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BASIC GYMNASTICS EXERCISES FOR THE PHYSICAL DEVELOPMENT OF PRIMARY SCHOOLERS

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Abstract: It can be inferred that regular physical activity helps to further increase the rate of physical development, namely being physically active can improve brain health, help manage weight, reduce the risk of disease, strengthen bones and muscles, and improve ability to do everyday activities. Gymnastics for primary school children, like other sports, enhances physical development by providing an outlet for them to develop skills such as strength, flexibility, coordination, balance, and body control, all while laying a strong foundation for a healthy habit of physical fitness throughout their lifetime. Furthermore, it provides a chance for them to acquire not just physical skills, but also social and emotional skills that will be a compass for their foreseeable future. While the primary school gymnastics teacher plays with pupils in her class, she is preparing them for successful experiences in school. Children who have participated in movement education activities have longer attention spans, increased communication skills, general problem-solving skills and improved self-esteem. Thus, this article covers the effectiveness of using basic gymnastics tools in the physical development of primary school children. The creation of pedagogical conditions, correct organization of the gymnastics exercises allows us to conduct high-quality physical education classes based on basic gymnastics tools that help to make PE lessons more captivating.

Keywords: physical education, motor activity, psychological and morphofunctional abilities, action and movement games, gymnastic exercises, Commonwealth of Independent States, handgrip strength, vital capacity.

INTRODUCTION. Gymnastics is one of the main tools in the system of physical education of primary school children in general secondary schools around the world. Considerable amount of scientific researchers have been conducted on the use of basic gymnastics in primary schoolers, the development of methods of teaching gymnastics as well as general developmental gymnastics for children. Gymnastics tools including hanging, leaning, balance, acrobatics, jumping exercises help to enhance their basic qualities in the comprehensive development of pupils and increase motor activity. Moreover, it is widely used as a leading tool in educating the younger generation, strengthening the intellectual, psychological, morphofunctional abilities of them. At present, specialists in this field are required to improve the teaching process, organize physical education classes at a high standard, develop tools and methods for the selection, conduct gymnastic exercises effectively and efficiently.



Pictures - 1

The period of primary school age covers 7-10 years. During this period, the foundation for all-round physical development is laid. During that period body structure type, the ability to perform various movements and their health begin to

form and strengthen. According to scientists, one of the main criteria for the health of school-age children is their physical development. (*J.K. Kholodov; V.S. Kuznetsov*)

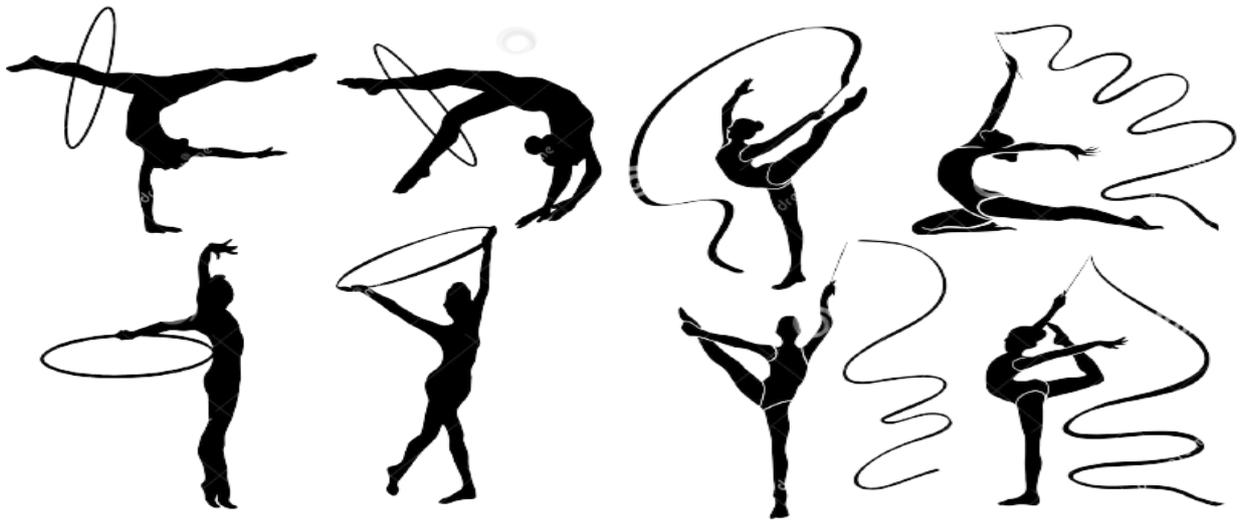
MATERIALS AND METHODS.

The aim of the study is the physical development of 7-10 year old primary school children through basic gymnastic exercises, 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 7-10 at primary school;
- ◆ increase the physical fitness level of primary schoolers through basic gymnastic exercises.

