

# DEVELOPMENT OF PHYSICAL QUALITIES OF PRESCHOOL CHILDREN

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**Abstract:** This article introduces a special set of exercises for the effective organization of the process of physical education for preschool children, the development of their physical qualities in relation to their age, as well as the development of levels of physical fitness. The purpose of our research is to carry out a study into the development of physical qualities of children aged 5-7, as well as the analysis of indicators of physical development of preschool children. As the correct physical education of preschoolers is one of the most significant importance, this article intends to assist with providing general and specific ways in order to preserve the health of preschoolers. Furthermore, their positive impacts on physical development, the formation of motor skills, physical qualities of them.

**Key words:** preschool education, physical development, physical preparation, physical qualities, physical activity, education, motor skills, physical development indicators, non-governmental preschool educational institution, physical load.

## INTRODUCTION.

It can be inferred that the government has been paying great attention to the development of each sphere in our country, and it has already reached a political level. The main focus has been on the pedagogical process aimed at radically improving the system of preschool education, comprehensive intellectual, moral, aesthetic and physical development of children, preparation of children for school education effectively and the introduction of modern educational programs and technologies in the educational process. According to the final statistical analysis of 2018, there are 5770 state and 1808 non-governmental preschool educational institutions in Uzbekistan where 876 443 boys and 48435 girls are educated. Considering all this information, it is of paramount importance of taking care of the

life and health of preschool children in all aspects, as well as emphasizing effective organization of the educational process.

In the implementation of the tasks set out in the Decree of the President of the Republic of Uzbekistan dated December 29, 2016, № PD-2707 "On measures to further improve the system of preschool education in 2017-2021", the Decree № DP-5198 of September 30, 2017 "On measures to radically improve the management of the preschool education system", the Decree of the President of the Republic of Uzbekistan dated April 5, 2018, № PD-3651 "On measures to further stimulate and develop the system of preschool education", The order of the Ministry of Preschool Education of the Republic of Uzbekistan "State requirements for the development of primary and preschool children of the Republic of Uzbekistan" dated June 18, 2018, № 1-mh as well as other relevant regulations in this sphere, this pioneering research plays a crucial role [1,2].

In the scientific researches on the formation and development of basic movements, skills and abilities that are necessary in preschool children for their future life conducted by T.S. Usmankhodjayev, A.N. Livitsky, K.M.Makhamjanov, R.S.Salomov, and based on the theory of health of preschool children and their adaptation to physical activities, in scientific researches done by F.Kh. Khodkhayev, G.K.Jalolova, F.A. Raimbekova pointed out that one of the most pressing issues in the theory and practice of physical education today is the development of ways to develop the physical fitness of a large group of children in preschool education [7,8].

#### **MATERIALS AND METHODS.**

The aim of the study is to improve the physical development and physical fitness of children aged 5-7 years through exercise, whereas in terms of objectives of the research, they are the followings:

- ✓ analysis of scientific and methodological literatures on the subject;
- ✓ determination of indicators of physical development of children aged 5-7 in preschool education;

- ✓ providing a practical justification of the level of physical fitness of children aged 5-7 years by using exercises.

Research methods such as analysis of scientific and methodological literatures, pedagogical observation, interviews, surveys, pedagogical testing, mathematical statistics were used in the implementation of research. The experiment was conducted on 200 children 5-7 years that were being educated in nursery schools called "Kichkintoy", "Yulduzcha" and "Kaldirgoch" located in Chilanzar and M.Ulugbek districts of Tashkent respectively.

To determine the physical development and physical preparation of preschool children, scientists such as L.P. Matveev, L.I. Penzulaeva, V.I. Lyah, V.M. Shebeko, T.S. Usmankhodjaev, A.N. Livitsky, R.S. Salomov and K.M. Makhkamjanov carried out their own researches, yet the rapid development of modern theory and practice, as well as the growing demands on education require the use of modern methods for the development of physical preparation of children 5-7 years. [8,9].

