution of everyday problems; maneuvering on SP position in case of gunning; fire; reloading of weapons. Variability and unpredicted character of enemy's actions create unstable rhythm of motor functioning of SP personnel. It does not permit to work out algorithm of their professional functioning. Hours of silence can immediately be changed with periods of fire confrontation. Provocation fire forces fighters to immediately take combat positions and it requires coordination skills. In period of defensive fight (most frequently in dark time) military officers shall bear combat equipment of over 24 kg weight. They move on short distances (up to 40 meters) in trenches and communications of strong point in bent position and with arms. Intensity of military officers' load during servicing on SP varies from 12 to 16 points. In fighters' opinion the main factors of their fighting capability's weakening in period of being on SP are: moral-psychological influence of situation; muscular fatigue from combat equipment; unusual methods of moving; long being in position for shooting.

Period of duty on SP is changed by equal by duration period of rest. During rest period personnel recreate fighting capability and prepare for next duty. Physical loads of personnel during rest are determined by character of everyday problems to be solved. They are usually of moderate intensity.

Functioning of scouts is of more intensive character (13–17points). By results of scouts' questioning (n = 26) we formed rating of importance of kinds of their training for successful professional functioning (see fig.1).



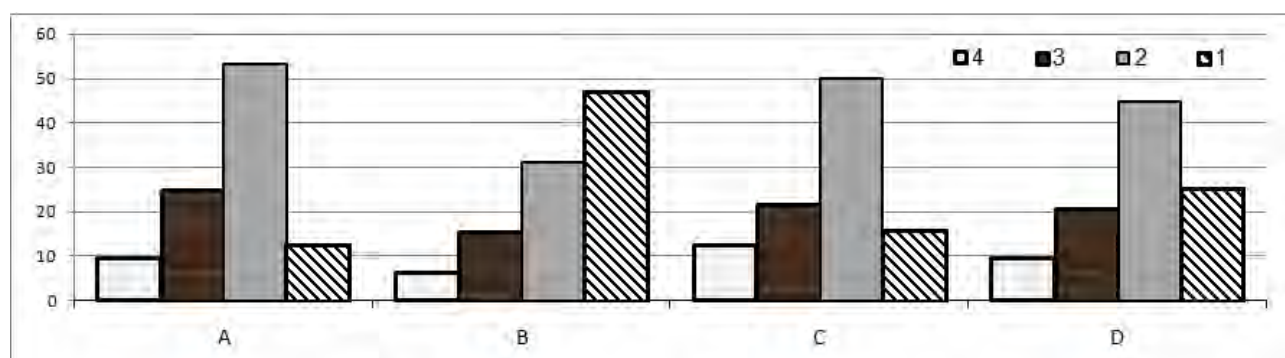
**Fig.1.** Rating of importance of kinds of scouts' training (by weight coefficient value,  $\kappa$ ), where: 1 – moral-psychological training; 2 – tactical-special training; 3 – fire training; 4 – engineering-sapper training; 5 – military topography; 6 – physical training; 7 – other kinds of training; w – coefficient of concordance.

Moral-psychological training is the basis of successful realization of tactical-special and fire trainings. In respondents' opinion it is based on mastered previously practical professional skills, abilities, confidence of scouts group's fighters in each other and concordance in actions. Insufficient rating of physical training is conditioned by character of tasks, which scouts fulfilled in conditions of positional defense. 84% of the questioned think that success of combat task's fulfillment depends on quickness, stealth, noiseless of actions; ability to immediately and adequately respond to change of situation. Among the most demanded physical qualities scouts call general, power and static endurance, dexterity. The most important motor skills they consider ability to overcome obstacles, moving by different means (secret, squatting, on bellies, defense with equipment and arms).

Professional functioning of automobile transport drivers is of low intensity. Most of transportations are realized in daytime that permits for drivers to fulfill professional duties in ordinary mode and do not break organism's physiological rhythm. Checks out the rout are followed by increased nervous-psychological tension, load on organs of hearing and eyesight because of high probability of attack on transport mean (blasting, ambush, gunning). Besides,

driving for long time in extreme conditions and means of individual protection causes pain in backbone, numbness of lower limbs. Fulfillment of even insignificant repair, adjustment of automobile's systems (mechanisms) requires proper power abilities and flexibility. Most of drivers ( $n = 23$ , 61%) understand usefulness of physical perfection for improvement of professional workability. Only 13% of them fulfill physical exercises for this purpose.

