European Journal of Humanities and Educational Advancements (EJHEA)
Available Online at: https://www.scholarzest.com
Vol. 3 No. 2, February 2022
ISSN: 2660-5589

ASSESSMENT OF ANTHROPOMETRIC PARAMETERS OF BODY MASS INDEX AND SPINE IN CHILDREN AGED 3-6 YEARS LIVING IN RURAL AND URBAN CONDITIONS OF KHOREZM REGION

Navruzov Dilshod K., Ruzibaev Rashid Y.
Urgench branch of the Tashkent Medical Academy;
220100, Republic of Uzbekistan, Urgench, st. Al-Khorazmiy, 28

Article history:

Received: December 20th 2021
Accepted: January 20th 2022
Published: February 26th 2022

Abstract:

The article examined 264 boys and girls 3-6 years old living in the city of Urgench and in the Shavat district of the Khorezm region. Anthropometric studies of body mass index and spine length in children were carried out and studied. According to the results of the anthropometric survey, differences in the results of the anthropometric survey of boys and girls 3-6 years old living in rural and urban areas were analyzed. Based on these studies, the physical development of boys and girls 3-6 years old living in urban areas was superior to that of boys and girls 3-6 years old living in rural areas.

Keywords: Anthropometric Indices, Body Mass Index, Vertebral Column, Regions Of The Southern Aral Sea Region.

INTRODUCTION.

The most important condition for improving the health of children and adolescents is to identify and study the characteristics of their growth and development [6]. Anthropometric studies are of particular importance in the medical examination of children and adolescents, this allows children and adolescents to determine their development over time in accordance with certain age and physical requirements for development.

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 an organism [4].

According to Levin V.N., the concept of "physical development" is the state of functional, physiological indicators and body health. Vladovsky V. G. characterizes the concept of "physical development" as the sum of morphofunctional signs of the degree of age-related biological development of the organism [5]. The physical development of a growing organism is one of the main indicators of the health of children. The study of anthropometric indicators in children and adolescents plays an important role in assessing their future physical development. Disorders in the physical development of re-benk indicate the presence of various diseases of the body [3].

In determining the level of physical development of children and adolescents, the body mass index (Ketle index) is most often used. With this indicator we determine the level of physical development of children of adolescents [10, 11, 12]. Normal growth and development of the spine play an important role in the physical development of children and adolescents. As the child grows older, the growth and development of the spine is accompanied by an increase in its length, size and mass, 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 bends of the spine. Switching to the vertical position of the child leads to an increase in the volume of the spine from top to bottom [1,8,9].

In the first years of life, the development of the spine is so intense that even after a short period of time, certain changes in the structure of the spine occur. Therefore, E.V. Ulrich, A.Yu. Mushkin believes that it is necessary to pay attention to age-related features of normal spinal development [2, 9].

Khorezm region of the Republic of Uzbekistan is one of the most environmentally unfavorable regions of the Southern Aral Sea region. The deterioration of the environmental situation in the Southern Aral Sea region has not been left without its impact on the health of children and adolescents. Conducting medical examinations of children and adolescents living in these climatic conditions will help prevent various diseases. The study of physical development processes in children living in different geographical zones, as well as in urban and rural conditions, is of great importance for improving the human environment and promoting health. Based on the above, the aim of our study was to study the level of physical development on the basis of anthropometric indicators of children 3-6 years old living in urban and rural conditions of Khorezm region. The results were statistically processed using Microsoft Office Excel 2010 on a Pentium IV computer.

MATERIALS AND METHODS.