Research methods such as analysis of scientific and methodological literatures, interviews, surveys, pedagogical observation, mathematical statistics and pedagogical testing were used in the implementation of research.

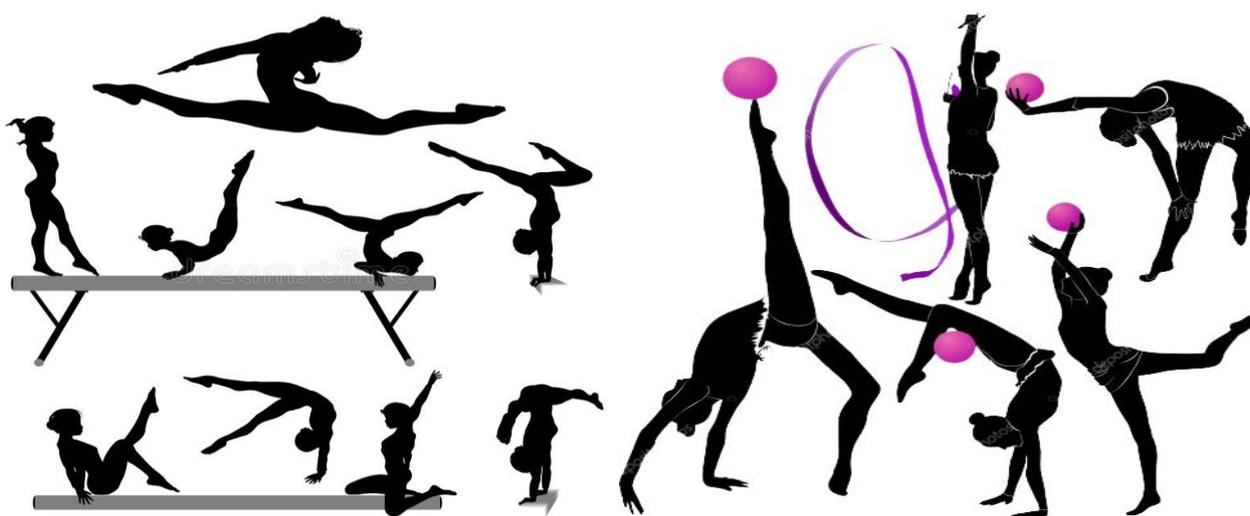
Physical education lessons including gymnastics elements should be a required syllabus at schools for a good reason – physical activity couldn't be more important to children's physical, mental and emotional development. Like it or not, there is no denying that physical activity presents so many benefits to children that exercise should definitely be encouraged whenever possible.



Pictures – 2

The height and weight of the child are separate indicators, which helps to determine whether the child's body is affected by environmental factors and living conditions for better or worse. Based on scientific studies, if the body length is higher than the average, such children are isolated, in-depth medical observation is performed, and the extent to which they can bear the load is checked. In overweight children, there may be changes in the functioning of the cardiovascular system. This ought to be taken into account when gaining a physical load.

Excess body size in children is determined by the high excitability of the nervous system. When emotional states are strong in action and movement games in PE lessons, the teacher should give the children a longer rest interval. On the other hand, in children who are underweight, exercises are chosen to strengthen the muscles of respiration, which helps to improve breathing. Based on the instructions of V.I. Shaposhnikova, and V.A. Taymazov, a table that helps to determine the anthropometric structure of a child, was created since physical development indicators are inextricably linked with physical fitness indicators. Generally, children with normal development have a good physical fitness level. There are low, medium and high indicators of physical fitness level of children aged 7-10 years.



Pictures – 3

Specialists in physical education and sports L.B. Kofman, V.A. Kabochkov, A.N. Tyapin, L.A. Zakharov, Y.N. Puzir and other teachers have developed a test program, which is an objective indicator in the testing of physical fitness level of children aged 7-10 years. Incorporating children into the PE lessons by selecting effective means to improve their physical and functional well-being and interest in becoming agile, strong and courageous will elevate the level of knowledge of them. Using improving physical development. Therefore, the use of basic gymnastics, introduction of new technologies, the regulation of exercises is one of the most burning issues we are facing today. When it comes to an introduction of new technologies and their effects on gymnastics, it shortens recovery time. The earlier children recover, the sooner they may resume training.

RESULT AND DISCUSSION.

The experiment was conducted on 240 children aged 7-10 years that were being educated in primary schools. There were 30 boys in each age group. They were divided into groups, with 120 students in the experimental group and 120 students in the control group. In the pedagogical experiment, the participants of the experimental group participated in PE lessons using gymnastic exercises on the basis of the program developed by us, and a pedagogical experiment was conducted. The

participants of the control group participated in the physical education classes using current gymnastic exercises in the program. We paid great attention to determining the level of physical development of the subjects involved in the experimental and control group using anthropometric indicators (*body length – cm, body weight – kg, vital capacity – l, handgrip strength of right and left hand – kg*). The results obtained on the indicators of the level of physical development of primary schoolers before the pedagogical experiment were summarized, as well as the results obtained on the physical development of primary school children given by the Commonwealth of Independent States (CIS) and leading scientists were analyzed.