Characteristics of professional functioning of the tested categories of military officers permit to speak about importance of physical fitness component in structure of their fighting capability. Content of this concept envisages military officers' ability to demonstrate military applied motor skills, which they shall acquire before their going to ATO zone. The level of their skills was tested in stating experiment. Military officers were reminded technique of fulfillment of some physical exercises. Then they were offered to fulfill these exercises from the first attempt. For unification of the process we used 4 points' scale (see fig.2).



**Fig.2.** Relative indicators of applied motor skills formation in military officers ( $n = 32$ ), where:

% - Percentage of military officers, who fulfilled exercise; A – exercise: throw of grenade with ammunition; B – exercise: overcoming of wall of 1.1 meters with ammunition; C – exercise: self-insurance when falling on back; D – mean indicator of applied skills' formation.

Assessment of exercise's fulfillment: 4 – exercise is fulfilled properly, without mistakes, easily; 3 - exercise is fulfilled properly, but with insignificant mistakes; 2 – exercise is fulfilled properly, but with rough mistakes; 1 – exercise is fulfilled wrongly.

Criteria of assessment were space-time and qualitative (accuracy of movements, economic character of them and energy). Results of experiment point at low level of important military applied skills' formation in mobilized military officers, especially in cases, where steady motor stereotype is required. We researched possibilities of correction of military officers' physical condition and organization of physical trainings in ATO zone. Besides, we considered conditions of military officers' training and importance of physical fitness component in structure of their fighting capability.

We questioned 76 military officers of age from 22 to 56 years. From them 87% were mobilized to MF of Ukraine, 72% – had experience of combat actions. Questioning results showed that physical fitness factor takes 4<sup>th</sup> place in rating of military officers' fighting capability. 63% respondents confirmed that it was possible to conduct physical perfection trainings in zone of combat actions. Part of the questioned (44%) thinks it purposeful to practice physical perfection in period of recreation of fighting capability. 27% desired to practice trainings. 82% of them were sure that it is necessary to have organizer of such trainings or better – instructor. It should be noted that absence of normative documents on organization of PT in ATO zone is not an obstacle for military officers, who have inner demand in physical perfection. As per our observations 11–19% of military officers find time and opportunities for trainings. Nearly all of them had sports achievements in the past, sports grades and practice physical perfection with accent on own sports specialization. The tasks of own physical perfection are understood by fighters as maintaining of organism's workability, physical condition, psychological release and formation of confidence in own abilities; enjoying of trainings.

Individual trainings are practiced in free from gunning and duties time. Choice of content of physical perfection depends on sports orientation of military officer, own bents, initiatives of sport active of the unit, environmental conditions and equipment of site for physical exercises. The most popular kinds of physical perfection

in ATO zone are power training (80%), sport games (16%), run (4%). Military officers use mainly simple in operation and production equipment: parallel bars, horizontal bars, weights, barbells, skipping ropes, punching bags. The equipment can be original and improvised, self-made.

Military officers note absence of commanders' exactingness to physical fitness of the subordinates; absence of methodic advices on physical perfection and organized practical consultations. Such position of commanders does not facilitate personnel's motivation for physical perfection and excludes this process from general system of maintaining of military officers' individual fighting capability.

#### **Discussion**

Factor of physical fitness is one of determining in ensuring of individual fighting capability of military officers and influences significantly on effectiveness of their professional functioning [16, pg.283]. Influence of this factor is traditionally actualized in period of CA, on stages of direct personnel's training for CA [17, 18] or when fulfilling tasks in extreme conditions [19, 20]. In existing conditions of military officers' mobilization and their further training it is rather difficult to ensure their proper physical fitness. It was confirmed by results of stating experiment. However, research of structure and character of personnel's professional functioning in durable conditions of positional defense confirmed specialists' opinion about possibility of organization of physical perfection trainings in combat conditions [13]. Such opportunities are restricted by CA intensity, character of environment, weather and everyday conditions and so on.