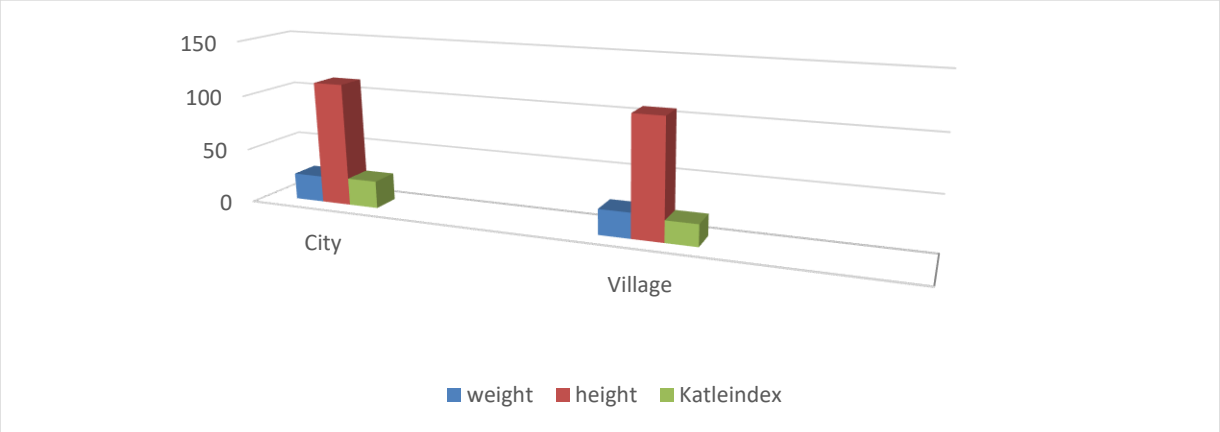
Almost healthy children aged 3-6 years, living in rural and urban areas of Khorezm region, Uzbekistan, were selected for the anthropometric study. A total of 306 children were examined, including 76 girls and 78 boys in the family clinic No. 3 of the city of Urgench and 74 girls and 76 boys in the family clinic No. 52 of the Shavat district. The study was conducted using anthropometry. To estimate weight-growth ratios, the study used Ketle weight-growth indices (body mass index - BMI). When measuring the length of the vertebral column, a centimeter ribbon is used. The obtained data were recorded in the "Anthropometric medical examination" form approved by the scientific council of the TMA of the Urgench branch (protocol No. 430 November 2019).

RESULTS AND DISCUSSION.

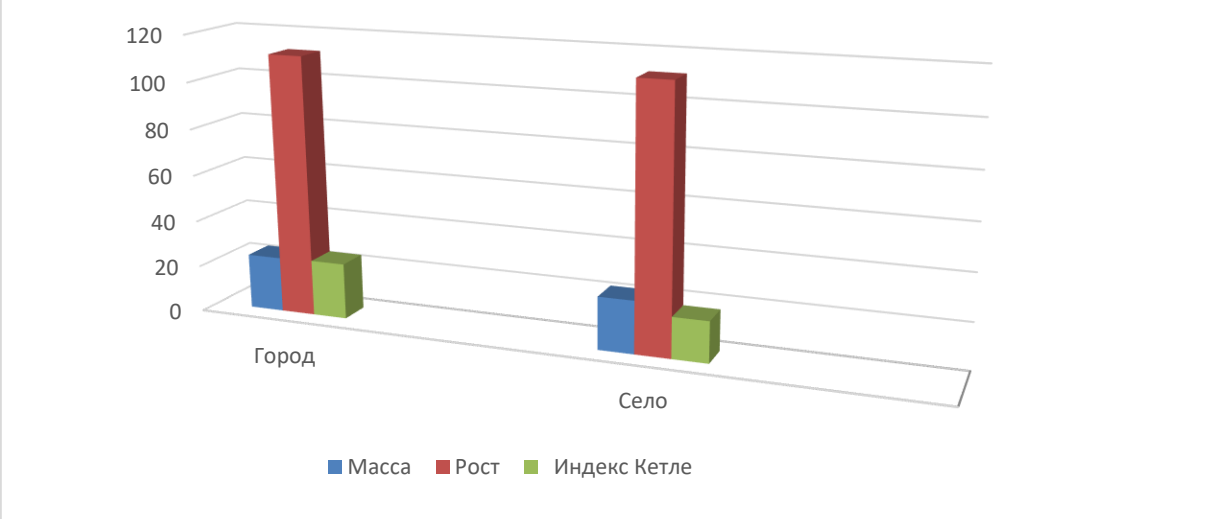
The results of the survey showed that the body weight of boys 3-6 years old living in the city of Urgench is on average 23.7 kg, the body weight of girls 3-6 years old is on average 22.8 kg. The body weight of boys 3-6 years old living in the Shavat district averaged 22.8 kg, the body weight of girls 3-6 years old averaged 22.0 kg. The body length of 3-6 year old boys living in the city of Urgench is 111.4 cm, the body length of 3-6 year old girls is an average of 110.9 cm. The body length of boys 3-6 years old living in the Shavat region is an average of 109.4 cm, the body length of girls 3-6 years old was an average of 110.4 cm.

