UDC 371.134:355.23

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# FORMATION OF SKILLS FOR USE OF FORCE AND WEAPON ENGAGEMENT BY FUTURE BORDER GUARD OFFICERS IN COURSE OF PROFESSIONAL TRAINING

Purpose of the article was to work out and study the influence of authors' weapon training program on formation of skills for use of force and weapon engagement by future border guard officers in course of professional training. The material base is 178 3rd - 4th year cadets of Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine participated in the research (experimental group, n=92; control group, n=86), of age 19-24 years. The cadets' functional state was registered using the indicators in the theoretical and practical tests developed by authors, theoretical (analysis, synthesis, comparison, generalization, systematization of the data of scientific literature and educational and methodical documentation); empirical (pedagogical experiment, observation, interviewing, testing, questioning, method of expert assessments); mathematical statistics (Kolmohorov-Smirnov criterion) methods. The term of trainings was 1 year. As the result, it was found that the acting weapon training programs do not permit to completely train a border guard for fulfilment of his missions. We also found the purposefulness of special exercises in weapon trainings, which would be approached by their structure to border guards' professional actions. The conclusions is that in order to form skills for use of force and weapon engagement by future border guard officers in course of professional training, it was recommended

to implement such pedagogical conditions: a gradual organization of the training of future border guard officers for the use of weapons and physical force; formation of knowledge, skills and habits of the use of weapons and physical force on the basis of simulation of service situations of border guard officers and the drill of the action algorithm in extreme situations; provision of the unity of weapon, psychological and legal training based on the principles of an integrative approach; optimization of training methods of future border guard officers by using innovative means.

**Key words:** professional training; weapon engagement; future border guard officers; weapon training, pedagogical conditions.

## **1. INTRODUCTION**

**Problem statement.** The increased level of terrorism, international crime, smuggling activities, military confrontation in the Eastern regions of Ukraine stipulated the need to revise and improve the system to counter these factors [1]. Border guard officers must master the technique of use of physical force and weapon engagement, be able to quickly assess the situation and make decisions, be strong, enduring, that is, fully physically trained in order to perform missions of operational and service activities, often caused by extreme situations of conflicts with violators of the border. Under such conditions, the tactics of disarmament and neutralization of offenders are not only a guarantee of personal safety, but also a professional duty of each border guard.

Analysis of scientific works revealed that in conditions of anti-terrorist operation, professional functioning has certain specific features and put forward high requirements to physical and psychological fitness of ground troops' military officers [2].

Successful implementation of military functions requires radical changes in the system of professional training of future border guard officers that are affirmed by the requirements of the current legal acts regulating the operational and official activities of the State Border Guard Service of Ukraine (SBGS). Thus, the Strategy of the State Border Guard Service of Ukraine Development emphasizes the need to increase the level of individual professional training of the SBGS personnel, taking into account the actual threats to border security, in particular, the formation of skills for use of physical force and weapon engagement by future border guard officers when conducting operations. The generalized results of the analysis of legal documents regulating the activity of the SBGS [3–7] point out that one of the most important

tasks of the border guard science is further development of the professional training of future border guard officers. One of the important components of this training are use of force and weapon training.

Certain law enforcement (power-wielding or specialized) agencies are allowed by the law to apply special measures of coercive activities, namely: physical force, special means, and as a last resort, fire weapons [8].

The Common Core Curriculum for Border and Coast Guard Basic Training in the EU states that a border guard must be able to use physical force effectively, safely, with minimum energy expenditure and in proportion to the threat observing the legislation and human rights. Also border guard should be able to make decisions about the application of all types of physical force and apply them, observing the requirements of professional ethics and human rights [9]. Hypothesis: it is assumed that skills of future border guard officers for use of force and weapon engagement are formed more effectively in course of professional training if using the pedagogical conditions developed by authors in comparison with the current state.