We confirmed leading role of inner motivation of military officers for realization of their demand in physical perfection [21, 22]. Our research showed that it is necessary to create sites for motor functioning and appropriate methodic provisioning in places of military units' location.

#### **Conclusions**

Content and character of military officers' professional functioning in ATO zone in conditions of positional defense condition variation of their physical loads' intensity from moderate to sub-maximal.

The fact that military shall be constantly in means of individual protection with full ammunition sets increased requirements to fitness of muscular skeletal apparatus of their organisms. Conditions of servicing in ATO zone in positional defense permit to organize individual trainings of power orientation and perfect some military applied motor skills.

Our further researches will be oriented on substantiation and working out of physical perfection programs for military officers of different age and professional groups.

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#### **Conflict of interests**

The author declares that there is no conflict of interests.

#### **References:**

1. Gilev VP, Balaban IuE. Aktual'nye voprosy fizicheskoy podgotovki voennosluzhashchikh vozdushno-desantnykh vojsk pri prokhozhenii sluzhby v rajonakh boevykh dejstvij. [Current issues of physical training of airborne assault troops' military officers, when servicing in zones of combat actions]. *Sovremennyj boj i fizicheskaja podgotovka vojsk* 1992;3:43–48. (in Russian)
2. Korabel'nikov AA, Litovchenko SV. Fizicheskaja podgotovka v usloviiakh boevykh dejstvij. [Physical training in conditions of combat actions], *Vestnik AVN* 2008;3:34-40. (in Russian)
3. Warr BJ. *Physical Fitness in Army National Guard Soldiers and Its Relationship on Utilization of Medical Resources During Combat*. Dissertation. Arizona state university; 2011.
4. Dyrstad SM, Pensgaard AM, Barlaug DG, Giske RI. Relationship between soldiers' service performance and physical training volume. *Journal of Military and Veterans' Health* 2010;18(2):7–11.
5. Dyrstad SM, Miller BW, Hallén JI. Physical fitness, training volume, and self-determined motivation in soldiers during a peacekeeping mission. *Military Medicine* 2007;172(2):121–127.

