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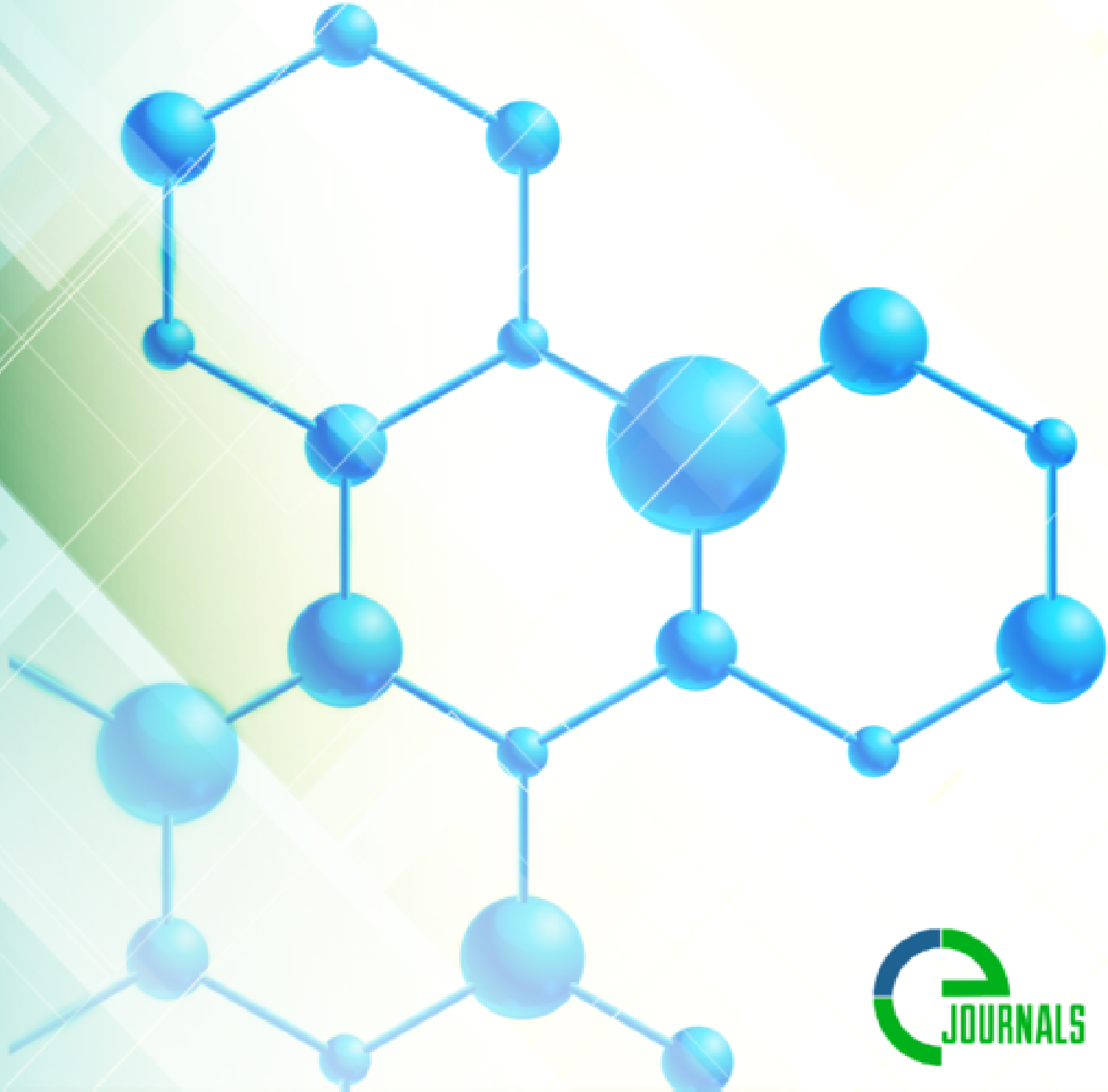

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НЕКОТОРЫЕ ИНТЕГРАЛЬНЫЕ ПОКАЗАТЕЛИ ФИЗИЧЕСКОГО РАЗВИТИЯ ДЕТЕЙ Г БУХАРЫ

И.Х.Касимов
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Цель исследования является выявить половые возрастные и конституциональные особенности физического развития и двигательных качеств у детей возрасте 4-7 лет в г Бухары.

Изучение интегральной показателя физического развития у мальчиков 4-7 лет выявило наибольшую их долю со средним уровням развития во всех возрастах. При этом в 5 лет таких детей становится меньше, чем как у девочек а с уровнями выше среднего и высоким, напротив, больше (до 39,8%).