## **RESULT AND DISCUSSION.**

Physical activity is a period of formation of necessary skills and abilities for a person, especially in childhood and adolescence. Failure to engage in physical activity leads to insufficient development of children's creative activity and physical abilities. Restricting or disrupting movement and action has its negative impacts on all aspects of life. Research to date has presented that a considerable amount of efforts is required for a growing organism in childhood. However, physical inactivity reduces children's ability to fight fatigue quickly, infectious diseases, slow growth, stunted mental and cognitive development. Children who enrol for physical activities mostly are able to develop a natural desire for physical and mental development.

The judicious use of mental and physical loads is of paramount importance for the full development of children. It is highly recommended using them extensively in the planning of physical education activities on account of being at the top of the agenda. Therefore, attention should be paid to the physical development of the

children from their early ages. The results of physical development indicators for 5-7-year-old boys and girls who are taken care of by educators in nursery school located in Tashkent city are presented in Table 1.

**Table 1**

**Analysis of indicators of physical development of preschool children**

№	Age	5	6	7
	Tests	$\bar{x} \pm \sigma$	$\bar{x} \pm \sigma$	$\bar{x} \pm \sigma$
<b>Boys</b>				
1	Height (cm)	104,3±0,43	110,3±0,48	116,5±0,61
2	Weight (kg)	17,4±0,23	18,0±0,14	20,3±0,23
3	Hand strength: right hand (kg)	5,0±0,18	7,0±0,22	8,0±0,23
	left hand (kg)	4,9±0,16	6,6±0,26	6,9±0,23
4	Width of chest: in a calm state	55,0±0,34	61,8±0,43	60,7±0,44
	breathing	56,6±0,29	64,0±0,36	62,2±0,39
	exhaling (cm)	53,7±0,32	59,7±0,31	57,5±0,41
<b>Girls</b>				
1	Height (cm)	100,2±0,49	109,7±0,45	113,0±0,47
2	Weight (kg)	15,3±0,18	18,7±0,2	19,6±0,21
3	Hand strength: right hand (kg)	3,1±0,15	4,8±0,21	6,9±0,15
	left hand (kg)	3,7±0,13	6,1±0,23	7,3±0,19
4	Width of chest: in a calm state	53,8±0,2	55,0±0,25	56,0±0,28
	breathing	55,4±0,24	57,9±0,25	59,0±0,3
	exhaling (cm)	52,6±0,2	54,0±0,27	54,7±0,26

Speed-power quality indicators (long jump control exercise) varied as follows: increased by 16.7 cm in 5-6-year-old boys and 26.6 cm in girls, and by 12.1 cm in 6-7-year-old boys whilst in girls it increased by 12.2 cm. Even though the results shown among 7-year-old girls and boys were low, the results from girls were equal to the

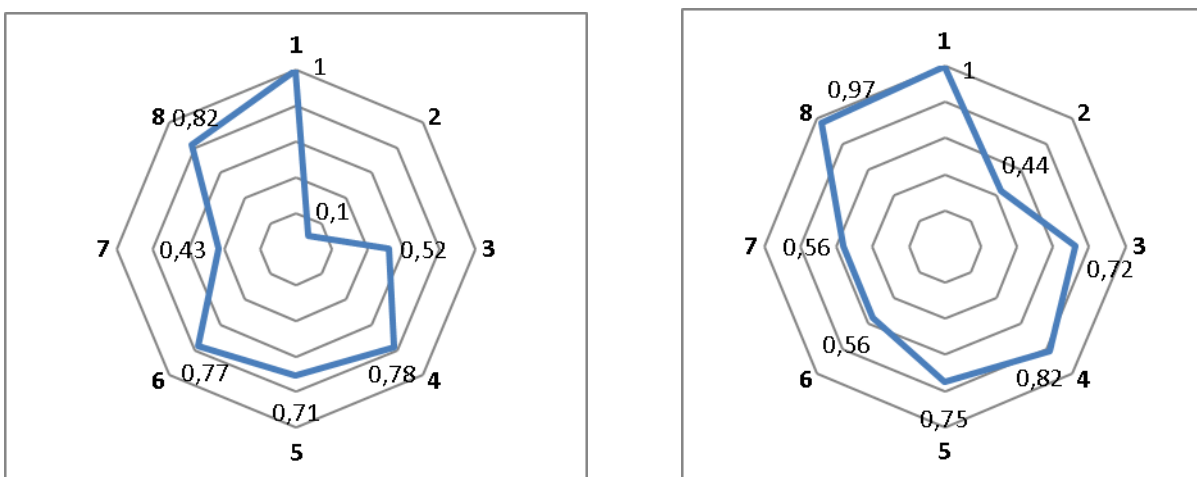
results of boys. This indicates that the means of physical training were incorrectly selected and little attention was paid to exercises for the development of speed-power quality.