6. Nindl BC, Castellani JW, Warr BJ, Sharp MA, Henning PC, Spiering BA, Scofield DE. Physiological Employment Standards III: physiological challenges and consequences encountered during international military deployments. *European Journal of Applied Physiology* 2013;113(11):2655–2672.
7. Sharp MA, Knapik JJ, Walker LA, Burrell L, Frykman PN, Darakjy SS, Lester ME, Marin RE. Physical fitness and body composition after a 9-month deployment to Afghanistan. *Med Sci Sports Exerc.* 2008;40(9):1687–1692.
8. Tilghman A. Fitness crackdown pushed to war zones. *Military Times*, 2008;7:34-41.
9. Lett B. Combat Ready in a Combat Zone. *Marinesmag*, 2010;12:23-30.
10. Hlad J. Weight training in Afghanistan? Build a gym. *Stars and Stripes*. 2014;3:56-60.
11. Zhembrovs'kij SM. *Fizichna pidgotovka iak chinnik zabezpechennia osobistoi bezpeki vijs'kovosluzhbovciv* [Physical training as factor of personal protection of military officer], Kyiv: NUOU; 2015. (in Ukrainian)
12. Bondarovich OP. Osoblivosti fizichnoi pidgotovki spivrobotnikiv sluzhbi bezpeki Ukraini do dij u bojovikh umovakh. [Peculiarities of physical training of Ukraine security service officers for actions in combat conditions], *Mizhvidomcha naukovo-metodichna konferenciia «Fizichna pidgotovka osobovogo skladu Zbrojnikh Sil, inshikh vijs'kovikh formuvan' ta pravookhoronnikh organiv Ukraini», m. Kiiv, 26 – 28 listopada* [Interdepartmental scientific-methodic conference “Physical training of personnel of Military Forces of Ukraine, other military units and law enforcement organs of Ukraine”, Kyiv, November 26-28]. Kyiv: NUOU; 2014. P. 33– 37. (in Ukrainian)
13. Verbin NB, Glazunov SI, Finogenov IuS. *Zastosuvannia form zasobiv metodiv fizichnoi pidgotovki v osoblivij period* [Application of forms and methods of physical training in special period]. Kyiv: NUOU; 2015. (in Ukrainian)
14. Kostenko AM. Pidtrimannia fizichnoi pracezdatnosti oficeriv organiv vijs'kovogo upravlinnia zasobami gimnastiki “khadu” [Maintaining of workability of officers of military administration by means of “Khady” gymnastic]. *Mizhvidomcha naukovo-metodichna konferenciia «Fizichna pidgotovka osobovogo skladu Zbrojnikh Sil, inshikh vijs'kovikh formuvan' ta pravookhoronnikh organiv Ukraini», m. Kiiv, 26 – 28 listopada* [Interdepartmental scientific-methodic conference “Physical training of personnel of Military Forces of Ukraine, other military units and law enforcement organs of Ukraine”, Kyiv, November 26-28], Kyiv: NUOU; 2014. P. 65–68. (in Ukrainian)
15. Borg G. Perceived exertion as an indicator of somatic stress. *Scand J Rehabil Med* 1970;2:92-98.
16. Shejchenko VA. *Razvitie nauchnykh vzgliadov o fizicheskoi gotovnosti cheloveka k deiatel'nosti* [Development of scientific views on human physical readiness for activity], Sankt Petersburg: VIFK; 1996. (in Russian)
17. Krivilev SA. O vozmozhnosti provedeniia special'noj fizicheskoi trenirovki motostrelkov v sokrashchennyj period podgotovki k boevym dejstviiam [On possibility of special physical training of motorized infantry in shortened period of preparation fro combat actions]. *Nauchnaia konferenciia instituta za 1997 god “Teoreticheskie i prikladnye aspekty fizicheskoi podgotovki voennykh specialistov”* [Scientific conference of institute for 1997 “Theoretical and applied aspects of physical training of military specialists”]. Sankt Petersburg: VIFK; 1998. P. 53–54. (in Russian)
18. Shejchenko VA, Nikolaev SV, Paladenko VV. Fizicheskie uprazhneniia na etape neposredstvennoj podgotovki razvedchikov k konkretno postavlennoj boevoj zadache [Physical exercises at stage of direct preparation of scouts for fulfillment of definite combat task]. *Nauchnaia konferenciia instituta za 1997 god “Problemnye voprosy fizicheskoi podgotovki, obucheniia i vospitaniia kursantov i slushatelej instituta”* [Scientific conference of institute for 1997 “Problems of physical training and education of institute’s cadets”]. Sankt Petersburg: VIFK; 1995. P. 121–122. (in Russian)
19. Nikolaev SV, Zikov AV. Osobennosti fizicheskoi podgotovki voennosluzhashchikh k dejstviiam v napriazhennykh psikhologicheskikh situaciiakh [Specific features of military officers’ physical training for functioning in extreme psychological situations]. *Nauchnaia konferenciia instituta za 1997 god “Social'no-psikhologicheskie i istoricheskie aspekty fizicheskoi podgotovki i sporta, voinskogo obucheniia i vospitaniia”* [Scientific conference of institute for 1997 “Social-psychological and historical aspects of physical training and sports, military education and teaching”], Sankt Petersburg: VIFK; 1998. P. 119–120. (in Russian)

20. Pugachev Iu, Korablev IuIu, Osmanov IeM. Osobennosti professional'noj deiatel'nosti razvedchikov sukhoputnykh vojsk RF i trebovaniia k ikh fizicheskoiu gotovnosti [Specific features of RF land forces' scouts' professional functioning and requirements to their physical fitness]. *Vestnik Tambovskogo universiteta* 2013;7(123):188–197. (in Russian)
21. Romanchuk SV. *Formuvannia motivacii do zaniat' fizichnoi pidgotovkoiu i sportom kursantiv tekhnichnikh vijs'kovikh navchal'nikh zakladiv Cand. Diss.* [Formation of motivation for physical trainings and sports practicing in cadets of technical military educational establishments. Cand. Diss], Lviv; 2006. (in Ukrainian)
22. Matveev E, Chastikhin A, Radchenko O. Osobennosti fizkul'turno-sportivnoj motivacii voennosluzhashchikh [Peculiarities of military officers' physical culture – sports motivation]. *Problemy nauki i obrazovaniia* 2015;3:45-50. (in Russian)

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