The body mass index - BMI in boys 3-6 years old in the city is on average 19, in girls 3-6 years old living in the city on average 19, in boys 3-6 years old living in rural areas BMI is on average 19, in girls 3-6 years old living in rural areas BMI is on average 18.

Tab. 1.1. Body weight index in boys 3-6 years old.

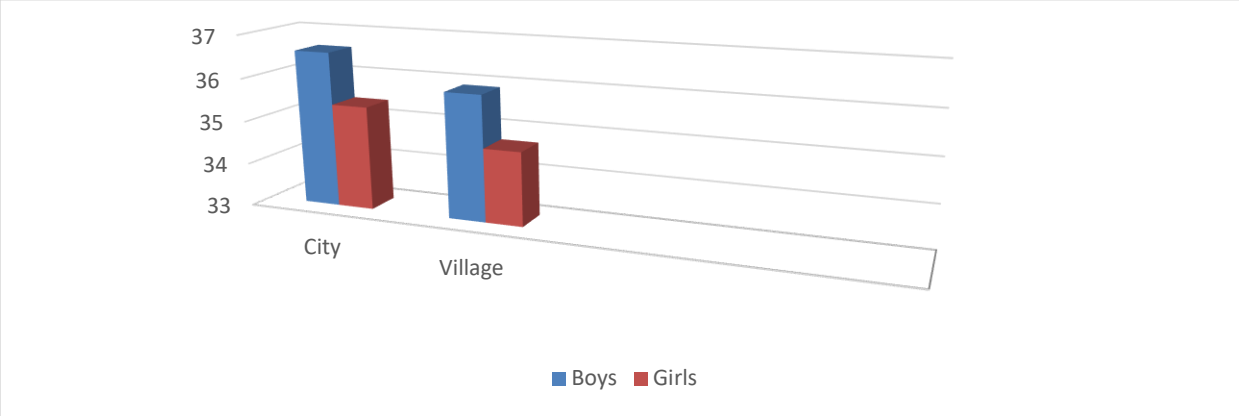


Tab. 1.2. Body weight index in girls 3-6 years old.



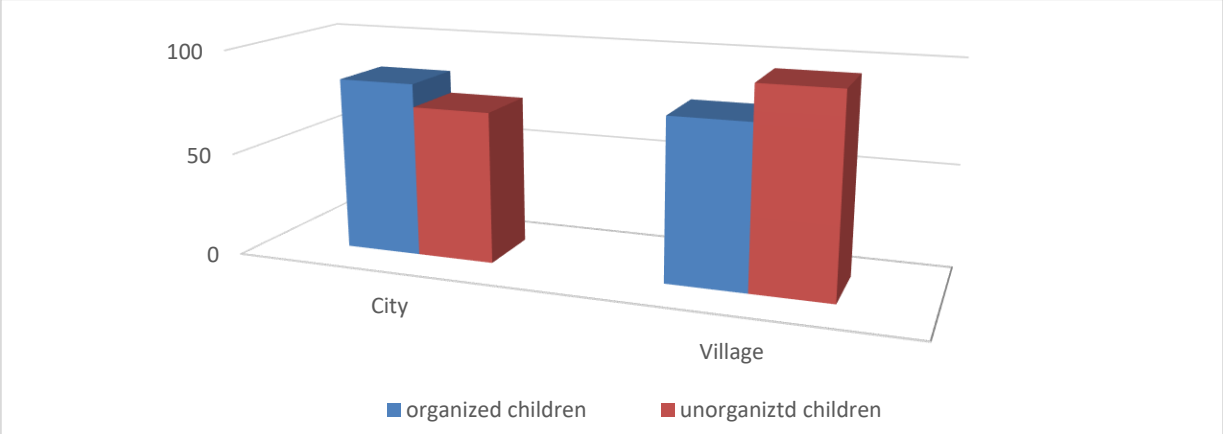
The total length of the vertebrate of 3-6 summer boys living in the city is on average 35 ± 5, 31 cm, 3-6 summer girls living in the city is on average 34.4 ± 4.2 cm. The total length of the vertebrate of 3-6 summer boys living in rural areas is on average 34 ± 4.2 cm, 3-6 summer girls living in rural areas is on average 33.4 ± 4, 8 cm (Tab. 2.).

