

CORRELATION DEPENDENCE BETWEEN PARAMETERS OF ANTHROPOMETRIC MEASUREMENTS IN CHILDREN 3-7 YEARS OF AGE IN SAMARKAND



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САМАРҚАНД ШАҲРИ 3-7 ЁШДАГИ БОЛАЛАРДА АНТРОПОМЕТРИК КЎРСАТКИЧЛАРНИНГ ЎЗАРО КОРРЕЛЯЦИОН БОҒЛИҚЛИГИ

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ВЗАИМОСВЯЗЬ МЕЖДУ АНТРОПОМЕТРИЧЕСКИМИ ПОКАЗАТЕЛЯМИ У ДЕТЕЙ 3-7 ЛЕТ, ПРОЖИВАЮЩИХ В ГОРОДЕ САМАРКАНДЕ

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Резюме. Ушбу мақолада Самарқанд шаҳрида яшовчи 3-7 ёшдаги болаларда жисмоний ривожланиши ва антропометрик кўрсаткичлар орасидаги ўзаро корреляцион боғлиқликни ўрганилди.

Калим сўзлар: Болалар жисмоний ривожланиши, антропометрия, корреляцион боғлиқлик.

Abstract. In this article, the correlation between physical development and anthropometric indicators in aged 3-7 living in the city of Samarkand was studied.

Keywords: Children, physical development, anthropometry, correlation connection.

Introduction: It is known that changes in any trait (parameter) lead to changes in other traits. Weight depends on height, although weight is a labile indicator, as the value of weight is influenced by various factors (2,3,4).

The aim of our work is to study the correlation between weight, chest circumference, length of upper and lower limbs from height.

Material and methods of research. Measurements of children from 3 to 7 years old living in the city of Samarkand were carried out. 100 boys and 100 girls were studied for each age. The following parameters were determined: height, weight, chest circumference (at rest), length of upper and lower limbs. Based on the data obtained, the correlation between weight, chest circumference, upper and lower limb length and height was determined.

The results of the study and their discussion. Our research has shown that in girls of 3 years of age with an average weight of 13,96±0,44 kg and an average body length of 93,74±1,63 cm, the correlation between weight and height is 0,4884, in boys of the same age with an average weight of 15,02±0,44 kg and an average body length of 94,82±1,49 cm the correlation coefficient is 0,5144. The study of correlation in girls of 4 years of age with average weight 15,49±0,49 kg and average height 101,27±1,92 cm showed that the correlation coefficient is equal to

0,4834, in 4-year-old boys with average weight 16,27±0,48 kg, average height 101,25±1,83 cm this indicator was 0,5552. At the age of 5 years in girls at average body weight 17,25±0,57 kg and average body length 106,53±1,8 cm correlation coefficient 0,5695, in boys of the same age at average body weight 17,91±0,48 kg, average body length 107,60±1,59 cm this figure (correlation coefficient) is equal to 0,5128. When studying the correlation between weight and height in children of 6 years of age, it was revealed that the co - weight 19,74±0,69 kg from height - correlation coefficient in girls is 0,5680 with an average length of 113,50±1,73 cm, in boys (weight-19,81±0,49 kg, height 113,92±1,8) the correlation coefficient is 0,6246. At the age of 7 years in girls at weight 21,21±0,69 kg and height 118,18±1,22 cm the correlation coefficient is 0,7511, at weight 21,77±0,69 kg, height 118,89±1,18 cm this value is 0,6452. The value of the correlation coefficient when studying the correlation dependence of chest circumference on height in girls of 3 years of age with average chest circumference of 49,33±0,56 cm and height - 93,74±1,63 cm is equal to 0,3608, in boys with average values of chest circumference -50,80±0,51 cm, height 94,82±1,49 cm it was 0,4052. 101.27±1.92 cm in girls 4 52.04±0.56 cm and height At an average chest circumference of 50.47±0.64 cm and height of years this coefficient is 0.1792, in boys of 4 years old

at a chest circumference of 101.25 ± 1.83 cm it was 0.4071. In girls of 5 years old with chest circumference of 52.20 ± 0.62 cm and height of 106.53 ± 1.8 . this correlation coefficient is 0,3006, in boys with chest circumference of 52.10 ± 0.51 cm and height of 107.60 ± 1.59 cm this coefficient is 0,3151.

