

ASSESSMENT OF OFFICIAL COMBAT MISSION'S FULFILLMENT BY HIGHER EDUCATIONAL ESTABLISHMENT'S CADETS (on example of militarized cross)Anatskyi R.V.¹, Kolomiitseva O.E.²¹The National Academy of the National Guard of Ukraine²Yaroslav the Wise National Law University

Abstract. *Purpose:* to analyze results of official combat mission's fulfillment (militarized cross with shooting and throwing of grenades) by military educational establishment's cadets. *Material:* in the research 80 2nd year cadets of different specialties participated. The cadets fulfilled exercise in full military equipment. They started and finished by military units and total time, registered by indicators of the last team member, was considered. The distance was 6 km and included: run on even surface; overcoming of obstacle course; two firing lines with shooting in lying and standing position at human height target; throwing of training grenade (F 1) for distance of not less than 35 m. For every slip in shooting 10 seconds of penalty time was accounted; for failure in throwing grenade – 40 seconds of penalty time. *Results:* the conducted study permitted to assess different sides of cadets' profile training, i.e. physical, fire and tactic. All units finished in full strength, i.e. coordination of actions was good. The best total time of cross fulfillment was demonstrated by cadets of "special purpose units" specialty. The best shooting results were in cadets of "automobile transport" specialty – 90%, who also were the best in throwing grenade – 40%. Not very high indicator of this speed-power exercise says about inability to overcome general fatigue and fulfill combat task at the utmost. *Conclusions:* Complex technology of trainings with their combining with profile disciplines (physical, tactic and fire) first of all train cadets to act coordinately; to be responsible for each other; it will facilitate development and perfection of basic physical qualities, formation of main physical skills; increase percentage of sharpshooting in conditions of significant physical loads.

Key words: cadets, military unit, militarized cross, sharpshooting, throwing of grenade.

Introduction

As on to day, in military higher educational establishments there exists rather complex situation with cadets' physical fitness level. The reasons of physical loads' weak positive influence on professional fitness are: absence of typical programs on special physical training, absence or neglect of sport training bases, low physical level of most of applicants. Of not less importance is also unjustified reduction of practical hours' quantity, assigned for military officers' physical training [2, 16].

As it is noted in order of Commander of National Guard of Ukraine "On organization of physical training and sport-mass work in National Guard of Ukraine in 2016", № 708 dt. 27.11.2015 "results of control inspections of military parts and units for 2015 academic year witness that physical fitness level of most of military officers ... does not correspond to existing requirements. Especially low level was registered in exercises for endurance...".

General endurance influences, to certain extent, on human workability. Besides, general endurance plays important role in optimization of life functioning; is an important component of person's physical health. Endurance is determined by functional potentials of organism's vegetative functions – cardio-vascular and respiratory. Examples of aerobic endurance are run and swimming at long distances, triathlon, ski and bicycle racings, academic rowing and etc. [12]. Means of training of military officers' endurance [10] are 1 km and 3 km run, run-marches at 5 and 10 km. Besides, in regulations for "Competitions of National Guard of Ukraine in military applied kinds of sports" one of program items is military course with shooting and throwing of grenade. These competitions combine results of many links of cadets' training: first of all coordination of actions in unit; psychological stability, moral-combat qualities of every cadet; personal physical fitness, sufficient aerobic endurance and shooting skillfulness.

Seeking of new technologies of military officers' physical and professional fitness improvement is constantly important and urgent. It attracts attention of leading domestic [2, 8, 9] and foreign specialists [19-22]. For example, a number of authors deal with different sides of organization of cadets' special physical training [13, 14, and 18]. Some authors [1, 4, and 7] point at paying attention to cultivation of applied physical qualities for effective fulfillment of combat techniques. Other works are devoted to "overcoming of obstacle course" [3, 11, and 14]. Alongside with it,

fulfillment of militarized cross with shooting and throwing of grenade requires from cadets to be able to resist to significant tiredness for fulfillment of the task. Such exercise is absolute new and complex element of personnel staff training in modern army. That is why we did not find such information in modern domestic scientific-methodic literature. It proves the relevance of our work.

Purpose: to analyze results of official combat mission's fulfillment (militarized cross with shooting and throwing of grenades) by military educational establishment's cadets.

Material and methods

Participants: in the research 80 2nd year cadets of different specialties of National Academy of National Guard of Ukraine participated:

- military management, hereinafter group 1;
- special purpose units, hereinafter group 2;
- weaponry and military equipment, hereinafter group 3;
- automobile transport, hereinafter group 4.