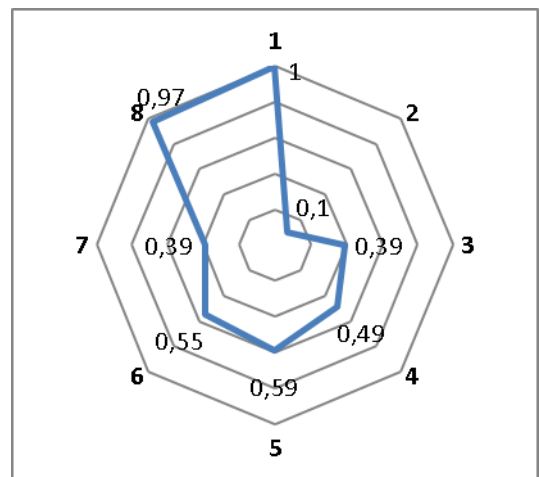
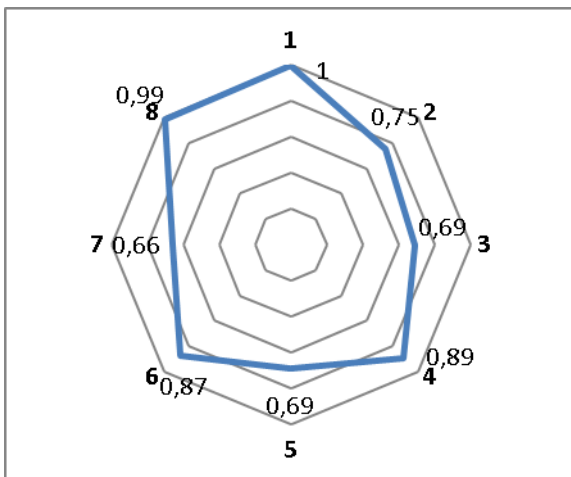
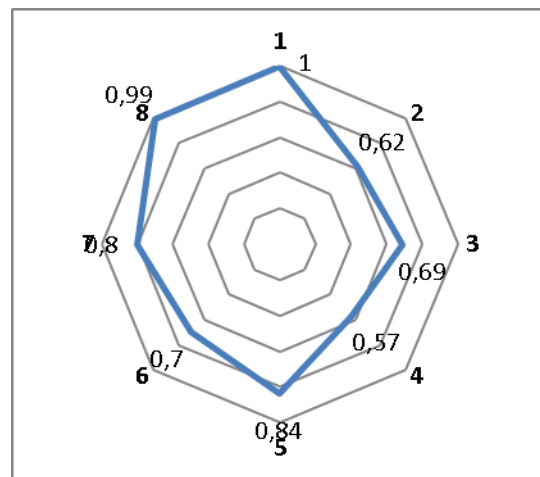
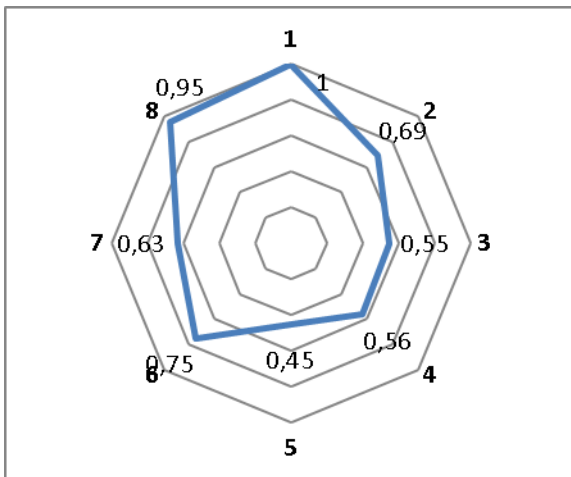
To properly organize children's physical education, physical development, training from a methodological and pedagogical point of view, it is important to have a good knowledge of children's physiology and psychology, and on the basis of this information should set specific tasks before each lesson. The number of tasks is 2-3, and the main actions, exercises as well as movement and action games are selected according to the tasks. Firstly, the selected exercises should be related to the basic movements, and secondly, be appropriate for the ages, preparation, and gender of the children. Moreover, these exercises should be simple, understandable, familiar and achievable for children. Only in this way children are able to develop their movement skills and become competent.

