



**DETERMINING THE LEVEL OF DEVELOPMENT OF PHYSICAL
QUALITIES THROUGH THE ANALYSIS OF THE GENERAL PHYSICAL
FITNESS CONDITION OF TAEKWONDO ATHLETES.**

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Annotation: This article analyzes the general physical fitness condition of taekwondo athletes and identifies the development level of their key physical qualities: strength, speed, agility, endurance, and motor coordination. Based on the results of the study, recommendations are provided for evaluating and improving the athletes' level of preparedness.

Keywords: taekwondo, physical fitness, analysis, physical qualities, tests, evaluation.

**АНАЛИЗ ОБЩЕЙ ФИЗИЧЕСКОЙ ПОДГОТОВЛЕННОСТИ
ТАКВОНДИСТОВ С ЦЕЛЮ ОПРЕДЕЛЕНИЯ УРОВНЯ РАЗВИТИЯ
ФИЗИЧЕСКИХ КАЧЕСТВ**

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Аннотация: В данной тезисной работе проведён анализ эффективности применения комбинационных боевых действий спортсменами в процессе





подготовки таэквондистов к тренировкам и соревнованиям. С целью изучения мнений квалифицированных тренеров были проведены анкетные опросы. На основе полученных данных специалистами были разработаны предложения и рекомендации по эффективному использованию боевых комбинаций в подготовке таэквондистов.

Ключевые слова: комбинация, техника, тактика, тренер, движение, тхэквондо, специалист, тренировка, соревнование, боевой.

Introduction In taekwondo, achieving high performance results requires not only technical, tactical, and psychological preparation but also a well-developed level of general physical fitness. Physical fitness plays a crucial role in determining an athlete's motor activity, endurance, agility, and striking power. Therefore, the systematic evaluation of athletes' physical qualities is an integral part of the training process.

Relevance of the Study In the context of the rapid development of modern sports, achieving high results in taekwondo requires athletes to possess comprehensive and well-rounded preparation. In particular, general physical fitness serves as a decisive factor in effectively demonstrating technical and tactical skills. In taekwondo matches, physical qualities such as speed, agility, strength, and endurance directly influence the outcome and contribute to victory. Therefore, systematically assessing athletes' physical condition and tailoring their training to their individual capabilities is one of the key priorities in the training process. Moreover, the level of physical fitness has a direct impact on injury prevention and the athlete's ability to perform the coach's instructions correctly and efficiently. From this perspective, applying individual approaches and scientifically grounded testing methods in the physical preparation of taekwondo athletes remains an essential component of modern training systems.





Research Objective The objective of this study is to determine the general physical fitness condition of athletes and to assess the level of development of their key physical qualities.

Object of the Study The practical training process of taekwondo student-athletes from the national Olympic and Paralympic sports training centers was taken as the object of the study.

Research Tasks

1. To assess the level of development of key physical qualities by determining the general physical fitness condition of taekwondo athletes.

In the course of the study, surveys were conducted among coaches of national Olympic and Paralympic sports training centers as well as sports schools. General physical fitness (GPF) is a system of training aimed at developing an athlete's key physical qualities: strength, endurance, speed, agility, and flexibility. In taekwondo, these qualities are essential for the correct and effective execution of every technical movement, for making quick and accurate decisions in combat situations, and for injury prevention. Through GPF, the athlete's overall functional state is improved, creating a necessary foundation for specialized training.

The physical qualities of taekwondo athletes were assessed using the following tests:

1. **Flexibility** – Forward bend on a gymnastics bench (cm)
2. **Speed** – 60-meter sprint (in seconds)
3. **Strength** – Handgrip strength measurement (dynamometer)
4. **Explosive strength** – Standing long jump (cm)





Table-1

General Physical Fitness Indicators

№	S.N	Class	60 m	Standing Long Jump	Sit and Reach Test on a Gymnastics Bench	Hand Grip Strength Measurement	
						right	left
1	Ilxomov Sh	5	11,36	1,62	4	23,6	21
2	Abdumalikov S	5	9,7	1,82	0	28,4	30,7
3	Abdullayev L	5	9,48	1,85	7	23,9	22,2
4	G'iyosiddinov X	6	9,38	1,77	7	22,6	19,2
5	Obloqulov N	6	9,95	1,8	11	23,4	22,7
6	Raxmatqulov Ch	6	9,52	1,77	11	23	25,8
7	Xamrokulov S	6	9,89	1,73	23	25,8	24,3
8	Qamaridinov H	6	9,48	1,88	10	28,6	28,9
9	Axrоров H	7	10,33	1,9	8	27,2	26,2
10	Musratullayev T	7	8,39	2,1	6	29,5	25,3
11	G'iyosiddinov I	8	8,39	2,12	10	31,7	27,2
12	Ibragimov I	8	8,79	2,06	16	38,8	34,4
13	O'lmasova D	8	10,58	1,63	18	24,9	23,1
14	Shirinqulova Sh	9	9,12	2,16	23	31,9	25,1
15	Xolmirzayev A	9	8,57	2,25	26	34	38,1



