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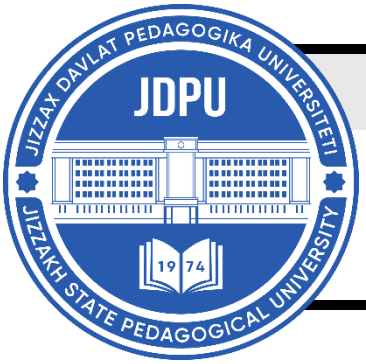

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FORMATION OF PHYSICAL TRAINING OF FOOTBALL PLAYERS OF THE TRAINING GROUP

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ABOUT ARTICLE

Key words: Football, physical training, training group, young football players, speed, endurance, strength, jump, tests, pedagogical experience.

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Abstract: This article analyzes the physical fitness of 13-14 year old football players in a training group. During the research, various tests were used to assess the physical qualities of the football players, reflecting speed, endurance, strength and jumping ability. The results of the experimental and control groups were compared and the average values, standard deviations and coefficients of variation for physical fitness indicators were determined. The obtained research results were analyzed and presented in the article.

Relevance and necessity of the topic: The development of football in the world continues at a rapid pace, and it is not without reason that it is considered one of the most important directions in the world of sports, both now and in the future. International competitions such as the World Cup, Intercontinental Cups, and the UEFA Champions League are a clear example of this. Such competitions demonstrate the high level of physical fitness of players . In particular, it is of particular importance to improve the physical fitness of young players through athletics in order to bring football to a level that allows them to compete with developed countries, train football specialists based on international requirements and standards, develop the activities of football clubs, and effectively organize the training process for national teams.

Purpose of the study: To determine the physical fitness of football players trained in a training group.

Research tasks:

– Analysis of scientific methodical literature and training program on the development of physical fitness of training players.

– Determining the physical fitness of the training group of football players.

Results and their discussion: The level of physical fitness of the young football players we have studied is directly related to their sports results. Because physical fitness is considered a criterion for assessing the level of their fitness. We focused on determining the physical qualities of the experimental and control group participants involved in our pedagogical experiment based on eleven indicators. According to this, the following tests were used: running from a high start for a distance of 15 m, running from a high start for a distance of 30 m, running before the start for a distance of 30 m, running for a distance of 1000 m, testing the explosive power of the legs in a standing long jump, triple jump from a standing, high jump on the "Spork" apparatus, and testing the explosive power of the hands in throwing a 3 kg soft ball with two hands behind the head forward and backward. According to it, the test results are given in the following tables 3.2.1-3.2.2.

3.2. Table 1.

The dynamics of the formation of physical fitness indicators of the experimental group of 13-14-year-old football players - testers at the beginning of the study (t=15)

TG TB	Test takers	15m run from high start (s.)	15m run before the start (s.)	30m run from high start (s.)	30m run before the start (s.)	1000m run (min)	3000m run (min)	Standing long jump (cm)	3 times long jump (cm)	High jump on SPORK equipment (cm)	Throwing a stuffed ball behind the head with two hands (cm)	Throwing a stuffed ball back with two arms (cm)
1	A. Sh.	3.52	3	5.54	5.27	4.02	15.41	188	598	17.25	615	622
2	A. O.	3.65	2.94	5.68	5.41	3.51	14.8	189	614	18	610	614
3	H. U.	2.98	3.01	5.22	5.15	3.59	15.3	184	597	16.8	615	619
4	E. A.	3.52	3.05	5.24	5.2	5	15	182	600	17.2	600	607
5	A. B.	3.56	3.08	5.47	5.18	4.03	15.45	195	602	18.05	615	620
6	R. J.	2.95	2.8	5.33	5.25	4.12	15.26	185	590	16.9	605	608
7	A. A.	2.74	2.71	5.47	5.23	4.13	15.36	184	587	16.5	600	605
8	S. B.	2.57	2.68	5.52	5.44	4.42	14.56	180	590	17	600	606