Physical fitness and development of children is the rudimentary foundation of their upcoming healthy lifestyle. The quality of physical development and preparation of children depends on the use of modern methods and forms, as well as the pedagogically correct organization of the process of physical education.

**Diagram 1**

**Analysis of the correlation of physical fitness indicators of 5-7-year-old children**





1. Run 30 m (seconds)
2. Shuttle run 4x10 m. (seconds)
3. Standing long jump (cm)
4. Medicine ball throws (cm)

5. Standing forward bend (cm)
6. Abs workout (count)
7. Sandbag throws (m)
8. Right and left

According to the research results, the ability of a large group of children to perform speed exercises increased from year to year (from 10.0 seconds to 6.9 seconds). Regarding with the results of girls, the figures are from 0.7 to 1,9 seconds. These figures represent that the results of boys and girls in performing speed exercises among preschool-age children have not differed much from each other.

According to the information presented by Professor A.N. Livitsky, the average running for 30 meters is 8.7-7.9-7.6 seconds in 5-6 year old boys, whereas 9.3-9,0-8,3 seconds in 5-6-7 year old girls. As seen from the data we obtained, the

figure is 10.0-10.5; 9.5-9.8; 8.6-8.9 seconds correlatedly. Despite the fact that results that mentioned above are not statistically different, we can observe that the speed quality results in children aged 5-7 years prepared for the experiment are relatively low (see Table 2).