Analyses of investigations and publications. Nowadays there are a lot of investigations and publications on determination of necessity to develop physical training by different categories of law enforcement agencies officials. But the problem of formation of skills for use of force and weapon engagement by future border guard officers in course of professional training is not investigated. Problems of improving physical training of law enforcement agencies officials were studied by Shevchenko [10], Hnydiuk [11], Chudyk [12], Fedak, Afonin, Nebozhuk, Lashta, Romaniv, Dzyama, Pylypchak [2], Lemeshko [1].

The purpose of the research is to establish the pedagogical conditions of the professional training, under which the formation of skills for use of physical force and weapon engagement by future border guard officers will be effective.

According to the purpose, the following objectives are defined for the research:

1. To clarify the essence of the skills of use of physical force and weapon engagement by future border guard officers and the possibility of their formation by means of weapons training in course of professional training. 2. To determine the criteria, to develop indicators and to characterize the levels of formation of skills of using physical force and weapon engagement by future border guard officers in course of professional training.

3. To define and substantiate pedagogical conditions for formation of skills of using physical force and weapon engagement by future border guard officers in course of professional training.

4. To check experimentally the pedagogical conditions of forming the skills of using physical force and weapon engagement by future border guard officers in course of professional training.

5. To develop methodological recommendations to the scientific and pedagogical staff regarding the development of skills of using weapons by future border guard officers in course of professional training.

## 2. **RESULTS OF THE RESEARCH**

Participants: 178 3rd – 4th year cadets of Bohdan Khmelnytskyi National Academy of the SBGS participated in the research (experimental group, n=92; control group, n=86), of age 19-24 years. All cadets had statistically equal physical fitness and physical condition indicators. Experimental and control groups were formed by method of equal pairs.

Organization of the research: the research was conducted on the base of Bohdan Khmelnytskyi National Academy of the SBGS (Khmelnytskyi) from August 2016 to March 2017. The results of the empirical analysis of the educational process of higher military educational institutions allowed to determine the content of weapon training and to distinguish its main features. Weapon training is a kind of training of future professionals, which is to study the material part of weapons, safety precautions, techniques and firing rules; training on simulators; weapon practice; study of the legal basis for the use of force and weapons. An important characteristic of weapon training is the need to maintain its appropriate level throughout the period of professional activity of the border guard officer, which ensures professional growth and the appropriate level of his professional skills.

Taking into account the conclusions of our research on the clarification of the essence of skills for use of force and weapons by future border guard officers, as well as the results of the analysis of scientific works (V. Bespalko, A. Dakhin, V. Kallney, S. Podmazin, S. Shyshov, etc.), the relevant criteria and indicators have been determined: cognitive (systemacity, integration, practical orientation of knowledge, ability to accumulate it); psychological (motivation of professional training, emotional reactions to actions with weapon, psychological stability, level of volitional powers); physical (level of strength endurance and labour ability, level of physical coordination, ability to relax, vestibular tolerance, ability to arbitrarily control breathing); reflexive (the ability to analyse and adequately assess the ability to use force and weapons (self-concept, self-control), the ability to coordinate and regulate the actions of all persons involved in the use of weapons and to choose adequate means of influence in order to stimulate the necessary actions (mutual evaluation, mutual control), ability to organize further self-education, selfdevelopment, personal development on the use of weapons, ability to control personal activities). Three levels of formation of skills for use of physical force and weapon engagement by future border guard officers were defined: low, medium and high.

Weapon training is a type of multicomponent training that includes interconnected and interdependent components: intellectual training (studying the basic knowledge of ballistics, the legal basis for transformational changes in weapons and special equipment, the material part of pistols, sub-machine guns, basics of weapon handling), training of techniques (improvement of the firing technique level of a single shot), physical training (solving tasks for working out skills that increase the level of overall shooting effectiveness) and special psychological training (use of psychological diagnostics and correction of cadets in conditions of drills and actual use of weapons).