16	Shokirov A	9	8,48	2,26	21	50,3	45,9
17	Xabibullayev O	9	8,91	1,99	4	24	25,7
18	Raxmatullayev D	10	8,48	2,25	28	48,8	34,8
19	Raxmatullayev S	11	8,39	2,33	26	43,4	46,6
20	Ergashev U	11	8,7	2,26	18	47,9	42,9
21	G'oziyev H	11	8,81	2,1	16	38,3	38,9
22	Habibullayev N	11	8,6	2,27	22	53,3	47,5

Research Results and Discussion According to the results of this study, the table presents indicators of several physical qualities among students from grades 5 to 11: 60-meter sprint (speed), standing long jump (explosive strength), forward bend on a gymnastics bench (flexibility), and handgrip strength (measured separately for the right and left hand). The analysis shows that students' physical indicators improved steadily depending on their age and grade level.

Speed (60-meter sprint): The best result was achieved by 8th-grade students – G'iyosiddinov I. and Musratullayev T., with a time of 8.39 seconds. The slowest result belonged to Ilxomov Sh., who completed the sprint in 11.36 seconds. This highlights the importance of extracurricular physical education activities.

Standing Long Jump: Jump results exceeding 2 meters were more common among upper-grade students. The highest performances were recorded by Shokirov A. (2.26 m), Rakhmatullayev S. (2.33 m), and Kholmirezayev A. (2.25 m).

Flexibility (Forward Bend): An increase in flexibility was also observed with grade progression. In 5th grade, the results were minimal (0–7 cm), while in grades 9 to 11, they reached up to 20–28 cm.





Handgrip Strength: The highest result in handgrip strength was recorded by 11th-grade student Habibullayev N.: 53.3 kg with the right hand and 47.5 kg with the left hand. In general, it can be observed that strength indicators increase with age among students. The analysis shows that as students grow older and progress through grades, their physical fitness indicators improve accordingly. This proves that physical qualities can be effectively developed through systematic training and age-appropriate workloads. Regular monitoring of physical fitness levels and the application of individualized approaches contribute to the improvement of motor qualities. In turn, this supports the development of combat movement combinations in taekwondo athletes.

Conclusions. The results of this study indicate that regular analysis of taekwondo athletes' general physical fitness allows for their individual development. Systematic assessment of physical qualities serves as a foundation for their improvement and enhances the quality of competition preparation.

References

1. Tursunaliyev U.Sh. Modern stages of development of training preparation in the process of initial taekwondo training // Eurasian Journal of Sport Science. Vol. 1: Iss. 2, Article 7. 2022. P 69-73.
2. Рахматов Б.Ш. “Ёш таэквондочиларда мувозанат сақлаш турғунлиги ва ҳаракат аниқлигини вестибулосоматик машқлар ёрдамида ривожлантириш самарадорлиги. Педагогика. фан. (PhD)...дисс.автореф.-Чирчик: ЎзДЖТСУ; 2022.
3. Тажибаев С.С. Ўсмир яккакурашчиларнинг комплекс тайёргарлигида ҳаракатли ўйинларни қўллаш методикасини илмий-педагогик асослаш: Пед. фан. (DSc)...дисс.автореф.-Чирчик:ЎзДЖТСУ, 2019.-77





4. Юсупова Н.Ш. Ёш таеквондочиларнинг (WT) махсус жисмоний тайёргарлигини инновatsion технологиядан фойдаланган ҳолда назорат қилиш методикаси. Педагогика. фан. (PhD)...дисс.автореф.- Чирчиқ:ЎзДЖТСУ; 2022.

5. *K.J.Park. (2023) Comparison of subjective and objective evaluation of back injuries of elite taekwondo athletes // Science & Sports. Volume- 1-7. <https://doi.org/10.1016/j.scispo.2023.12.001>.*