Organization of the research: the cadets fulfilled exercise "militarized cross with shooting and throwing of grenade", which was realized by competition method, in field uniform, high ankle boots and baldric. The weight of military equipments (bulletproof vest "Corsair MZS", helmet, SMG AK-74, belt kit with two magazines and gas mask) was nearly 10 kg.

Distance was 6 km on medium rugged terrain. On this distance it was necessary to overcome natural and artificial obstacles as well as shoot at two fire lines (sic shots at each) and throw grenade for distance. Start and finish were in one and the same place (see fig.1). The cadets started and finished together: by units; total time, registered by indicators of the last team member, was considered. At finish lagging if one cadet should not exceed 50 meters.

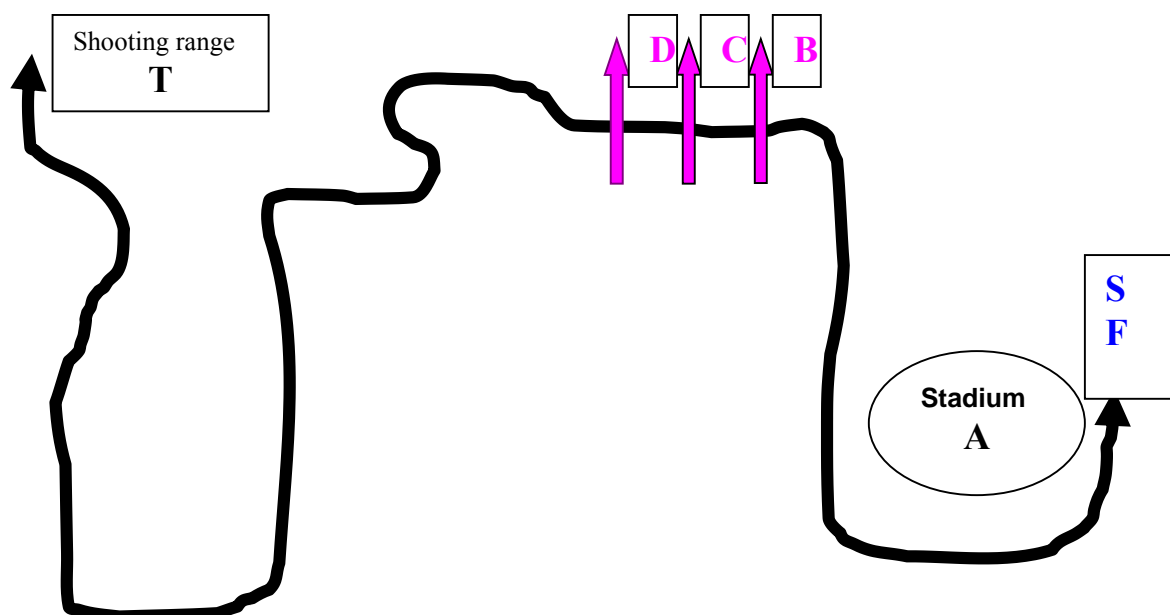


Fig.1. Diagram of distance for militarized cross

Notes: S, F – Star, finish; A – place for throwing of grenade; B – first obstacle (blockage of logs); C – second obstacle ("snake"); D – third obstacle (gap in wall); T – shooting range.

First 3.5 km of distance included:

- Run on even surface;
- Overcoming of "obstacle course" elements (blockage of logs, "snake", "gap in wall");
- Run on even surface to first fire line, at which shooting from lying position (three shots) at 100 meter' distance (target No.4 – human height) was fulfilled;

- Run on even surface to second fire line, at which shooting from standing position, in the same conditions was fulfilled;

The rest 2.4 km included run on even surface to place of throwing of training anti-personnel grenade for distance. Throw distance of not less than 35 meters was registered.

For every slip in shooting 10 seconds of penalty time was accounted; for failure in throwing grenade – 40 seconds of penalty time. During run help or mutual help without weapon or equipment’s handing over of was permitted.

Statistical analysis: calculation of experimental results was conducted with the help of Excel program.

Results of the research

Study of endurance level, shooting and grenade throw efficiency permits to receive material, which can explain the reasons of low level of official combat missions’ fulfillment in conditions of actual combat. The obtained data can serve as the base for creation of technologies for different modifications’ militarized crosses and working out of assessment standards for them.