Pictures – 4

The physical development of 7–10-year-old pupils was determined by anthropometric indicators. As Table 1 demonstrates, the difference in body length indexes between boys aged 7-8 years was 6.4 cm, while those aged 8-9 years were 5.2 cm and pupils aged 9-10 years were 3.3 cm. As a result, it can be seen that the difference between the pupils of primary schools is higher than 7-8 year olds. If we take a look at the difference in the weight of pupils, it was 5.2 kg at the age of 7-8 years, 1.6 kg at the age of 8-9 years, and 1.2 kg at the age of 9-10 years respectively.

PRE-EXPERIMENTAL PHYSICAL DEVELOPMENT OF PRIMARY SCHOOLERS IN TASHKENT

(N = 30 in each group)

Table 1 (boys)

№	Age	Group	7	t	8	t	9	t	10	t
	Tests		$\bar{x} \pm \sigma$	p	$\bar{x} \pm \sigma$	p	$\bar{x} \pm \sigma$	p	$\bar{x} \pm \sigma$	p
1.	<i>Body length (cm)</i>	EG	121,6±4,03	t =0,1	128,0±8,06	t =0,1	133,2±3,74	t = 0,2	136,5±4,16	t =0,1
		CG	121,1±4,49	p>0,05	129,2±6,91	p>0,05	134,9±6,62	p>0,05	136,0±4,19	p>0,05
2.	<i>Body weight (kg)</i>	EG	21,0±6,06	t =0,4	26,2±3,17	t =0,2	27,8±3,17	t =0,2	29,0±3,89	t =0,1
		CG	23,9 ±2,88	p>0,05	25,4±3,45	p>0,05	26,8±3,45	p>0,05	29,4 ±3,74	p>0,05
3.	<i>Vital Capacity (l)</i>	EG	1500±78,2	t =0,9	1550±66,2	t =0,2	1700±76,2	t =0,09	1750±72,2	t =0,1
		CG	1400±82,6	p>0,05	1530±66,6	p>0,05	1690±78,2	p>0,05	1740±62,4	p>0,05
4.	<i>Handgrip strength of right hand</i>	EG	8,0±0,63	t =0,8	12,8±0,63	t =1,1	18,9±0,44	t =0,5	20,6±0,46	t =1,2
			6,0±0,81	p>0,05	13,4±0,38	t>0,05	18,3±0,48	p>0,05	20,3±0,85	p>0,05
	<i>Handgrip strength of left hand – (kg)</i>	CG	7,0±0,99	t =0,8	11,8±0,65	t =0,7	18,3±0,48	t =1,3	19,9±0,38	t =0,9
			6,9±0,82	p>0,05	13,2±0,38	p>0,05	17,8±0,35	p>0,05	19,2±0,88	p>0,05

NOTE: CG – control group, EG- experimental group

The results showed that the difference between the boys was not large. When we measured the handgrip strength, the difference between 7-8 year old boys was as follows: handgrip strength of right hand was 4.8 kg, handgrip strength of left hand was 7.4 kg, handgrip strength of right hand of 8-9 years was 6.1 kg, handgrip strength of left was 4, 9 kg. From the data given in the table, it can be seen that the difference between the strength of the right and left hand also increases as the child grows. These figures were much higher than those for Tashkent. Experimental and control groups after pedagogical experiment, the difference between the height indicators of 7,8,9,10-year-old boys was as follows: body length of 8-year-old boys differed from control group students by 1.5 cm, $t = 3.2$; $P < 0.01$ increased. In 9-year-old boys by 0.9 cm, $t = 3.2$; $p < 0.01$ developed equally (*Table 2*).



Pictures – 4 (Dynamometer)

Body length of 10-year-old boys was 1.1 cm relative to the control group, $t = 2.2$; $R < 0.05$. These figures were observed to increase at the end of the school year. 7-year-old pupils in the same experimental and control groups weighed 2.1 kg, $t = 3.0$, $R < 0.01$ increased, while the weights of 8-year-old pupils were as follows: 1 kg, $t = 3.0$ and an increase of $R < 0.01$ was observed; boys aged 9 weighed 0.5 kg at the end of the school year, $t = 2.5$; in girls, $R < 0.05$ weighed 1.9 kg, $t = 3.8$; $R < 0.001$ was recorded in 10 years old pupils and weighed 2.2 kg, $t = 3.1$. The development appears to be natural and increased under the influence of exercise. The difference in postoperative physical development of 7–10-year-old experimental and control group pupils in terms of vital capacity was as follows: in 7-year-old boys, increased to 78 ml, while it was 40 ml in 8-year-old boys and 30 ml in girls. In 9-year-old boys, it increased to 52 ml, as well as an improvement of 45 ml in 10-year-old boys and 38 ml in girls were seen.

