



ANALYSIS OF INDICATORS OF PHYSICAL DEVELOPMENT OF STUDENTS OF SECONDARY SPECIAL EDUCATION INSTITUTIONS

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ANNOTATION

The article describes the results of research conducted to study the physical status of students of secondary special education institutions in order to determine the level of physical development and physical fitness, readiness to serve in the Armed Forces.

Key words

Physical development, professional-practical physical training, qualities of movement, physical training, physical status, program, norms.

In recent years, there is a need to promote physical culture and sports in the country, to implement specific programs in this area that will help strengthen the health of the population, to involve young people in sports.

We conducted research to study the physical development and status of college students to determine their level of physical fitness and readiness to serve in the Armed Forces.

Anthropometric characteristics of adolescents - body length and weight, chest circumference, lung vital capacity and dynamometric characteristics were determined over the years of college.



The results of the study are presented in Table 1.

Table 1.

Indicators of physical development of adolescents studying in secondary

№	Indicators	1 stage			2 stage			3 stage		
		\bar{X}	σ	<u>V, %</u>	\bar{X}	σ	<u>V, %</u>	\bar{X}	σ	<u>V, %</u>
1	Body length (cm)	164.3	3.8	2.3	169.3	3.9	2.3	171.9	3.7	2.2
2	Body weight (kg)	58	2.3	4	59	1.3	2	59	0.9	2
3	ChC (chest circumference) (cm)	78	8.4	10.8	80	4.1	4.7	80	4.2	4.9
4	OTS (ml)	3655	203	8	3770	186	5	3810	118	3
5	Right palm strength (kg)	37.8	3.9	10.3	38.2	4	10.7	39.8	3.6	17.2
6	Left palm strength (kg)	36.7	3.2	8.7	37.1	3.6	9.7	38.4	3.5	9.1
7	Waist strength (kg)	77	20.1	26.1	80	14.6	18.2	82	12.9	15.7

special educational institutions in Fergana region

Body length indicators are the main evaluating factor of physical development, which has the property of indicating the formation of the organism. In the first stage, the body length was 164.3 ± 3.8 cm, in the second stage the difference was 5 cm, and in the third stage the figure increased significantly to 2.6 cm.

An assessment of body weight indicators revealed that they had been growing steadily over the school years. In the first stage, the body weight of adolescents was 58.0 ± 2.3 kg, while in the second stage, an increase trend was observed to 59 ± 1.3 kg. Adolescents in the final stage gained a body weight of 59.0 ± 0.9 kg, which increases the body weight of the first stages by 1 kg and indicates a significant decrease in mobility by the end of the school year.



It was found that in stage I students, when reliability $r < 0.001$ relative to stage II, the chest circumference decreases during the exhalation phase and the OTS (lung capacity) increases, the strength of the right and left palms increases compared to the third stage, and other indicators decrease. It is important to note that the physical development of students in stage I did not improve in the third stage, and only the results did not change when the vital capacity of the lungs was $r < 0.001$.

In the assessment of UTS performance by college students, it was found that no significant differences were found in this test by academic year and that it was within the physiological norms.

The strength ability of the students on the dynamometric readings of the right and left palms showed that no reliable changes were observed in the study data during the entire reading period. Thus, in the first phase, the right palm strength in the students was 37 ± 3.9 kg, while the left palm strength index was 36.7 ± 3.2 kg in the distribution of insignificant variation. By the second stage, no reliable changes were observed in the studied indicators. A similar situation was observed in the third stage, where the improvement over the first stage was 2 kg in right palm strength and 1.7 kg in left palm strength.

The waist strength of college students ranges from 77 to 82 kg during the entire study period, with a decrease in variance rates from 26.1 to 15.7 percent.

Analysis of anthropometric indicators of adolescents studying in colleges in Fergana region showed an unreliable increase in indicators on all studied parameters ($r < 0.001$) during the phased learning process, which is the reason for the shortcomings in the traditional system of physical education of students in the college system.

A comparative analysis of the identified indicators with the norms of the current program of vocational training of students can be the basis for the need to increase the amount of funds aimed at general and special physical training of students.



Adolescents studying in professional colleges and entrants to the military education faculties of higher humanitarian educational institutions also studied the indicators of physical training.

In secondary special education institutions, physical culture will have a specialized practical character associated with service in the Armed Forces and a future profession.