At the age of 6 years in girls with average values of chest circumference 53.44 ± 0.67 cm and height 113.50 ± 1.75 cm the correlation coefficient was 0,3509, in boys with average values of chest circumference $55.150,60$ cm and height $113,92 \pm 2,8$ cm this value is 0,2669. The correlation coefficient in children of 7 years of age is as follows: in girls at average values of chest circumference 55, 210,66 cm and height $118,18 \pm 1,22$ cm 0,4956, in boys at average values of chest circumference- $56,31 \pm 0,74$ cm and height $118,89 \pm 1,18$ cm 0,4103. At arithmetic mean data of the length of the upper limb 39.29 ± 0.52 cm and height 93.74 ± 1.63 cm the correlation coefficient in girls of 3 years of age is 0.4409, in boys of 3 years of age at mean data of the upper limb 40.55 ± 0.55 cm and height 94.82 ± 1.49 this index is 0.4604. The correlation between the length of the upper limb and height in girls of 5 years of age with average upper limb length $45,42 \pm 0,82$ cm and height $106,53 \pm 1,8$ cm - 0,4995, in boys of the same age with average upper limb length $46,16 \pm 0,53$ cm and height $107,60 \pm 1,59$ cm - 0,2984. At the age of 6 years the correlation coefficient in girls with arithmetic mean upper limb length $48,38 \pm 0,66$ cm and height $113,50 \pm 1,73$ cm is 0,4872, in boys with arithmetic mean upper limb length $49,11 \pm 0,64$ cm and height $113,92 \pm 1,8$ cm it was 0,5503. At the age of 7 years in girls the value of correlation coefficient at average values of upper limb length - $51,11 \pm 0,68$ cm and height $118,18 \pm 1,22$ cm is 0,8126, in boys at average length of upper limb $51,85 \pm 0,67$ cm and height $118,89 \pm 1,18$ cm it is 0,6930. At estimation of the correlation coefficient it was revealed in girls of 3 years of age at length of the lower limb $45,09 \pm 0,70$ cm and height $93,74 \pm 1,63$ cm this value was 0,5393, in boys of this age at average length of the lower limb $45,29 \pm 0,68$ cm and height $94,82 \pm 1,49$ cm this indicator was 0,4953. At the age of 4 years in girls at mean values of lower limb length $49,48 \pm 0,85$ cm and height $101,28 \pm 1,92$ cm the correlation coefficient was 0,5597, in boys at mean values of lower limb length $49,56 \pm 0,91$ cm and height $101,25 \pm 1,85$ this index was 0,6551. At the age of 5 years, the correlation between lower limb length and height in girls with arithmetic mean values of lower limb length $53,83 \pm 0,97$ cm and height $106,53 \pm 1,8$ is 0,6737, in boys of this age with arithmetic mean values of lower limb length $53,93 \pm 0,74$ cm and height $107,60 \pm 1,59$ cm this index was 0,4579. At 6 years of age, the value of the correlation coefficient in girls at an average lower limb length of 58.15 ± 0.91 cm and height of 113.50 ± 1.73 cm was 0.6448, in boys at an average lower limb length of 58.07 ± 0.94 cm and

height of 113.92 ± 1.8 cm 0.7819. At the age of 7 years the correlation coefficient in girls at the average value of lower limb length $62,20 \pm 0,82$ cm and height $118,18 \pm 1,22$ cm is 0,7828, in boys - at the average values of lower limb length $61,99 \pm 0,87$ cm and height $118,89 \pm 1,18$ this index was 0,7535. It was found that the correlation between weight, upper limb length and height is greater in boys aged 3, 4 and 6 years than in girls, and at the age of 5 and 7 years this indicator is greater in girls than in boys. The correlation between chest circumference and body height is greater in boys at the age of 3,4,5 years than in girls, and it is greater in girls at the age of 6 and 7 years. The correlation between lower limb length and height: at 3,5,7 years of age is greater in girls and at 4,6 years of age in boys.

Thus, the study revealed that boys grow faster than girls.

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Резюме. В данной статье изучена взаимосвязь между физическим развитием и антропометрическими показателями у детей 3-7 лет, проживающих в городе Самарканде

Ключевые слова: Дети, физическое развитие, антропометрия, корреляционные связи.