9	A. Z.	3.62	3.14	5.61	5.47	4	15.46	182	595	17.3	600	605
10	A. I.	3.73	3	5.28	5.14	3.56	16.55	200	605	18.2	620	628
11	K. M.	3.12	2.89	5.25	5.11	4.53	17.4	176	578	18.5	625	633
12	R. J.	3.76	3.2	5.26	5.18	4.18	17.3	175	588	18.8	630	635
13	M. B.	2.97	2.78	5.31	5.25	4.1	17.15	170	585	17.4	600	604
14	U. M.	3.53	2.98	5.22	5.13	4.12	18.3	175	615	16.7	605	608
15	A. A.	3.06	2.9	5.24	5.18	4.34	15.55	176	582	17	600	604
$\overline{X}$		3.29	2.94	5.38	5.24	4.11	15.92	182.73	595.07	17.44	609.33	614.53
σ		0.46	0.44	0.70	0.84	0.62	2.23	29.17	77.16	2.44	97.43	92.03
B, %		13.97	14.98	12.98	15.99	14.96	13.97	15.96	12.97	13.99	15.99	14.98

3.2. Table 2.

The dynamics of formation of physical fitness indicators of the control group of 13-14-year-old football players - testers at the beginning of the study (n=15)

N G Tb	Test takers	15m run from high start (s.)	15m run before the start (s.)	30m run from high start (s.)	30m run before the start (s.)	1000m run (min)	3000m run (min)	Standing long jump (cm)	3 times long jump (cm)	High jump on SPORK equipment (cm)	Throwing a stuffed ball behind the head with two hands (cm)	Throwing a stuffed ball back with two arms (cm)
1	K. M.	3.2	3.1	5.28	5.2	4.15	16.42	178	580	16.5	610	615
2	A. A.	3.3	2.8	5.48	5.2	4.05	14.35	182	592	16.6	590	630
3	T. M.	3.15	2.89	5.25	5.1	4.12	15.25	173	579	16.3	605	600
4	A. M.	3.4	3.08	5.65	5.77	4.08	15.4	195	605	18.05	620	620
5	R. M.	3.25	3	5.3	5.2	4.12	16.45	175	570	16.2	585	625
6	M. Sh.	3.2	2.9	5.22	5.68	4.05	14.8	180	585	16.5	610	602
7	M. D.	3.5	3.2	5.89	5.11	4.41	17.35	190	600	18.5	635	635
8	M. U.	3.2	2.9	5.9	5.5	4.05	14.25	195	615	18	590	622
9	A. M.	3.2	3	5.33	5.26	4.12	15	185	573	17.5	620	615
10	U. M.	3.21	3.3	5.46	5.87	4.05	14.45	175	595	17.1	585	610
11	Sh. B.	3.18	2.89	5.2	5.1	4.22	15.48	180	590	17.2	615	625
12	H. B.	3.42	3.2	5.56	5.3	4.42	17.25	170	575	16.5	610	600
13	K. H.	3.15	2.8	5.25	5.14	4.06	14.7	178	585	16.5	605	615
14	H. B.	3.2	3.4	5.64	5.73	4.33	17.35	174	570	16.6	590	630

15	I. A.	3.1	2.9	5.33	5.28	4.15	16.4	180	582	17.05	610	605
$\overline{X}$		3.24	3.02	5.45	5.36	4.16	15.66	180.67	586.40	17.01	605.33	616.60
σ		0.44	0.44	0.69	0.84	0.61	2.13	28.17	73.97	2.31	88.43	96.11
B, %		13.61	14.62	12.61	15.60	14.61	13.62	15.59	12.61	13.60	14.61	15.59

According to the results, the average time for the experimental group to run from a start to a distance of 15 m was 3.29±0.46 seconds at the beginning of the study, while the average time for the experimental group to run from a start to this distance was 2.94±0.44 seconds. The average time for the 30 m distance to the start was 5.38±0.70 seconds. The average time for the 30 m distance to the start was 5.24±0.84 seconds. The average time for the 1000 m distance, which requires fast endurance, was 251.0±0.62 seconds. The average time for the 3000 m distance, which requires special endurance, was 992.0±143 seconds. The next standing long jump test showed an average result of 182.73±29.17 cm. They achieved an average of 595.07±77.16 cm in the triple jump test. They recorded the result of an average upward jump of 17.44±2.44 cm on SPORK equipment. They showed the average result of 609.33 ± 97.43 cm when throwing the ball forward with two hands, and the average result was 614.53 ± 92.03 cm when throwing the projectile back with two hands.