Так же увеличение даже мальчиков с уровнями физического развития высоким и выше среднего отмечается в 6 и 7 лет и незначительно -в 4 года.

Ключевые слова: физическое развитие, выносливость, двигательной активность, грудной клетки.

SOME INTEGRAL INDICATORS OF PHYSICAL DEVELOPMENT OF CHILDREN IN BUKHARA

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The purpose of the study is to identify gender, age and constitutional features of physical development and motor qualities in children aged 4-7 years in Bukhara.

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Also, an increase even in boys with high and above average levels of physical development is noted at 6 and 7 years old and slightly at 4 years old.

Keywords: physical development, endurance, motor activity, chest.

Currently, at the global level, there has been a steady trend of some deterioration in physical health and a decrease in the functional capabilities of their body [9,10,11] negative trends are also observed in the physical development of children, adolescents and young people, which are manifested by a decrease in body length and weight (desekliration) and an increase in the disharmony of physical development [1,6,9,10].

Already at preschool age, 15-20% are diagnosed with chronic diseases, which, when entering school, seriously complicate adaptation to the school environment and are the cause of further deterioration in health and academic performance [5,12].

An essential factor determining the state of health of the population is the maintenance of optimal physical activity throughout the life of each citizen [11,12].

Many authors point to aclose relationshi p between indicators of physical development and physical fitness in different population groups [13,14].

The above problems dictate the need to study the degree of physical development and motor quality of children of different ages in the conditions of scientific and technological progress.

Purpose of the study: the purpose of this study is to identify gender, age and constitutional features of physical development and motor qualities in children aged 4-

7 years in Bukhara.

Materials and methods: the work was carried out on the basis of 4 preschool institutions in Bukhara.

To solve the tasks set, the parameters of physical development and motor qualities of children of the period of the first childhood of 4-7 years were measured, on the basis of 4 preschool institutions in Bukhara. The studies were carried out from September 2020 to May 2022 twice a year, at the beginning (September) and at the end (May) of the school year. Over the past period, 3369 examinations of children aged 4-7 years were carried out, which is 12% of the coverage of all children of this age group in Bukhara, of which 1725 (51.26) are girls and 1644 (48.7%) are boys.

Anthropometric measurements of the parameters of physical development and functional tests were carried out in the medical office. Motor qualities were tested during physical education classes with the involvement of educators and physical education instructors.

Thus, the following groups of research methods were used: anthropometric, functional. Testing of motor qualities, static.

Results and discussions

The study of the integral indicator of physical development in boys 4-7 years old revealed the largest proportion of them with an average level of development at all ages. At the same time, at the age of 5, there are fewer such children, as in girls, and with levels above the average and high, on the contrary, more (39.8%).

Table 1
Distribution of boys by levels of physical development (in %)

Age/Level	Short	Below the average	Average	Above average	High
4 of the year	8,6	12,0	54	12,1	16,0
5 years	5,9	13,0	43	26,1	17,2
6 years	7,1	15,0	52	23	9,0
7 years	5,4	12,4	52	18,1	13,1

Also, an increase in the proportion of boys with high and above average levels of physical development is noted at 6 and 7 years old (up to 31.1% and 29.6%, respectively) and slightly - at 4 years old (26.6%).

At the same time, among them, the proportion of boys with low and below average levels decreases to 20.2% at 4 years old, to 19.2% at 6 years old, and to 17.2% at 7 years old, while with an average level it decreases. is about 50%.

Motor qualities

Testing the speed-strength endurance of the trunk muscles - "Lifting the trunk up to 30 seconds" showed a significant ($P \leq 0.01$) annual improvement in results from 4 to 7 years. The annual increase has maximum values at 5 and 6 years (up to 2.4% per year), and by the age of 7 it decreases (up to 2.2 times per year).

The dynamic strength of the muscles of the lower extremities - "Burn in length from the spot" annually significantly ($P \leq 0.01$) changes incrementally from 4 to 7 years. The maximum annual increase in the values of the indicator falls on the age of 5 years - 19.4 cm per year, then it gradually decreases to 13.2 (6 years) and 6.8 (7 years) cm per year.

The values of the indicator of speed - "Running for 30 meters on the move" significantly ($P \leq 0.01$) also change from 4 to 7 years. The value of growth annually decreases from 5 years (1.8 sec), which indicates a deterioration in this indicator in boys.

In the test for active flexibility of the spine and hip joints - “Seated forward bend”, a significant ($P \leq 0.01$) deterioration in the values of the indicator occurs only from 4 to 5 years. In subsequent ages (6 and 7 years), they continue to worsen, but not reliably. The annual increase in test results (Fig. 3) has negative values throughout, increasing from the age of 5, and its maximum values are determined at the age of 6-7 years (0.6 cm per year).

