COMPARATIVE ASSESSMENT OF PHYSICAL DEVELOPMENT AND PHYSICAL FITNESS OF ADOLESCENT SCHOOLCHILDREN LIVING IN URBAN AND RURAL AREAS

Yusupova M.A.
Tuychiyeva D.T.
Pakhridinova N.Y.

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Abstract: The study involved 227 schoolchildren aged 13-16 years old living in urban and rural areas of the Republic of Uzbekistan. Anthropometric indicators of physical development and indicators of physical fitness of schoolchildren living in Karshi and schoolchildren living in rural areas were taken as the compared groups. It was found that rural schoolchildren from the village of Nekuz demonstrated higher results in terms of the development of physical qualities compared with urban schoolchildren, and differences in body composition were also revealed.

Keywords: Adolescent schoolchildren, physical development, physical fitness, motor activity, methods of anthropometry, pedagogical testing.

Relevance: The World Health Organization (WHO) has identified the prevention of obesity in children and adolescents as one of its key priorities in the 21st century; motor behavior plays a key role in this. In this regard, WHO presents global recommendations on physical activity, sedentary lifestyle and behavior of children and adolescents. Initial data collected from 25 countries shows that only 15% of preschoolers (ages 3 and 4) follow all three rules of daily movement. This exposes the remaining 85%, who do not comply with all three recommendations, to an increased risk of deteriorating health and developmental outcomes and potentially lower human capital development. For these reasons, it is important to collect international surveillance data in a timely manner using new developments in WHO global recommendations. This will provide the first such international data on the prevention of obesity in children and adolescents and ensure that they reach their development potential. Analysis According to V.A. Puzyjnina, S.V. Kaznacheeva, 2010 [6] it is this approach in the educational process that determines the orientation of the entire system, which is potentially embedded in the subject "Physical culture". According to the author, the successful development of society can be carried out under the condition of fundamental education, democratization and humanization of all its foundations. It's no secret that the teaching of physical education in universities needs to be reviewed. This is confirmed by the data from a number of studies indicating the unsatisfactory state of health and physical condition of a significant part of modern schoolchildren.

The degree of study of the problem: The picture is especially unsightly in those institutes where mostly girls study [5, 2, 7]. Sociological studies conducted by the authors in four Western Siberian universities revealed that only 1/10 of the students systematically engage in physical education in their free time. In senior years, this figure drops to 6%. Environmental factors also negatively affect the health of students. Thus, in the work of V.S.Rakhimov, 2008 [7], as a result of the performed acupuncture diagnostics of students' health, data are provided on the number of students with diseases of the cardiovascular, respiratory, digestive systems, musculoskeletal system, which are associated not only due to physical inactivity, but also due to the adverse effects of ecologically disadvantaged areas of the

Aral Sea region and Khorezm region. regions. As a result, students' physical fitness is low, their motor skills are limited, and they lack knowledge of the basic principles of physical education. The incidence in universities is increasing every year. This is evidenced by the number of students in special medical groups, whose number is growing every year. [1, 3, 6, 10]. The monitoring carried out (by T.V. Koltoshova, 2010) [4] revealed the presence of risk factors for functional disorders and diseases of the spine of students, which aims to use various preventive and physical fitness measures in their physical education. The more important it becomes is the question of changing the focus and transformation of outdated ones, as well as the formation of new stereotypes of conducting physical education classes. Classes should correspond to the modern rapidly changing pace and quality of human life, which is consistent with ongoing reforms in preschool and school educational institutions.

We have identified the intergroup variability of morphological characteristics of urban schoolchildren aged 15-16 in Karshi and schoolchildren living in the village of Nekuz in Kashkadarya region.

The purpose of the study is a comparative assessment of the physical development and physical fitness of schoolchildren living in urban and rural areas.

Research methods: 40 schoolchildren aged 13-16 years old living in different regions of the Republic of Uzbekistan participated in this study. The assessment of physical development was carried out using anthropometry methods . The methods of pedagogical testing investigated the indicators of physical fitness of schoolchildren living in urban areas (Karshi) and schoolchildren living in rural areas, in particular, the village of Nekuz at the initial, intermediate and final stages of the experiment. The obtained results were processed using mathematical statistics methods based on recommendations.

Research results and their discussion: Differences in indicators of total body size have been established. If urban schoolchildren have a body length of 171.9±6.7 cm, body weight is 58.9±9.2 kg, chest circumference is 86.9±9.2 cm, then schoolchildren in the village of Nekuz have a body length of 170.5±8.16 cm, weight

Таблица 1

Dynamics of changes in physical fitness of 16-year-olds during the experiment (Karshi city, school No. 23)

№	Tests and unit measurements of G. Karshi -n- 20	The initial stage	The interval is the exact stage	The final stage	The validity of the difference		
					прирост %	t	p
1	Triple jump (m)	7.09±0.26	7,17± 0,28	6,98± 0,27	1,6	1.25	>0.05
2	Standing long jump (cm)	160.0± 2.2	164,0± 2,3	168,0± 2.4	5,0	3.42	<0.05
3	Flexion and extension of the arms in the prone position 30 s.	38,2± 0,80	39,3± 0,91	40,9± 0,90	7.1	3.51	<0.05
4	Rope climbing-sec	9.7± 0,20	9.4± 0,3	10.0± 0,30	3,1	3.53	<0.05