When we determined the physical fitness of the control group subjects in the pedagogical experiment, they noted the following results.

According to the results obtained from the control group, the average time for the subjects to run from a high start to a distance of 15m was 3.24±0.44 seconds at the beginning of the study, and the average time for the run before the start to a distance of above 3.02±0.44 seconds. The average time for the run to a distance of 30m from a high start to a distance of 5.45±0.69 seconds. The average time for the run to a distance of 30m before the start was 5.36±0.84 seconds. The average time for the run to a distance of 1000m, which requires fast endurance, was 255±0.61 seconds. The average time for the run to a distance of 3000m, which requires special endurance, was 966±133 seconds. In the next test, they achieved an average result of 180.67±28.17 cm in the standing long jump , and an average result of 586.40±73.97 cm in the triple jump test. In the high jump on the SPORK apparatus, they achieved a high jump with an average result of 17.01±2.31 cm. In determining arm strength, they achieved an average result of 605.33±88.43 cm in throwing a soft ball forward above their head with two supports, and 616.60±96.11 cm in throwing the same projectile backward with two supports.

Table 3.2.3.

Comparison of the statistical characteristics of the physical fitness indicators of the experimental (n=15) and control (n=15) groups of 13-14-year-old football players - testers at the beginning of the study

Head	Experience Guru $\overline{X}$	σ	B, %	The control group $\overline{X}$	σ	B, %	AF	NF	t	P
15m run from high start (s.)	3.29	0.46	13.97	3.24	0.44	13.61	0.04	1.26	0.25	>0.8
15m run before the start (s.)	2.94	0.44	14.98	3.02	0.44	14.62	0.08	2.72	0.50	>0.6
30m run from high start (s.)	5.38	0.70	12.98	5.45	0.69	12.61	0.07	1.36	0.29	>0.7
30m run before the start (s.)	5.24	0.84	15.99	5.36	0.84	15.60	0.12	2.35	0.40	>0.6
1000m run (min)	4.11	0.62	14.96	4.16	0.61	14.61	0.05	1.18	0.22	>0.8
3000m run (min)	15.92	2.23	13.97	15.66	2.13	13.62	0.26	1.65	0.33	>0.7
Standing long jump (cm)	182.73	29.17	15.96	180.67	28.17	15.59	2.07	1.13	0.20	>0.8
3 times long jump (cm)	595.07	77.16	12.97	586.40	73.97	12.61	8.67	1.46	0.31	>0.7
High jump on SPORK equipment (cm)	17.44	2.44	13.99	17.01	2.31	13.60	0.43	2.48	0.50	>0.6
Throwing a stuffed ball behind the head with two hands (cm)	609.33	97.43	15.99	616.60	96.11	15.59	7.27	1.19	0.21	>0.8
Throwing a stuffed ball back with two arms (cm)	614.53	92.03	14.98	605.33	88.43	14.61	9.20 2.57	1.50 1.66	0.28	>0.7

