Development of general and special physical training of military university cadets

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Abstract

Purpose: It consists in developing the general and special physical training of cadets by improving a set of scientifically based exercises.

Methods: analysis of scientific and methodological literature on the topic; pedagogical observation, pedagogical testing, methods of mathematical and statistical analysis.

Results: At the end of the study, a re-examination of the general and special physical fitness of the cadets of the control and experimental groups was carried out, during which the following results were recorded: in the 10×10 m shuttle run, the control group scored 22.44±1.67 points, while the experimental group scored 23.13±1.09 points., the control group scored 16.81±2.54 points in the 100 m run, the experimental group scored 18.19±1.60, while the control group scored 20.0±2.25 in the 3000 m run, and the experimental group scored 21.13±1.20.

Conlcusion: Analyzing the results of the conducted research, it can be concluded that during pedagogical classes, the use of a set of exercises designed to develop the general and special physical fitness of cadets of military higher educational institutions has allowed to increase the level of physical fitness of cadets.

Keywords: training, physical training, physical education, running, sports work, training, experience, control, physical qualities, special training, physical fitness.

Introduction

Increasing the physical maturity of military personnel, strengthen their health, enhance their body's ability to withstand the adverse effects of the environment and military professional activities, develop physical qualities such as endurance, strength, speed, agility and flexibility, walk in hard-to-reach areas, overcome natural and artificial obstacles, perform hand-to-hand combat actions and form a military-practical swimming skills. Formation of theoretical knowledge and organizational and methodological skills of military personnel in the process of physical training. Physical training is important today for further improving the level of military-special training of personnel, as well as the education of spiritual and moral qualities.

The development of scientifically based approaches to the development of motor skills, physical fitness and physical qualities of cadets is one of the most urgent tasks of our time.

The limited number of hours devoted to physical training requires cadets to master a large number of movement techniques in a short period of time. This, in turn, requires an increase in the effectiveness of the cadet training process for professional and practical physical training. The analysis of the structure and content of physical training classes makes it possible to identify scientifically sound means and methods of improving the effectiveness of the educational process for the physical training of cadets.

In recent years, the development of general and special physical training of cadets has been observed. Many authors argue that performing heavy loads leads to a decrease in the physical fitness of cadets and, as a result, a significant increase in chronic diseases.

Physical education from the earliest stages of society's development is one of the most active means of preparing a person for work and military service, and is of great importance in his adaptation to constantly changing forms of work and social factors.

The main purpose of physical training is the interrelated development of cadets' physical qualities (strength, speed, endurance, agility, flexibility) and the improvement of their skills to effectively use these qualities in various conditions of daily activity. The quality of training of cadets of military higher educational institutions of the Ministry of Defense of the Republic of Uzbekistan largely depends on the scientifically sound organization and content of physical training.

Results and discussion

The main purpose of physical training is to ensure the constant physical readiness of military personnel, the development of their high moral and spiritual qualities for the successful performance of combat and special tasks in a timely manner.

The main tasks of physical training that

Table 1. Indicators of general and special physical training of cadets of the control and experimental groups (scores at the beginning of the experiment)

№	Control tests	Control group			Experimental group		
		$\overline{X}$	σ	V,%	$\overline{X}$	σ	V,%
1.	10×10 m shuttle run (seconds)	22,31	2,18	9,78	22,19	2,04	9,20
2.	100 m run (seconds)	16,44	3,14	19,11	16,31	2,98	18,28
3.	3000 m run (minutes; seconds)	19,88	2,90	14,57	19,75	2,70	13,65
4.	Comprehensive strength training (times)	9,13	2,63	28,82	9,19	2,71	29,53
5.	Pull-ups on a horizontal bar (times)	15,13	5,59	23,76	14,94	3,89	26,04
6.	Jumping off the horizontal bar with a swing back and a 90-degree turn (points)	11,88	1,82	15,34	11,75	1,69	14,41
7.	Obstacle course running (minutes; seconds)	9,44	2,85	30,21	9,31	2,60	27,92

are solved throughout the training session:

- formation of special knowledge, professional skills and qualifications that ensure the successful completion of tasks in the process of activity;
- comprehensive development and improvement of physical qualities: strength, speed, endurance, agility, flexibility;
- to preserve and strengthen the health of cadets, to form a conscious attitude towards systematic physical exercise and sports, and to maintain high performance throughout the entire period of study;
- improving the athletic skills of cadets;
- acquiring the necessary knowledge on the theory, methodology and organization of physical education and sports.

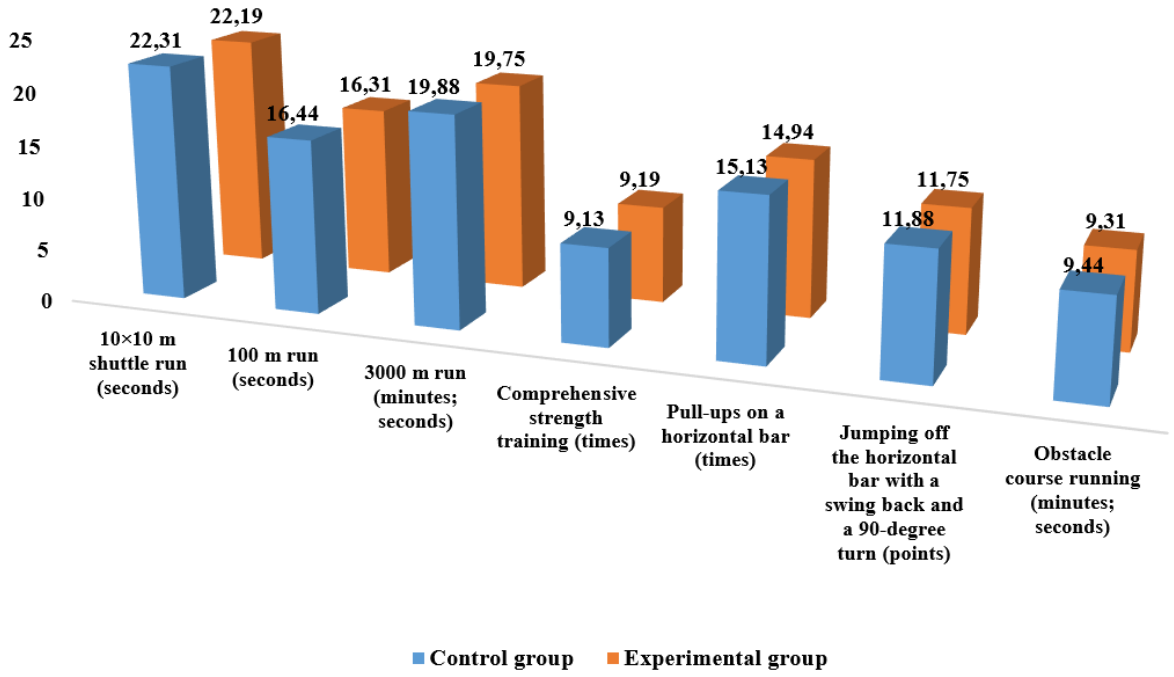
The main advantage of physical exercises as an adaptation factor is that they can be used not only to simulate various situations of professional activity, but, above all, they are the most effective means of developing the necessary physical qualities. Regarding the distribution of means of physical training and the volume of loads performed, a number of authors emphasize that high efficiency of exercises can be ensured by performing loads of sufficient volume in a mixed mode.

It is considered expedient and necessary to increase the total amount of physical education classes to 6-8 hours per week. An analysis of literary sources has shown that sports-oriented training is an effective means of physical education of cadets. As part of the professional and practical physical training of cadets, it is necessary to comprehensively and simultaneously develop strength, speed and endurance, since the development of some physical qualities contributes to the development of others.