POST-EXPERIMENTAL PHYSICAL DEVELOPMENT OF PRIMARY SCHOOLERS STUDENTS IN TASHKENT
(N = 30 in each group)

Table 2 (boys)

№	Age	Group	7	t	8	t	9	T	10	T
	Tests		$\bar{x} \pm \sigma$	p	$\bar{x} \pm \sigma$	p	$\bar{x} \pm \sigma$	P	$\bar{x} \pm \sigma$	P
1.	<i>Body length (cm)</i>	EG	127,3±0,40	t=3,2	131,5±0,35	t=3,2	135,9±0,45	t=3,2	139,1±0,35	t=2,2
		CG	125,4±0,45	p<0,01	130,0±0,91	p<0,01	135,0±0,46	p<0,01	138,0±0,36	p<0,05
2.	<i>Body weight (kg)</i>	EG	27,3±0,50	t=3,0	28,4±0,30	t=3,0	29,3±0,09	t=2,5	32,6±0,49	t=3,1
		CG	25,2 ±0,51	p<0,01	27,4±0,31	p<0,01	28,8±0,10	p<0,05	30,4±0,50	p<0,01
3.	<i>Vital Capacity (l)</i>	EG	1538±15,9	t=3,4	1600±10,1	t=3,4	1795±11,1	t=3,1	1845±8,5	t =3,5
		CG	1460±16,6	p<0,01	1560±11,3	p<0,01	1743±12,2	p<0,01	1800±9,5	p<0,01
4.	<i>Handgrip strength of right hand</i>	EG	10,8±0,30	t=3,6	15,8±0,45	t=3,3	20,6±0,68	t=3,5	21,9±0,75	t=3,0
			10,7±0,26	p<0,001	14,9±0,35	p<0,01	20,0±0,67	p<0,01	21,7±0,76	p<0,01
	<i>Handgrip strength of left hand – (kg)</i>	CG	9,0±0,35	t= 2,5	13,8±0,46	t=2,6	18,6±0,69	t=2,2	20,1±0,77	t=3,1
			9,7±0,27	p<0,05	13,6±0,37	p<0,05	17,8±0,70	p<0,05	19,5±0,78	p<0,01

NOTE: CG – control group, **EG-** experimental group

Handgrip strength of right hand was 1.8 kg in 7-year-old boys, $t = 3.6$; $R < 0.001$, $T = 3.3$ and 2 kg in 8-year-old boys; $R < 0.01$ and handgrip strength increased. Handgrip strength of right hand in 9-year-old boys was 2.0 kg, $t = 3.5$, $R < 0.01$; In 10-year-old boys, it was 1.8 kg, $t = 3.0$, $R < 0.01$ was observed. Strength of handgrip of left hand was 1 kg in 7-year-old boys, $t = 2.5$; increased by $p < 0.05$, and 1.3 kg was in 8-year-old boys, $t = 2.6$, $R < 0.05$; In 9-year-old boys, it was 2.2 kg, $t = 2.2$, $p < 0.05$; In 10-year-old boys, handgrip strength increased by 2.2 kg, $t = 3.1$ and $p < 0.01$.

An analysis of the literatures and experimental work reveals that the main difference in physical development is determined by the rate of growth of indicators associated with age. For instance, the change between the experimental and control group boys aged 7 was 1.9 cm while 1.5 cm was in 8-year-old children, 0.9 cm in 9-year-old children, and 1.1 cm was in 10-year-old children. Based on the analysis of those indicators, from our perspectives, growth in height is a biological feature and develops naturally. Enrolling in the process of doing exercises helps to further increase this growth rate. We also observed that the rate of weight gain in children also increased alongside age. Growth rates were higher in experimental groups than in control groups.

CONCLUSION.

To conclude, there is an unlimited amount of benefits in enrolling your child in a Gymnastics class. They will become stronger, more flexible, more confident team players, and can carry their knowledge and skills from Gymnastics to any other facet of their life. The creation of pedagogical conditions and correct organization of the gymnastics exercises make PE lessons more interesting, effective and efficient. According to the above-mentioned facts, the data collected from the analysis of pedagogical observations showed that the physical development of children aged 7-10 years was high in the experimental group, while their health was relatively high. To develop the motor skills of 7-10 year old pupils, it is of paramount importance that we have to focus on mostly developing specific motor skills, mastering the materials in the curriculum and improving anthropometric indicators.

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