The main task of the PPPT is to maintain and develop the physical qualities of the person associated with the high requirements for specific professional activities, to cultivate the functional stability of the organism and the formation of practical action skills, regional factors affecting the state of the organism. It is known that graduates of professional colleges are called up to serve in the Armed Forces after graduation, so PPPT is included in the form of an independent section of the physical education program for students of these educational institutions.

The analysis of the results of movement training of vocational college students revealed that their physical fitness is low, which affects the successful mastering of the program material on vocational training and service in the ranks of the Armed Forces. Selected tests to assess the physical fitness of students of vocational colleges are taken from the state standards of physical education for secondary special educational institutions and health tests "Alpomish".

The set of physical training tests included running for 100 m, cross-country for 3000 m, 4x10 m for squats, long jump from a standing position, bending and writing arms while lying down, throwing a grenade and pulling on a horizontal bar. The results obtained during the pedagogical testing were processed by the method of mathematical statistics and are given in Table 2.



Table 2

Action training of college students and entrants entering the Faculty of Military Education												
Indicators	1- stage			2- stage			3- stage			Entrant		
	\bar{X}	σ	V	\bar{X}	σ	V	\bar{X}	σ	V	\bar{X}	σ	V
Running to 100m, sec.	14,8	1,1	7,43	14,5	0,9	6,2	14,3	1,1	7,69	14,2	2,5	8,33
Long jump from standing position, m	1,81	18,2	6,18	1,87	23,9	12,7	1,92	23,2	12,08	1,94	7,5	4,41
Pulling on a horizontal bar, times	14,2	0,75	5,28	11,9	0,50	4,20	12,0	0,52	4,33	12	,5,0	16,6
3000 m. to the cross, min.	14:06,0	0,9	6,16	14:04,0	0,8	5,55	13:07,0	1,0	5,83	16:00,0	2,5	15,6
Grenade launching, m	34,	3,6	10,58	36	3,5	9,72	39	3,4	8,71	30	3,5	11,6
Bending and writing hands in bed, fold	24	2,6	9,0	28	4,7	16,78	28	4,3	15,35	20	1,5	7,5
mokisimon running to 4x10 m., sec.	9,5	0,6	6,31	9,4	0,7	7,44	9,2	0,7	7,6	12	0,75	6,25

The analysis of the initial indicators showed that the first-stage students covered an average distance of 100 m in 14.8 ± 1.1 sec. In the second stage, the indicators are on the rise compared to the first stage, faster by 0.3 sec (2.2%) ($t = 3$), and in the third stage, the result is noticeable (0.8%) ($t = 2$). .

A comparative analysis of the speed capacity indicators of students from the time they entered college to the time they graduated showed that the short-distance running result had an unreliable growth trend of 2.86% from the third stage, with a coefficient of variation from 3.7% to 6.3%.

In the assessment of endurance movement quality, it was found that in the first stage the average result of running 3000 m was $14: 06.0 \pm 0.9$ min, in the second stage it increased unreliably by 4.7% ($t = 4.2$), and in the third stage $13 : 07.0 \pm 1.0$ min. (5.2%) ($t = 2.3$).

An analysis of the results of the 4x10 m moxibustion run showed that in Level 1 students, the result was 9.5 ± 0.6 sec. matched, unreliable in the second stage 9.4 ± 0.7 sec. improved and the result grew unreliably by 2.3%.



When assessing the speed-power capacity of college students, which is determined by the indicators of long jump from the standing position, the first stages had a result of 1.81 ± 0.18 m, in the second stage there was an insignificant increase of 1.87 ± 0.23 m, in the 3rd stage it increased to 4 , 8% ($t = 2$), the coefficient of variation ranged from 8.6% to 19.9%.

In the lying-down arm flexion and writing test, the result of the 1st stage students was 24.0 ± 2.6 times, the 2nd stage result increased to 4.28%, and the result did not change at the time of college graduation.

The basis of the special task for college students is to throw a grenade, and it is in all the program-normative documents of the Armed Forces. Therefore, special attention is paid to the quality of this action, which leads to an assessment of their readiness to submit normative indicators. After serving in the Armed Forces, it became important to develop and improve the movement qualities of college graduates who expressed a desire to enter the Faculty of Military Education of the Humanitarian Higher Education Institutions, to determine the consistency of progressive motor skills.

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