Thus, we used 7 control tests to determine the general and special indicators of the cadets' physical fitness. The selected control tests allowed us to determine the level of general and special physical fitness of the cadets. These are: 10×10 m shuttle run, 100 m run, 3000 m run, comprehensive strength training, pull-ups on a horizontal bar, jumping off the horizontal bar with a swing back and a 90-degree turn and obstacle course running. (see table 1).

At the beginning of the study, when checking the general and special physical fitness of the cadets of the control and experimental groups, the following results were noted: in 10×10 m shuttle run control group scored 22,31±2,18, experimental group scored 22,19±2,04, in 100 m run control group scored 16,44±3,14, experimental group scored 16,31±2,98, in 3000 m run control group scored 19,88±2,90 experimental group scored 19,75±2,70, in comprehensive strength training control group scored 9,13±2,63, experimental

Fig 1. Indicators of general and special physical training of cadets of the control and experimental groups (at the beginning of the experiment).



group scored 9,19±2,71, in pulling-up on a horizontal bar control group scored 15,13±5,59, experimental group scored 14,94±3,89, in jumping off the horizontal bar with a swing back and a 90-degree turn control group scored 11,88±1,82, experimental group scored 11,75±1,69, in obstacle course running control group scored 9,44±2,85, experimental group scored 9,31±2,60 (see figure 1).

Based on the data of the above research results, it can be concluded that the general and special physical training of cadets of the control and experimental groups is close to each other.

In addition, it is worth noting that a decrease in the number of hours devoted to practical training in the subject of "Physical training", due to an increase in the number of hours allocated to cadets to study social and humanitarian disciplines, leads to a decrease in physical fitness indicators.

Cadets' physical fitness indicators vary from year to year: they are poor in the first year, better in the second, better in the third, and by the fourth year there is a slight decrease in physical fitness indicators. To maintain the physical fitness of cadets at a high level, it is possible to increase the general and special physical fitness of cadets by improving the set of exercises performed during sports activities.

To develop general and special physical training, as well as the physical qualities of cadets, it is necessary to use various training methods. To improve general and special physical training, it is advisable to use rotational forms of education aimed at developing general and special physical training and improving physical qualities, taking into account the individual characteristics of cadets in the course of sports activities.

During the experiment, we improved a set of special exercises aimed at improving the general and special physical fitness of cadets, and introduced them into the training of cadets during sports activities.

In the course of the pedagogical research, the effectiveness of exercises developed using the circular training method was tested using a set of special exercises that increase the physical fitness of cadets.

Thus, during the study, indicators assessing the physical fitness of the cadets of the experimental and control groups were systematically checked, which made it possible to trace the dynamics of the development of indicators of physical fitness of the cadets of the experimental and control groups (see table 2).

