

EVALUATION OF ANTHROPOMETRIC INDICATORS IN 6-YEAR-OLD CHILDREN IN KHOREZM REGION

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Turamuratova M.B.

Urgench Branch Of The Tashkent Medical Academy, Uzbekistan

ABSTRACT

Growth and development are the result of many metabolic processes that take place at the cellular level and lead to an increase in body size, differentiation and formation of various organs and systems. The ability of an organism, especially a child, to adapt is determined by their physical development and the generality of morphological information, including morphometry.

KEYWORDS

Anthropometry, children, body weight, body length

INTRODUCTION

One of the priorities of the social policy of the Republic of Uzbekistan is to bring up a healthy generation. Adverse environmental factors, together with social factors, determine the negative trends in the health of the population [1,2,3]. Of particular

concern is the deteriorating reproductive capacity of the population. The risk of environmental impact on children's health and development is particularly high [4]. Anemia, genitourinary, respiratory, digestive and circulatory diseases, and birth defects are on the rise

among children [5,6]. The leading parameters that reflect the physical development of the younger generation are height and body weight, which are studied in medical institutions for children and adolescents. Due to the most intensive development of the child at this age, maximum control of these indicators is required in the first year of life [7,8].

The purpose of this study is to determine the basic laws of structural anthropometric indicators that characterize the growth and development of the body of children living in rural and urban areas of Khorezm region.

Inspection material and methods. The study involved 1,390 children aged 1 to 6 living in rural and urban areas of Khorezm region. The research program was

conducted in accordance with WHO recommendations (WHO, 2015) [9,10]. The first group included urban residents and the second group included rural children. The first group - 694 children (49.9%). Boys -350, girls -344, the second group -696 children (50.1%). Boys -351, girls -345 The following series of actions were taken to achieve this goal: 1) accurate measurement of body weight, body length (height); 2) calculation of TMI; 3) plotting the measurement results on a body weight / height graph;

Result and discussion. The study involved 1,390 children aged 1 to 6 years in rural and urban areas of Khorezm region (Table 2). The research program was conducted in accordance with WHO recommendations (WHO, 2015). Group I included urban residents, group II included rural children.

Table 1.

Distribution of screened children by age and sex

Age	I group (n=694)		II group (n=696)	
	Boys (n =350)	Girls (n =344)	Boys (n =351)	Girls (n =345)
1 Years	55	56	62	57
2 Years	56	53	49	53
3 Years	59	58	63	56
4 Years	61	56	61	62
5 Years	63	60	58	61
6 Years	56	61	58	56

Mandatory information about the object is attached to all anthropometric data: date of the survey, name and surname of the child, gender, date of birth (with subsequent calculation of the age on the day of the survey).

Features of anthropometric data of children aged 3 to 6 years in Urgench are reflected. Three-year-old boys (21.4 ± 0.4 kg) had higher body weight than four-year-olds (22 ± 0.6 kg) ($p = 0.008$). 5-year-olds (22.9 ± 0.6 kg) were heavier than six-year-olds (23.6 ± 0.4 kg). In the fourth quarter, body weight gain was also lower in girls



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($p < 0.05$), while in boys it was in line with generally accepted averages. In boys of this age, body length increases 1.13 times (up to 98.8 ± 0.5 cm). 115 ± 0.4 cm), ie an average of 16.2 cm, the absolute increase in body length in boys from 3 years of age averaged 5.3 cm; At the age of 6 years - 3.4 cm. Head circumference increases slightly in both sexes at age three (48.4 ± 0.3

sm to 51.2 ± 0.1 sm in boys). At the same time, the absolute growth in 3-year-old boys is 0.5 sm compared to 5 years, 0.3 sm at 6 years, 0.5 sm at 6 years; in girls respectively: 0.4 cm; 0.3 sm; 0.8 sm. Our research shows that dizziness in boys increases significantly at age 3 and slightly at age. (Figure 1).