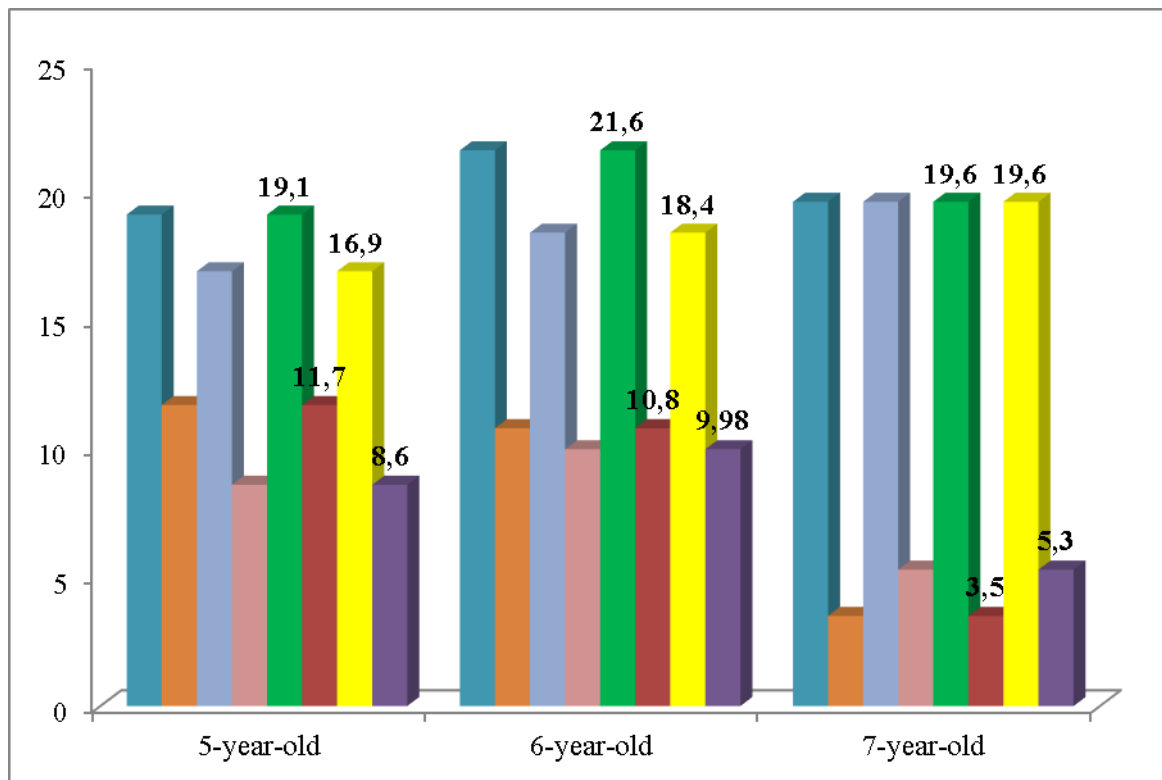
**Table 2**

**Preliminary and final results on physical fitness of children with 5-7 in the experimental group**

№	Exercises	gender	5-7 year old			
			Initial $\bar{x} \pm \sigma$	Final $\bar{x} \pm \sigma$	t	P
1	30 metre (seconds)	Boys	10,0±0,55	8,2±0,45	2,53	< 0,05
		Girls	10,5±0,34	8,1±0,32	5,15	< 0,001
2	4x10 m (seconds)	Boys	17,2±1,05	13,9±0,77	4,27	< 0,05
		Girls	17,7±0,68	14,7±0,33	3,97	< 0,05
3	Standing long jump (cm)	Boys	79,0±5,10	97,0±1,95	3,33	< 0,05
		Girls	75,0±7,0	94,0±5,72	2,11	< 0,05
4	Standing overhead medicine ball throw (cm)	Boys	59,0±5,5	98,0±4,8	5,30	< 0,05
		Girls	55,0±8,2	95,0±8,27	3,43	< 0,05
5	Middle-legged Seated forward bend (cm)	Boys	3,9±1,92	8,9±1,41	2,17	< 0,05
		Girls	4,9±1,29	8,8±1,34	2,16	< 0,05

A comparative analysis of the performance of the children in the experimental and control group presented that the results of the boys and girls increased significantly (Table 2) ( $t = 2,12,2,31$ ;  $P < 0,05$ ) after the pedagogical experiment. This means that the boys in the experimental group improved by 1.1 seconds compared to the control group and were up 11.8% while the girls improved by 1.2 seconds and were up 12.9% during the whole year.

The results of the 6-year-old experimental group children improved by 2.1 seconds that was 29.1% higher, similarly, girls' performance increased by 2.1 seconds as well, that was 21.4% higher than the results obtained at the beginning of the year (see Table 2).



*Histogram of physical fitness results for 5-7 year old boys and girls.  
4x10 m. Shuttle run (seconds).*

## **CONCLUSION.**

During the scientific and methodological literature analysis, it became crystal clear that there is conspicuous lack of information on the physical development and physical fitness of children 5-7 years.

The issues of organization of trainings in preschool educational institutions have not been developed and improved now, scientifically proven information on the directions of the pedagogical process is insufficient.

The results of painstaking research has represented that the levels of physical development and physical fitness of children aged 5-7 years do not correspond with the requirements of the program of nursery school. Speed, coordination skills and speed strength (standing long jump) are less than 18.2-51.8%; 24.3-27.2%; 29.0-26.7%, 40.3-38.7%; 32.8-29.7%; 17.3-17.9% as well as 28.9-61.7%, 6-18.1%, 15.0-13.5% correlatedly.



It was found that there is a correlation (medium and high) between physical development and physical fitness indicators. (from  $r=0,35$  to  $r=0,95$ ). Furthermore, it should be noted that in 5-year-old boys and 7-year-old girls there is a relatively low correlation between the indicators of speed, agility and fast-strength qualities.

Criteria for assessing the physical development and physical fitness of 5-7-year-old boys and girls have been developed, as well as comprehensive physical fitness are conditionally set out in the normative document of the Ministry of Preschool Education dated June 18, 2018, № 1 "State requirements for the development of primary and preschool children."

"Salomatlik pasporti" has been developed. It is conducted from the time a child arrives at the preschool until graduation. This will provide an opportunity to individually assess the physical fitness of children in preschool education.

The inclusion of national games (10-30%) and competition-style play in the physical education process of preschool children helped to stimulate children's interest in learning, increase their general physical fitness, and strengthen their mastery of program materials.

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