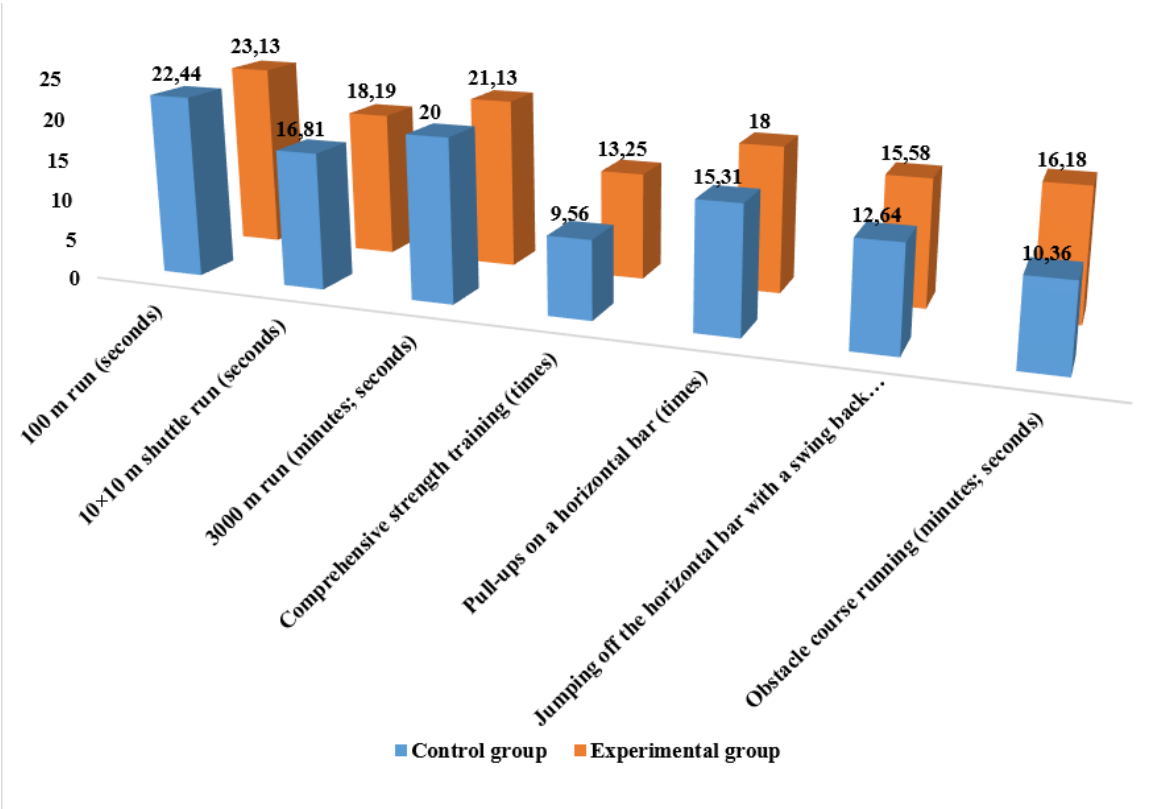
In comprehensive strength training control group scored 9,56±2,37, experi-

Table 2. Indicators of general and special physical training of cadets of the control and experimental groups (scores at the beginning of the experiment)

N	Control tests	Control group			Experimental group		
		$\overline{X}$	σ	V,%	$\overline{X}$	σ	V,%
1.	10×10 m shuttle run (seconds)	22,44	1,67	7,45	23,13	1,09	4,70
2.	100 m run (seconds)	16,81	2,54	15,08	18,19	1,60	8,80
3.	3000 m run (minutes; seconds)	20,0	2,25	11,25	21,13	1,20	5,70
4.	Comprehensive strength training (times)	9,56	2,37	24,74	13,25	1,84	13,92
5.	Pull-ups on a horizontal bar (times)	15,31	3,34	21,81	18,0	1,21	6,73
6.	Jumping off the horizontal bar with a swing back and a 90-degree turn (points)	12,64	1,22	15,42	15,58	1,34	20,87
7.	Obstacle course running (minutes; seconds)	10,36	1,85	19,16	16,18	1,23	19,90

mental group scored 13,25±1,84, in pulling-up on a horizontal bar control group scored

Fig 2. Indicators of general and special physical training of cadets of the control and experimental groups (at the end of the experiment)



15,31±3,34, experimental group scored 18,0±1,21, in jumping off the horizontal bar with a swing back and a 90-degree turn control group scored 12,64±1,22, experimental group scored 15,58±1,34, in obstacle course running control group scored 10,36±1,85, experimental group scored 16,18±1,23 (see figure 2).

Conclusion

Based on the results of the above study, the means and methods of training aimed at improving the effectiveness of general and special physical training of cadets confirmed the hypothesis about the possibility of improving the general and special physical training of cadets. The use of circuit training, which includes a set of exercises that develop strength, speed, endurance, agility and flexibility, allows cadets to improve their general and special physical training.

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