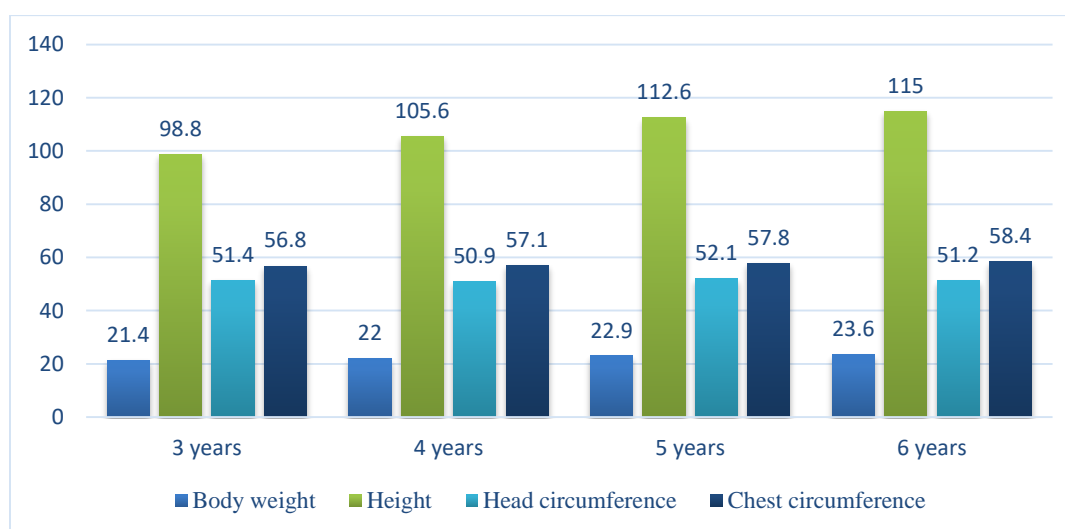


Figure 1. Anthropometric indicators of boys under 6 years of age in Urgench

The results of an age-related study of the parameters of the thoracic circumference of children showed that in four-year-old children (57.1 ± 0.4 cm) the thoracic circumference was larger than in three-year-old children. (56.8 ± 0.6 kg) averaged 0.6 cm ($p = 0.011$) in three-year-old girls (53.2 ± 0.2 cm) in four-year-old girls (55.3 ± 0.4).) relative to 2.1 cm less. cm) ($p = 0.000$) and 0.9 cm more ($p = 0.045$) in 5-year-old girls (57.2 ± 0.5 cm) than in 6-year-old girls (Fig. 2). Weight gain in children in Gurlan district in the first quarter was

significantly lower than the average for Urgench ($p < 0.05$).

According to the characteristics of anthropometric data of children aged 3 to 6 years in Gurlan district, the body weight index in 3-year-old boys (17.15 ± 0.2 kg) was 4 years ($18 \pm 0, 6$ kg) more than children ($p = 0.008$). 5-year-olds (19.5 ± 0.6 kg) were heavier than six-year-olds (24.5 ± 0.4 kg). (Figure 2).

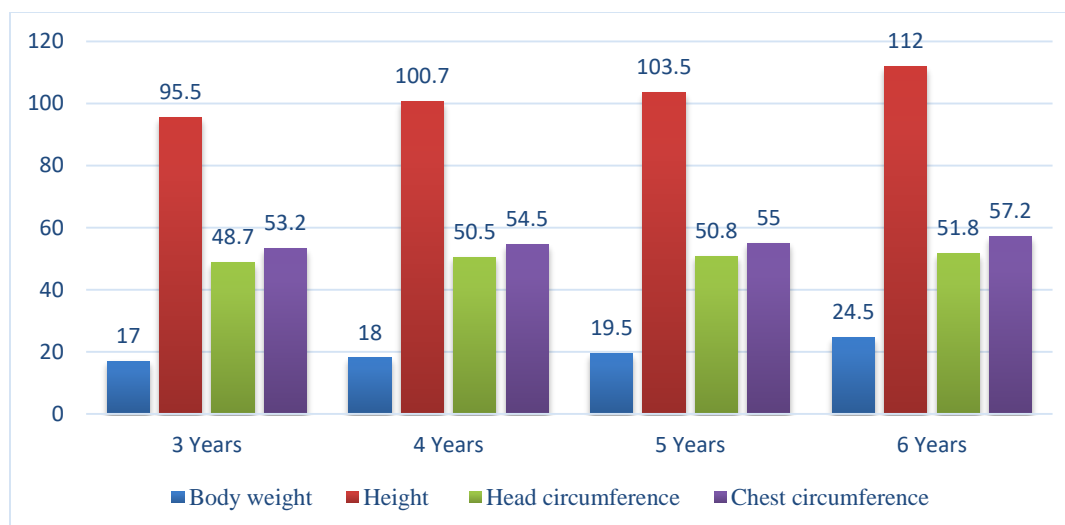


Figure 2. Anthropometric indicators of boys under 6 years of age in Gurlan district

Weight gain was also lower in girls ($p < 0.05$), while in boys it was in line with generally accepted averages. In boys of this age, body length increases 1.13 times (up to 95.5 ± 0.5 cm). 115 ± 0.4 cm), ie an average of 16.2 cm, the absolute increase in body length in boys from 3 years of age averaged 5.3 cm; At the age of 6 years - 3.4 cm. Head circumference increases slightly in both sexes at age three (48.4 ± 0.3 cm to 51.2 ± 0.1 cm in boys). At the same time, the absolute growth in 3-year-old boys is 0.5 cm compared to 5 years, 0.3 cm at 6 years, 0.5 cm at 6 years; in girls respectively: 0.4 cm; 0.3 cm; 0.8 cm. Our research shows that dizziness in boys increases significantly at age 3 and slightly at age.

An analysis of the data obtained shows that significant differences in body weight development were observed in girls in Gurlan district. They became noticeable at age 6, when their weight was 15-20% below normal. In the city of Urgench, the body weight of 5-year-old boys corresponds to the average norm, while in the provinces of Gurlan district it is 11% lower.

CONCLUSION

Thus, the analysis showed that there are significant gender differences in the development of body length between children in the environmentally disadvantaged area of Urgench and Gurlan district. They also occur in growth retardation, which is 13-15% below the average values of the norm. A possible reason for this may be the negative impact of environmental factors in the formation of individual anthropometric indicators of the child's body in the environmentally unfavorable Aral Sea region of Khorezm region. The obtained data allow to choose the optimal treatment and prevention measures for children living in different ecologically disadvantaged areas of Khorezm region, with physical and mental developmental delays.

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