Most motor skills improve at the fastest rate at 5 years, with the exception of active spinal flexibility. The next thing to note is that at 6-7 years old motor (except for the dynamic strength of the muscles of the lower extremities at 7 years old). At the same time, the improvement in speed-strength endurance of the muscles of the body is prolonged for all ages (tab. 2)

Table 2
Annual increase in the indicator of physical development and motor qualities in boys aged 5-7 years in Bukhara

sign	5 years	6 years	7 years
Body length, cm			
Body weight, kg			
Chest circumference, cm			
Shoulder circumference at rest, cm			
Vital lung capacity, ml			
Martin-Kushelevsky test, sec			
Dynamometry of the right hand, kg			
Dynamometry of the left hand, kg			
Torso lift 30 sec q.va times			
Standing long jump, cm			
Run for 30 m immediately, sec			
Forward bend, sitting, cm			

Highlight periods in white are low values of annual growth, green are high, and red are maximum. When analyzing the integral indicator in boys, it showed that in all ages, most of them have an average level of development of motor qualities (Table 3).

If the proportion of such children is 50% at 5-7 years old, then at 4 years old it increases, mainly due to a decrease with levels below the average (up to 13.5%). At 5 and 7 years old, the proportion of boys with a level of motor qualities above medium and high (up to 32.1% and 34%, respectively), and at 6 years old - slightly (up to 26.7%), while their proportion with a level below the average and low at these ages

decreases (up to 18.8% ,20.2% and 18.7% at 5.6 and 7 years respectively)

Table 3
Distribution of boys by the level of motor qualities (in %)

Age	Short	Below the average	Average	Above average	High
4 of the year	7,9	6,1	65,0	16,2	6,9
5 years	4,8	14,0	51,1	21,1	12,1
6 years	6,9	13,8	52,2	15,0	12,2
7 years	3,6	14,4	49,1	16,9	16,3

Based on the foregoing, it can be concluded that the period of intensive improvement in motor qualities in most indicators in boys 4-7 years old coincides in time with the maximum increase in body length, vital capacity of the lung and strength of the muscles of the hands at 5 years old (tab. 2). However, at 6 years old their increase in most indicators of physical development and motor qualities is quite high, except for the test of Martine Kushelevsky and Carpal dynamometry. By the age of 7, it again reaches its maximum values at the circumference of the shoulder, however, at the length of the bodies, the vital capacity of the lungs (VC) and the dynamic strength of the lower extremities decreases At the same time, at the age of 5, the proportion of boys with high and above average levels of both physical development and motor qualities increases among them. (tab.2,3)

CONCLUSIONS

1.In children of the period of first childhood (4-7 years old), gender differences in physical development are detected from 5-7 years old, and motor qualities - from 4-5 years old. and motor qualities in girls - at 6 years old and in boys - at 5 and 7 years old.

2.The predominance of the average monthly increase in indicators of physical development (by 2.2-35 times) and motor qualities by (4.8-37 times), regardless of gender, is observed in children after summer holidays, while over the rest of the year its intensity decreases ($P \leq 0.05$).

3.The constitutional features of the physical development of children aged 4-7 years are characterized by significantly ($P \leq 0.05$) large values of indicators in the macrosomal somatotype, minimal in the microsomal and medium in the mesosomal. The constitutional features of motor qualities are characterized by the predominant development of speed - and active flexibility of the spine and hip joints in children of the macrosomal somatotype, the dynamic strength of the muscles of the lower extremities - mesosomal and speed - strength endurance of the trunk muscles - microsomal.

4.In children of the period of first childhood (4-7 years), the usual variant of the development of independence from sex is found in 64.5%, shortened - in 18.4% and extended - in 17.1%. Age-related features are characterized by an increase in the proportion of boys with a shortened (in 8, 7 times) and extended (2.2 times) developmental variants from 4 to 5 years ($P \leq 0.05$).

5.In children of the period of first childhood (4-7 years)

gender differences in the component composition of the body are characterized by the predominance of relative fat mass in girls (by 5.8%) and muscle mass in boys (by 9.3%). no differences were found in children ($P \leq 0.05$).

6.Differences in the proportional level of variation in children of the first childhood period (4-7 YEARS 0 are characterized by the predominance of the macromembrane type (80.0% in girls and 78.6% in boys), less frequency of occurrence of the mesomembral type (9.8% in girls and 19.1% in boys) and micromembrane (10.22% in girls and 2.3% in boys). and micromembrane types from 4 to 5 years, and in girls by 4.3-18 times from 5 to 6 years ($P \leq 0.05$).

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