The first pedagogical condition is a gradual organization of training of future border guard officers for the use of weapons and physical force. Formation of physical readiness is a long-term process and requires coordinated practical training and phasing and continuity of the content of different forms of classes [10]. There is a need to adhere to certain stages in the formation of physical fitness; it is important to separate the stage of initial physical training for the development of physical fitness, the stage of basic development of physical fitness, the stage of development of special physical qualities, and the stage of achieving the final level of physical fitness within the professional-applied physical training and the stage of maintenance of optimal physical capability during the whole time of training.

Thus, first of all, instructors drew attention to ensuring a high level of cadets' motivation to master the knowledge system about the peculiarities of use of physical force and weapon engagement in official activities as well as for self-defence. In addition, the cadets' training of use of physical force and weapon engagement was implemented in three stages: educational, sport and tactical.

The stage-by-stage approach was related to the use of appropriate forms of training. We conducted the formation of skills for use of physical force and weapon engagement by future border guard officers using three main organizational forms of training: training sessions, sport trainings and field exercises.

The second pedagogical condition is to form skills for use of physical force and weapon engagement. It was carried out on the basis of simulation of activities of service situations of border guard officers and by exercising the procedure of actions in extreme situations. In this case, we also took into account the position of the representatives of the activity approach (K. Abulkhanova-Slavska, B. Ananiev, L. Vyhotskyi, O. Leontiev, P. Lesgaft, S. Rubinshtein). According to it, the teaching of any physical actions including methods of use of physical force and weapon engagement is carried out in three stages: knowledge – skills – practice. In such a case, the researchers pay attention to the primary element in the formation of skills and habits – giving the necessary knowledge to subjects of the training. In each lesson, we initially showed the essence of hold (action), tried to give a complete and correct idea of actions when using physical force and engaging weapons. At the stage of studying, we used mainly the method of conversation and presentation. For example, in order to study the action, we called the action, exemplified it in general, and then explained the purpose for which the action is and when it is needed and can

be used. If necessary, we showed the action slowly in general (in parts, sections) explaining the method of execution, emphasizing attention, etc.At first, we paid attention to teaching the methods of use of physical force and weapon engagement as elementary structural units: we formed the ability of cadets to perform actions in standard conditions, that is, in the gym. After studying individual actions, cadets practiced them in combinations, that is, in a set of sequential techniques and actions (movements, punches and blocks). Next, it was envisaged to study the actions and means to use physical force and engage weapons in the personal security system to such a level that they became habitual to each cadet. The logical interconnection of methods and actions of use of physical force and weapon engagement as well as the peculiarities of the technique of their implementation determined the sequence of training of individual holds and actions, based on the didactic principles of systematicity and continuality. Teaching of actions of the use of physical force and weapon engagement was organized in accordance with such basic pedagogical rules as "from easy to difficult", "from simple to complex". In all these cases, the scenarios simulated the real situations of official activities of border guard officers. We drew attention to the fact that none of the scenarios provided for irretrievable situation, that was the situations in which it was impossible be win. We chose situations that could be overcome by taking measures to comply with the requirements of the Decree of the Administration of the SBGS "On approval of the Instruction on the use of weapons, combat materiel, armament of ships (cutters), aircraft and helicopters of the SBGS, special means and measures of physical coercion during the protection of the state border and the exclusive (maritime) economic zone of Ukraine" [10].

It should be noted that we chose exercises to master the skills for use of physical force and weapon engagement against outnumbering opponents, taking into account the most likely variants of techniques and actions. We paid attention to the fact that the cadets should be trained to immediately assess the situation and act. Also while practicing each action during all classes, we emphasized the need to have a positive psychological state, firm confidence in survival and decisiveness to rebuff violators.