It should be noted that in the course of cross no unit lost any participant and finished at full strength. So, one of tasks was fulfilled: support, help and finishing in complete unit. It permits to say about coordination of actions in military unit and psychological resistance to physical loads; moral-morale in conditions of official combat functioning.

Analysis of militarized cross results by time indicators (see fig. 2) witnessed that the best total time was demonstrated by group 2 cadets (special purpose units). Much worse results were in groups 1, 3 and 4 with lagging behind nearly by 8, 11 and 10 minutes accordingly.

Complete analysis of cross fulfillment (as assessment of general endurance, shooting skillfulness and speed-power abilities in grenade throwing in conditions of high general fatigue) permits to understand that not all cadets groups coped with their tasks (see fig.3).

Rather high run endurance and shooting skillfulness was demonstrated by 70% cadets (at least one hit from six shots). Cross winners (2nd group cadets) could not cope with grenade throwing and only 20% fulfilled this task. Thus, for shooting slips and bad grenade throwing they were accounted 12 minutes and 3 seconds of penalty time.

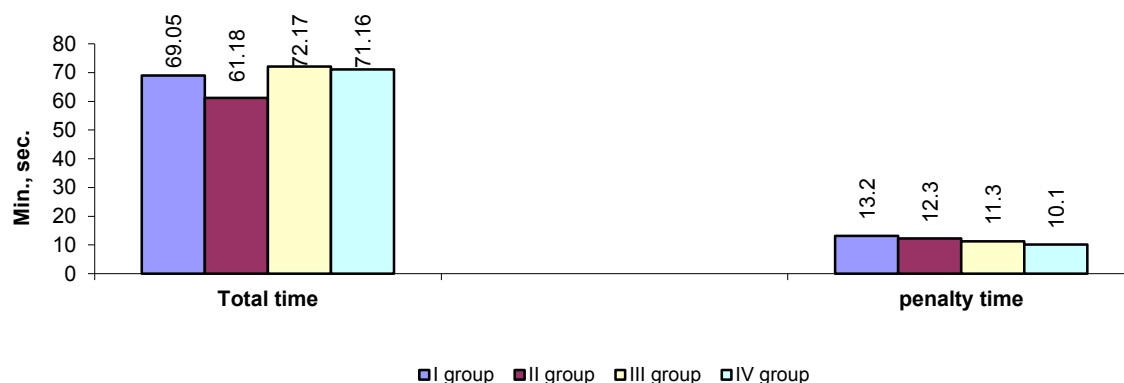


Fig. 2. Time indicators of sharpshooting and grenade throwing, demonstrated by cadets of different specialties, %

Much worse picture was in group 1: lagging behind from cross leaders was 8 minutes. The fulfilled 87.5% hits and 12.5% successful grenade throwing. Thus, for shooting slips and unsuccessful grenade throwing they were accounted 13 minutes and 2 seconds of penalty time.

Cadets of group 3 wasted much more total time, comparing with leader: they had the least penalty time. 90% of this unit hit in target and only 20% threw grenade at distance more than 35 meters. So for failures in grenade throwing they were accounted 11min. and 3sec. of penalty time.

Rather high results (shooting - 90% and grenade throwing – 40%) were demonstrated by group 4 cadets. It permitted for them to get the least quantity of penalty time.

Thus, grenade throwing was nearly failed by cadets in conditions of significant general fatigue. Indeed, they fulfilled throwing nearly at the end of distance. With it, they already covered 5600 meters’ distance with obstacle

course (“logs’ blockage”, “snake”, “gap in wall”) and two fire lines. It should be noted that grenade throwing at distance of 35 meters in physical training of higher educational cadets [10] corresponds to mark “satisfactory”.