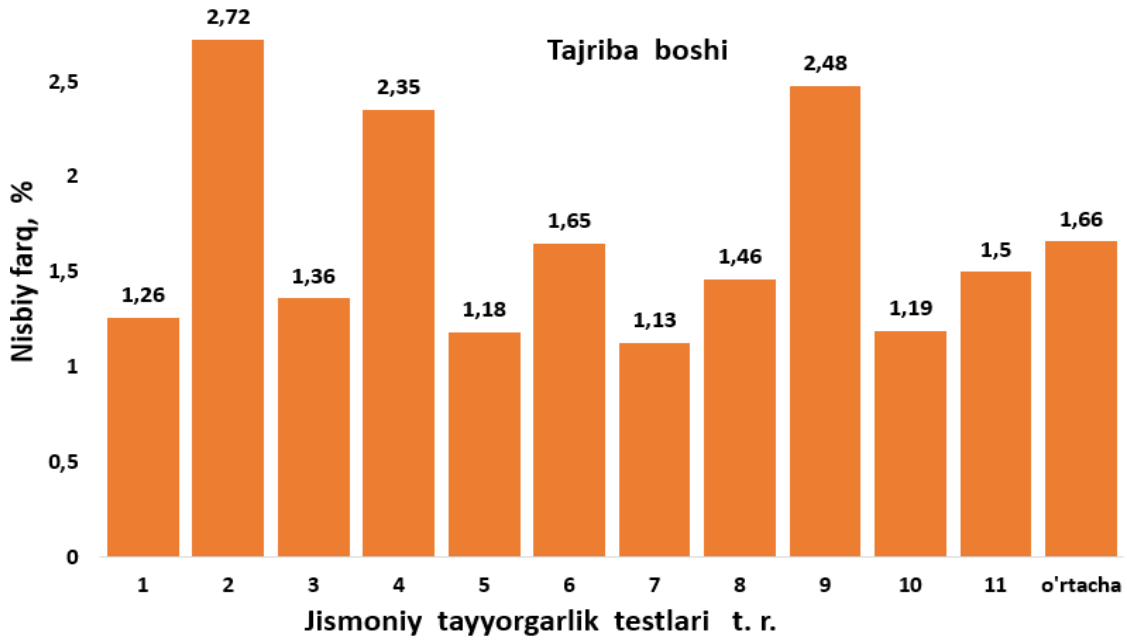

Figure 1. Diagram of the relative differences (in percentages) of the average arithmetic values of the level of physical fitness of the 13-14-year-old football players of the experimental and control groups at the beginning of the experiment

At the beginning of the study, the analysis of the physical fitness level of 13-14-year-old football players in the experimental and control groups was assessed using various tests. The average values, standard deviations, and coefficients of variation of the main physical qualities of the test subjects of the experimental (n=15) and control (n=15) groups were calculated. Analysis of the data obtained showed that there was no significant difference between the capabilities of the groups.

When the obtained results were analyzed, running from a high start to a distance of 15 meters was equal to 3.29±0.46 s in the experimental group, and 3.24±0.44 s in the control group. Also, the results of the 15-meter run before the start showed that it was 2.94±0.44 s in the experimental group and 3.02±0.44 s in the control group. These results showed that football players are almost equal in terms of short-distance sprinting capabilities in the cross-section of groups (R>0.6–0.8).

The 30 m sprint also had similar values, with the experimental group achieving a high start time of 5.38±0.70 s and the control group achieving 5.45±0.69 s . The experimental group achieved a 30 m sprint time of 5.24±0.84 s and the control group achieved 5.36±0.84 s. The differences were very small and not statistically significant (P>0.6–0.7).

In the 1000 m sprint, which requires high-speed endurance, the experimental group recorded a time of 251±0.62 seconds, while the control group recorded a time of 255±0.61 seconds. Similarly, in the 3000 m sprint, the experimental group recorded a time of 992±143 seconds, while the control group recorded a time of 966±133 seconds. These indicators also did not differ statistically significantly (P>0.7–0.8).

According to the results of the jump tests, the average long jump in the experimental group was 182.73±29.17 cm, and in the control group - 180.67±28.17 cm, and the results of the 3-fold long jump were 595.07±77.16 cm and 586.40±73.97 cm, respectively. The high jump on the SPORK apparatus was 17.44±2.44 cm in the experimental group, and 17.01±2.31 cm in the control group, the difference was not significant (P>0.6–0.7).

Throwing a filled ball forward behind the head with two hands, representing the explosive power of the hand, recorded the result of 609.33±97.43 cm in the experimental group, and 616.60±96.11 cm in the control group. It was 614.53±92.03 cm and 605.33±88.43 cm, respectively, when throwing the same projectile back with two hands. These indicators were also shown to be statistically unreliable (R>0.7–0.8).

Conclusions.

– At the beginning of the study, there was no statistically significant difference between the physical fitness indicators of the players in the experimental and control groups (R>0.05). This means that the initial opportunities of the players of the two groups are equal, and it creates a basis for an impartial assessment of the effectiveness of the pedagogical experiments conducted at the next stage.

– According to the results of the pedagogical experiment, there were no significant differences in the level of physical fitness of the experimental and control group participants at the beginning of the study. This makes it possible to continue the study with them.

– When comparing the results of pedagogical experiments with data provided by foreign scientists, it was found that there are differences between them in the tests of rapid endurance and special endurance. Therefore, based on the results obtained, it is necessary to develop and implement a set of exercises aimed at increasing the rapid endurance and special endurance of football players.

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