HSR London International Conference on Multidisciplinary Academic Research
(HSR-ICMAR) 2026
https://houghtonstreetreview.com/index.php/conference

PATTERNS OF THE FORMATION OF HEIGHT INDICATORS IN PRIMARY SCHOOL CHILDREN DURING THE PROCESS OF SCHOOL EDUCATION

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https://doi.org/10.5281/zenodo.21288998

Abstract. This article examines the characteristics of the physical development of primary school children in the context of education in a general secondary school. It is shown that a child's development is a continuous process accompanied by age-related changes, the acquisition of new skills, the formation of personal characteristics, and natural developmental crises. Particular attention is paid to the role of the school as a key factor influencing children's lifestyle, daily routine, level of physical activity, and growth processes. The assessment of the physical development of schoolchildren aged 7–9 years showed that body height indicators were distributed as follows: average values were observed in 46.2% of children (51.1% of girls and 42.4% of boys), above-average values in 38.5%, and below-average values in 15.3% of the examined children.

Keywords: physical development, primary school children, school education, growth, age-related characteristics, general secondary school.

A person develops throughout the entire lifespan. All body systems undergo transformations, including physical and mental development. Each stage of development is characterized by its own phase, involving the formation of new skills and the development of personal characteristics. Every new stage of a child's development inevitably leads to a developmental crisis. A crisis does not necessarily imply something negative. It represents a transitional period during which the familiar perception of the world, formed at an earlier age, changes, and difficulties arise while a new developmental stage is being established.

The school makes the most significant contribution to this stage of development. Entering school fundamentally changes a child's lifestyle, values, interests, and physical development.

Objective of the study: To analyze the functional state of primary school children under conditions of school education.

Materials and methods: Boys and girls from the first, second, and third grades of Secondary School No. 31 in the city of Andijan, Andijan Region, were examined. A total of 246 schoolchildren were included in the study, comprising 134 girls and 112 boys. Anthropometric measurements were performed during the first half of the day. Parametric statistical methods were used to analyze the anthropometric indicators. The arithmetic mean, the standard error of the mean, the standard deviation, and the coefficient of variation were calculated.

Results: Inter-age comparison at the beginning of the academic year demonstrated that the body height of girls exceeded the age-specific average reference values by 2.57 centimeters at 8 years of age, by 3.66 centimeters at 9 years of age, and by 0.58 centimeters at 10 years of age. Among boys, the excess over the reference values was more pronounced, amounting to 2.53 centimeters at 7 years of age, 5.07 centimeters at 8 years of age, 3.97 centimeters at 9 years of age, and 6.56 centimeters at 10 years of age. Only 7-year-old girls demonstrated body height below the age-specific standard, with a deficit of 1.14 centimeters.

The most intensive increase in body height was observed among 7-year-old children, which is associated with an important stage of age-related development and increased sensitivity to environmental factors.

The analysis of the distribution of body height values according to age groups revealed several distinctive features. At 7 years of age, one-half of the boys (50.0 percent) had body height corresponding to the age-specific average, whereas among girls this proportion was only 29.4 percent. At the same time, 41.2 percent of girls had body height values below the average, which was considerably higher than the proportion of boys with a similar level of physical development (16.7 percent).

At 8 years of age, the majority of girls (75.0 percent) demonstrated average body height values, whereas among boys this proportion was 50.0 percent. The proportion of boys with body height above the average exceeded the corresponding proportion among girls by 18.8 percent, indicating a greater prevalence of accelerated physical development among boys of this age group.

At 9 years of age, equal proportions of boys and girls (50.0 percent each) had average body height values. Among the remaining girls, body height values exceeded the age-specific reference level, whereas among boys such values were observed in only 33.3 percent.

Conclusion: The assessment of the physical development of the children demonstrated that body height indicators were distributed as follows: average values were observed in 46.2 percent of schoolchildren (51.1 percent of girls and 42.4 percent of boys), above-average values were identified in 38.5 percent, and below-average values were recorded in 15.3 percent of the examined children.

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