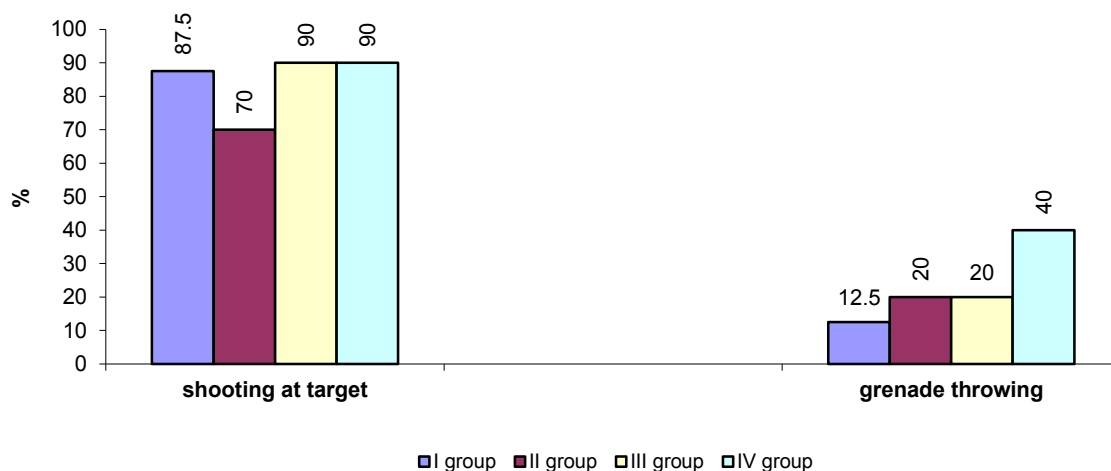


Fig.3. Time indicators of sharpshooting and grenade throwing, demonstrated by cadets of different specialties, %

As far as obstacle course elements are at the beginning of distance, fulfillment of this exercise was in fresh state. That is why cadets fulfilled it successfully, without instructor’s remarks.

More specific analysis of shooting results showed the following. First shooting was from lying position (after 3 km distance course) and, naturally, it was more successful than shooting from standing position (after running 500 meters more) (see table 1). The best results in shooting from lying position were in groups 3 and 4 and the worst results – in group 2. Results of shooting from standing position were also better in group 4 and the worst – in group 1.

Table 1. Results of shooting at target No.4 (human height) from different positions, %

Cadets groups	Quantity of hits from three shots			
	3 hits	2 hits	1 hit	No hits
From lying position, %				
I group	27.5	30	25	17.5
II group	20	20	30	30
III group	50	20	10	10
IV group	55	30	5	10
From standing position, %				
I group			5	95
II group		10	20	70
III group			20	80
IV group	5	20	5	70

Discussion

Analysis of researches showed that in present conditions professional functioning has specific features and puts forward high requirements to physical and psychological fitness of military officers [5, 17]. Basing on analysis and generalization of different sources’ data we supplemented the works of different authors [2, 16] devoted to physical and psychic loads, endured by cadets during fulfillment of official combat missions.

The data, received by us, prove first importance of physical fitness level in ensuring of individual combat readiness and its influence on professional functioning. We also supplemented the data about importance of cadets’ physical training factor just during their study at MHEE as far as in the future it will be difficult to ensure proper

physical fitness level [6, 17]. We also confirmed the data of [3, 5] about positive influence of physical exercises for endurance, for general physical fitness, morale of military officers.

As on to day competitions in militarized cross with shooting and throwing of grenade are a new approach to cadets' training in Ukrainian military higher educational establishments. Results of cadets' fulfillment of official combat mission in conditions of significant physical loads prove the presence of problem situation. Fulfillment of every exercise separately (long distance run, obstacle course, shooting, grenade throwing) are not difficult for cadets and do not cause any remarks of instructors [2, 3, 10]. However, combining of these elements in official combat situation (with need to act coordinately in unit, in military equipment of 10 kg weight)

In our opinion all mentioned above underlines the urgency of our research as well as witness about demand in working out of new training technologies and their implementation in educational space of modern military educational establishments. It is possible to use experience and methods of triathlon, modern pentathlon of military forces of other countries. Complex technology of trainings implies combination of profile disciplines: physical, tactic and fire. It permits to train cadets to act coordinately, to be responsible for each other as well as facilitate development and perfection of basic physical qualities, formation of main physical skills. Besides it trains to realize sharpshooting under physical and psychological loads in conditions, approached to combat.

Conclusions:

1. Analysis of scientific methodic literature and official documents showed unsatisfactory state of military higher educational cadets' physical fitness. It makes impossible successful fulfillment of official combat missions.

2. Analysis of militarized cross with shooting and grenade throwing results witnesses that in conditions of significant physical and moral loads cadets demonstrate low level of shooting at target of human height, as well as grenade throwing at distance of more than 35 meters is not feasible for all cadets.

3. The fulfilled research outlines a number of problems and puts new tasks for officers, instructors, cadets in respect of application of new approaches to improvement of MHEE cadets' physical and combat readiness for professional functioning.

The prospects of future researches imply working out technology of application of complex trainings for increase the level of profile disciplines' mastering by cadets and determination of its effectiveness.

Conflict of interests

The authors declare that there is no conflict of interests.

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