Table. 2. The total length of the vertebral column in children 3-6 years old.



Of the children selected for the study, almost healthy children living in the city, of which 103 were organized, not organized. 47. Practically healthy children of 3-6 years old, living in rural areas of them organized 52, not organized 98 (Tab. 3)

Tab.3. Distribution of children according to the coverage of educational activities: Organized and unorganized.



CONCLUSIONS.

Thus, the body weight of boys 3-6 years old living in the city is 0.9 kg more than the body weight of boys living in rural conditions. The average body length of girls 3-6 years old living in the city is 0.5 cm longer than the body length of girls living in rural conditions. The average length of the vertebral column in boys 3-6 years old living in the city is 0.6 cm longer than in boys 3-6 years old living in rural conditions.

The average length of the vertebral column in girls 3-6 years old living in the city is 1.0 cm longer than the length of the vertebral column in girls 3-6 years old living in rural conditions. Of 152 children of 3-6 years old living in the city of Urgench, 103 children are organized - 67%, and 47 children are unorganized - 30.9%. Of the 150 children of 3-6 years of age living in rural areas, 52 are organized children - 34.2%, and 98 are unorganized children - 65.3%. This difference between anthropometric indicators in children 3-6 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.

LITERATURE:

1. Abalmasova E.A., Khojaev R.R. Skolioz. Ibn Sino Publishing House. Tashkent. 1995.19-25 st.
2. Abdullaeva M.E., Mambetov J.M., Tashbaev O.S. Dynamic study of indicators of physical development of children of the first six months of life//Bulletin of KKO AN RUz. - Nukus, 2001. – № 1-2. - S. 35-38.
3. Baranov A.A., Kuchma V.R., Skoblina N.A. Physical development of children and adolescents at the turn of the millennium. - M.: Publisher, Scientific Center for Child Health, RAMS, 2008. - S. 2-6.
4. Bashkirov P.N. Doctrine on the physical development of man/P.N. Bashkirov. – M, 1962. – 340 pages.
5. Vlastovsky V. G. On changing the body size of adult men and women of Moscow over the past 50 years, depending on their year of birth/V. G. Vlastovsky, P. I. Zenkevich//Anthropology issues. – 1969. - Out. 33. – Page 34-35.
6. Kamilovo R.T. Impact of hygienic and biomedical aspects in environmentally disadvantaged conditions of the Republic of Karakalpakstan on the processes of growth and development of children: monograph/R.T. Kamilova, G.T. Niyazova, L.M. Basharov A.T. Niyazov, A.T. Niyazov. – M.: Publishing House – 94 pages.

7. Kazakova T. S., Nurmamedova E. E. Methods of anthropometric research in order to determine the state of physical health. Young scientist. International Scientific Journal. No. LLC "Publishing House Young Scientist." g Kazan ./2017.
8. Pavlova V.I., Mamylina N.V., Kamskovo Yu.G. Anatomo-physiological and age-related features of the human bone system: educational and methodological manual. Chelyabinsk: publishing house of the Black Sea Federal District of URAO, 2008. -36-55 sec.
9. Wilrich E.V., Vertebrology in terms, numbers, drawings by E.V. Wilrich, A.Yu. Mushkin. ELBI-SPb, 2004.
10. Lohman T. Indices of changes in adiposity in American Indian children / T. Lohman,J. Thompson, S. Going [et al.] // Prev. Med. – 2003. – V. 37 (6). – Pt. 2. –P. 1–96.
11. Sharp T. A. Association of anthropometric measures with risk of diabetes and cardiovasculardisease in Hispanic and Caucasian adolescents / T. A. Sharp, G. K. Grunwald,K. E. Giltinan [et al.] // Prev. Med. – 2003. – V. 37 (6). – Pt. 1. – P. 611–616.
12. Story M. Obesity in American-Indian children: prevalence, consequences, and prevention/ M. Story, J. Stevens, J. Himes [et al.] // Prev. Med. – 2003. – V. 37 (6). –Pt. 2. – P. 3–12.