Fig.1. Schematic representation of the unity of weapon, psychological and legal training of future border guard officers in the process of developing skills in use of force and weapon engagement

At the same time, we paid great attention to the skills of cadets to provide and then analyse vantage positions. The cadets were trained to analyses the position of a border guard and a suspect, to observe gestures and facial expressions, to find out the position of a vehicle, the location of cover or use of the cover, and the technique to approach an offender/criminal taking into account a specific situation. The next aspect of their analysis is the perception/assessment of a threat, that is, the process of identifying and assessing potential threats, which helps to make necessary decisions and identify appropriate responsive measures. Finally, the cadets had to evaluate the results, determine how effective the taken measures had been and/or what additional measures should be taken. The other pedagogical condition was to ensure the unity of weapon, psychological and legal training based on the principles of the integrative approach (Figure 1). The legal training is considered as a set of legal knowledge, legal beliefs and legal behavior related to the use of weapons. Psychological training involves the formation, support and development of professionally, psychological and moral-volitional important qualities necessary for skillful use of weapons. Experimental groups (EG) and control groups (CG) of cadets by determining quantitative and qualitative values according to the relevant criteria and their indicators. The results of obtained data analysis showed that the quantitative and qualitative changes of EG cadets showed a positive dynamic (Table 1).

Table 1

in control and experimental groups before and after the experiment						
(number, %)						
Cognitive Criterion						
Group	Initial Stage			Final Stage		
	High	Medium	Low	High	Medium	Low
CG	26 (30.23 %)	35 (40.70 %)	25 (20.07 %)	23 (26.75 %)	40 (46.51 %)	23 (26.74 %)
EG	22 (23.91 %)	36 (39.13 %)	34 (36.96 %)	42 (45.65 %)	35 (38.04 %)	15 (16.31 %)
Psychological Criterion						
Group	Initial Stage			Final Stage		
	High	Medium	Low	High	Medium	Low
CG	24 (27.91 %)	37 (43.02 %)	25 (29.07 %)	23 (26.74 %)	42 (48.84 %)	21 (24.42 %)
EG	23 (25.00 %)	40 (43.48 %)	29 (31.52 %)	42 (45.65 %)	35 (38.04 %)	15 (16.31 %)
Physical Criterion						
Group	Initial Stage			Final Stage		
	High	Medium	Low	High	Medium	Low
CG	26 (30.23 %)	38 (44.19 %)	22 (25.58 %)	27 (31.40 %)	38 (44.19 %)	21 (24.41 %)
EG	29 (31.52 %)	33 (35.87 %)	30 (32.61 %)	43 (46.74 %)	39 (42.39 %)	10 (10.87 %)
Reflexive Criterion						
Group	Initial Stage			Final Stage		
	High	Medium	Low	High	Medium	Low
CG	26 (30.23 %)	38 (44.19 %)	22 (25.58 %)	27 (31.40 %)	37 (43.02 %)	22 (25.58 %)
EG	29 (31.52 %)	35 (38.04 %)	28 (30.44 %)	39 (42.39 %)	39 (42.39 %)	14 (15.22 %)

## Comparative level analysis of formation of the ability to use force and weapons in control and experimental groups before and after the experiment

Comparison of data at the beginning and in the end of the experiment made it possible to conclude that, after the measures of the forming stage of the experiment, the number of cadets with the high level of skill development in using force and weapon engagement according to cognitive, psychological, physical and reflexive criteria decreased insignificantly (by 4.65 %, 4.65 %, 6.52 % and 2.17 % respectively). This suggests that individual knowledge started to fade way due to irregular use of it; at the same time, the skills and abilities were updated as they were applied in practice. Summarized results of the control phase of the experiment for all criteria for EG are shown in Fig. 2.



Fig. 2. Summarized results of the control experiment stage with all criteria for the experimental group

The statistical processing of the results of experimental work confirmed the hypothesis of the research, according to which the formation of skills in the use of force and weapon engagement in the process of professional training will be more effective if the suggested pedagogical conditions are implemented.

According to the results of research and experimental work, the methodical recommendations for the scientific and pedagogical staff on the formation of skills for the use of physical force and weapons engagement by future border guard officers in the course of professional training, which reflected the main directions for the scientific and pedagogical staff of the academy: creation of real conditions of the professional activity; increasing of speed activity, term reducing for decision-making for task realisation; decision practicing under opponent counteraction, sudden assault; task formation which require independent and creative solving; to implement the theme about extreme situations during official activity into educational program.

