ISSN NO: 2770-2936
March 2024

Features Of Anthropometric Indicators of The Spine and Body Mass Index in Children 4-7 Years Old Residing In The City Of Shirin And In Bayaut District Of Sirdarya Region

Mamatkulov Jaloliddin Gulom ogli – Teacher of the department of "General Medical Sciences" of the Faculty of Medicine of Gulistan State University. 120100, Republic of Uzbekistan, Syrdarya region, Gulistan, microdistrict 4. Tel:+998946359602. mamatqulovjaloliddin7@gmail.com

Abstract. Anthropometric studies of body mass index and spinal length in children were conducted and studied.

Based on the results of the anthropometric examination, the differences in the results of the anthropometric examination of boys and girls aged **4-7** years living in rural and urban areas were analyzed. Based on these studies, the physical development of boys and girls aged **4–7** years living in urban areas was superior to the physical development of boys and girls aged **4–7** years living in rural areas.

Key words: anthropometric indicators, children, spinal column

Relevance. The most important condition for improving the health of children and adolescents is to identify and study the characteristics of their growth and development [1].

Anthropometric studies are of particular importance in the medical examination of children and adolescents; they allow children and adolescents to determine their development over time in accordance with certain age and physical developmental requirements.

In addition, anthropometric examination helps to identify pathological changes in the growth and physical development of children and adolescents, as well as prevent the development of many diseases.

The concept of "physical development" is interpreted differently by different authors.

P.I. Bashkirov noted that the concept of "physical development" is a unit of morphological and functional properties of the organism.

According to V.N. Levin, the concept of "physical development" is a state of functional, physiological indicators and health of the body.

Vladovsky V.G. characterizes the concept of "physical development" by the sum of morphofunctional characteristics of the degree of age-related biological development of the organism [3].

When determining the level of physical development of children and adolescents, the body mass index (Quetelet index) is most often used.

Using this indicator, we determine the level of physical development of adolescent children [2].

Normal growth and development of the spine plays an important role in the physical development of children and adolescents.

As the child grows up, the growth and development of the spine is accompanied by an increase in its length, size and weight, and the cartilaginous parts of the spine are replaced by bone.

The transition of the child's body to a vertical position leads to the formation of physiological curves of the spine.

The transition to the vertical position of the child leads to an increase in the volume of the spine from top to bottom.

In the first years of life, the development of the spine is so intense that even after a short period of time certain changes occur in the structure of the spine.

Therefore, E.V. Ulrikh, A.Yu. Mushkin believes that it is necessary to pay attention to age-related features of the normal development of the spine [4].

Studying the processes of physical development in children living in different geographical areas, as well as in urban and rural conditions, is of great importance for improving human ecology and promoting health.

ISSN NO: 2770-2936
March 2024

Based on the above, the purpose of our study was a comprehensive study of the level of physical development based on anthropometric indicators of children 4-7 years old living in urban and rural conditions of the Syrdarya region.

Materials And Methods

For vertebrometric and anthropometric studies, practically healthy children aged 4-7 years living in rural and urban areas of the Syrdarya region of the Republic of Uzbekistan were selected.
A total of **320** children were examined, of which **81** girls and **76** boys in the family clinic No. 3 of the city of Shirin and **85** girls and **78** boys in the family clinic in the Bayaut district.
The study was conducted using anthropometry. To assess weight-height ratios in the study, Quetelet's weight-height indices (body mass index - BMI) were used.
When measuring the length of the spinal column, a centimeter tape was used.

Results And Discussion

The survey results showed that the body weight of boys 4-7 years old living in the city of Shirin is on average **24.7** kg, the body weight of girls 4-7 years old is on average **23.6** kg. The body weight of boys 4-7 years old living in the Bayautsky district averaged **23.0** kg, the body weight of girls 4-7 years old averaged **22.5** kg.
The body length of 4-7 year old boys living in the city of Shirin is **112.4** cm, the body length of 4-7 year old girls is on average **111.9** cm. The body length of 4-7 year old boys living in Bayaut district is on average **107.4** cm, the body length of girls 4-7 years old averaged **111.6** cm.
Body mass index - BMI in boys 4-7 years old living in the city is on average **25**, in girls 4-7 years old living in the city is on average **24**, in boys 4-7 years old living in rural areas the BMI is on average **19**, 7, girls 4-7 years old living in rural areas have an average BMI of **17.6.**
The total length of the spinal column of 4–7 year old boys living in the city is on average **36.6** cm; on average, 4–7 year old girls living in the city are 35.4 cm.
The total length of the spinal column of 4–7 year old boys living in rural areas is on average **35.8** cm, 4–7 year old girls living in rural areas are on average **34.7** cm.
Of those selected for the study, practically healthy children living in the city, of which **84** were organized, **73** unorganized. Practically healthy children 4-7 years old, living in rural areas, of which 78 were organized, **95** were not organized.

Conclusions. Thus, the body weight of boys **4-7** years old living in the city is **1.7** kg more than the body weight of boys living in rural areas.
The average body length of girls **4-7** years old living in the city is 0.3 cm longer than the body length of girls living in rural areas.
The average length of the spinal column in boys **4-7** years old living in the city is **0.8** cm longer than in boys **4-7** years old living in rural areas.
The average length of the spinal column in girls **4-7** years old living in the city is **0.7** cm longer than the length of the spinal column in girls **4-7** years old living in rural areas.
Of the **157** children **4-7** years old living in the city of Shirin, **84** children are organized - **53**%, and **33** children are unorganized - **46.4**%. Of the **163** children **4-7** years old living in rural areas, **78** children are organized - **47.8%**, and **95** children are unorganized - **58.2%**. This difference between anthropometric indicators in children **4-7** years old was associated with the distribution of children depending on the coverage of educational activities (organized and unorganized). The data obtained can be used to assess the quality of health and physical development of children.

Bibliography:

1. Абдуллаева М.Э., Мамбетов Ж.М., Ташбаев О.С. Динамическое изучение показателей физического развития детей первых шести месяцев жизни // Вестник ККО АН РУз. – Нукус, 2011. – № 1- 2. – С. 35-38.

ISSN NO: 2770-2936
March 2024

2. Калмин О.В., Галкина Т.Н. Антропометрическая характеристика лиц юношеского возраста Пензенского региона // Известия высших учебных заведений. Повложеский район. Медицинские науки. - 2019.- № 1 – С.10-23.
3. Камилова Р.Т., Ниязова Л.М., Башарова А.Т., Ниязов А.Т. Влияние гигиенических и медикобиологических аспектов в экологически неблагополучных условиях Республики Каракалпакстан на процессы роста и развития детей: // монография – М.: Издательский дом Академии Естествознания, 2016. – 94 с.
4. Нурмамедова Е. Э. Методы проведения антропометрических исследований с целью определения состояния физического здоровья . Молодой учёный. Международный научный журнал. № ООО «Издательство Молодой ученый» . г Казань. / 2017.