5	Pull-up on the crossbar (one time)	17,80±0,7	18,3±0,7	19,3±0,5	8,4	3.4	<0.05
6	Running for 30m from a place	5.12± 0,04	5.60± 0,03	4,93± 0,03	3,7	3.12	<0.05

Research results and their discussion: Differences in indicators of total body size have been established. If urban schoolchildren have a body length of 171.9±6.7 cm, body weight is 58.9±9.2 kg, chest circumference is 86.9±9.2cm, then schoolchildren in the village of Nekuz have a body length of 170.5±8.16 cm, weight is 56.9±9.05, and chest circumference is 82.1±6.05cm, that is, In terms of physical development, there is a certain lag in body length of 1.4 cm, body weight is 2 kg, chest circumference is lower by 4.8 cm, that is, less than that of urban schoolchildren (Table No. 1). It should be noted that in addition to the school curriculum, about 3% of urban schoolchildren are engaged in sports clubs, however, in rural conditions of the village of Nekuz, the physical activity of schoolchildren is much higher. In addition to physical education classes according to the school curriculum, rural conditions (lack of transport, employment in household chores) contribute to ensuring the necessary level of physical activity. Intergroup pairwise differences were recorded for the compared urban and rural schoolchildren and in terms of physical fitness. During the experiment period, the increase in this test among urban schoolchildren was -1.6%, and among schoolchildren in the village of Nekuz – 6.9%. (Table No. 2.). In the "long jump from a place" test, urban schoolchildren showed a higher result demonstrating the level of development of speed and strength qualities. The increase in the result on this test was 5.0% for urban schoolchildren and 4.2% for rural schoolchildren . In the test, the increase in the development of strength qualities in schoolchildren Karshi was 7.1%, and among rural schoolchildren it reached -8.7%, that is, in terms of strength capabilities, the indicator is higher among schoolchildren living in rural areas, although only slightly. The quality of agility is demonstrated in the rope climbing test. For the compared groups, the values of this indicator turned out to be practically in favor for schoolchildren living in the village of Nekuz, the increase was 8.3%, and for urban rope climbing it was 3.1%. In the "Pull–up on the crossbar" test, the increase in strength qualities was 8.4% for rural schoolchildren, 9.7% for urban schoolchildren, that is, this is the only indicator by which urban schoolchildren are ahead of rural schoolchildren. The speed test was evaluated based on the results of a 30 m run. For this test, the result of the increase was higher among rural schoolchildren and amounted to -5.9%, and for urban schoolchildren -3.7%. Thus, some disproportion between the level of physical development and physical fitness of the compared groups of schoolchildren was revealed. Thus, in terms of physical development, urban schoolchildren are characterized by increased body weight, taller height, and greater chest circumference compared to rural schoolchildren. However, according to the level of physical fitness among rural schoolchildren, the maximum number of statistically significant differences in the level of development of a number of physical qualities has been established, although according to some test indicators, low differences have been established between the compared groups ("pull–up on the crossbar"). It can be assumed that the differences recorded for urban schoolchildren are related to the amount of time spent on work performed under conditions of hypokinesia, that is, with a low level of physical activity (working with computers, possibly influenced by increased calorie intake of food).

Table 2

Dynamics of changes in physical fitness of 16-year-old schoolchildren from the village of Nekuz during the experiment

In rural areas, the absence of urban transport, it is this group of schoolchildren that is

№	Tests and unit measurements Nekuz village	Initial stage n=20	The interval is the exact stage	The final stage	The validity of the differences		
					Различие в %	t	p
1	Triple jump (m)	6,98± 0,21	7.40± 0,35	7.46± 0,36	6,9	4.89	<0.05
2	Standing long jump (cm)	165,0± 2.2	170.0± 0,23	172,0± 2.2	4,2	3.55	<0.05
3	Flexion and extension of the arms in the prone position 30 s.	39.0± 0.9	40,8± 0,90	42.4± 0,8	8.7	4.98	<0.05
4	Rope climbing (4.5m)	12,1± 0,30	11.5± 0,20	11,1± 0,31	8.3	3.83	<0.05
5	Pull-up on the crossbar (one time)	17,80±0,7	18,3±0,7	19,3±0,5	8,4	3.4	<0.05
6	Running for 30m from a place (c)	5,13±0,04	4,95±0,03	4,90±0,04	4.4	4,5	<0.05

characterized by the maximum amount of time devoted to performing various types of physical activity, special types of work typical of rural areas.

Conclusion: Thus, historically established living conditions, the characteristics of physical exertion, the nature and regional conditions affect not only body composition, but also the level of physical fitness. It has been established that constant dynamic monitoring of the physical condition of the population is necessary for the prevention and promotion of health by means of physical culture, and requires methodological, organizational and informational support.

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