## **3. CONCLUSIONS**

The substantiated pedagogical conditions of forming the skills for use of physical force and weapons engagement by future border guard officers are effective, which is confirmed by the results of the molding experiment. The results of the analysis of the obtained data showed that the quantitative and qualitative changes that occurred in the experimental group of cadets demonstrated positive dynamics. If at the beginning of the forming phase of the experiment, a high proportion of cadets with a low level of formation of the skills for use of physical force and weapons engagement (32.61 %) was noticeable in the experimental group, then in the end of the experiment, it decreased to 15.22 %. The number of cadets with a high level (up to 45.65 %) has significantly increased in experimental groups. Based on the decision rule for the Kolmohorov-Smirnov criterion, it can be argued that the differences in the distribution of cadets of the control and experimental groups by the levels of the formation of the skills of using special means and weapons according to all criteria are statistically significant at the significance level of p=0.05.

Formation of the skills for using physical force and weapons engagement by future border guard officers in the process of professional training is effective under such pedagogical conditions: a gradual organization of the training of future border guard officers for the use of weapons and physical force; formation of knowledge, skills and habits of the use of weapons and physical force on the basis of simulation of service situations of border guard officers and the drill of the action algorithm in extreme situations; provision of the unity of weapon, psychological and legal training based on the principles of an integrative approach; optimization of training methods of future border guard officers by using innovative means.

The conducted research does not cover all aspects of the problem of forming the skills for using physical force and weapons engagement by future officers of the State Border Guard Service of Ukraine in the process of professional training.

The perspective directions for further research are the improvement of the methodology for forming skills of using physical force and weapons engagement, the

study of the factors of educational environment which influence the formation of

skills for use of force and weapons in the higher military educational institutions.

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## Володимир Лемешко, Ольга Лемешко, Олена Янковець, Андрій Янковець. Формування навичок застосування сили і зброї майбутніми офіцерами прикордонної служби в процесі професійної підготовки

В статті досліджено вплив авторської програми підготовки з використання зброї на формування навичок застосування сили та зброї майбутніми офіцерами прикордонної служби в процесі професійної підготовки. У дослідженні взяли участь курсанти ІІІ - IV курсів Національної академії Державної прикордонної служби імені Богдана Хмельницького

(дослідна група, n = 92; контрольна група, n = 86), віком 19–24 років. Функціональний стан курсантів було зареєстровано за допомогою показників у теоретичних і практичних тестах, розроблених авторами, теоретичних (аналіз, синтез, порівняння, узагальнення, систематизація даних наукової літератури та навчально-методичної документації); (педагогічний експеримент, спостереження, інтерв'ювання, емпіричних тестування, анкетування, метод експертних оцінок); та методів математичної статистики (критерій Колмогорова-Смірнова). Навчання тривало терміном 1 рік. У результаті дослідження встановлено, що діючі програми підготовки із застосування зброї не дозволяють повністю навчити прикордонника для виконання покладених завдань. Також було виявлено, що у навчанні застосуванню зброї доцільно використовувати спеціальні вправи, які за своєю структурою були наближені до професійних дій прикордонників. Робиться висновок, що з метою формування навичок застосування сили та озброєння майбутніми офіцерами прикордонної служби в процесі професійної підготовки рекомендовано реалізувати такі педагогічні умови: поступова організація підготовки майбутніх офіцерів прикордонної служби до застосування зброї та фізичної сили; формування знань, умінь і навичок використання зброї і фізичної сили на основі моделювання службових ситуацій посадових осіб прикордонної служби і відпрацювання алгоритму дій в екстремальних ситуаціях; забезпечення єдності вогневої, психологічної та юридичної підготовки на засадах інтегрованого підходу; оптимізація методів навчання майбутніх офіцерів-прикордонників за допомогою інноваційних засобів.

**Ключові слова:** професійна підготовка; застосування зброї; майбутні офіцериприкордонники; вогнева підготовка; педагогічні умови.