

# Comparative Characteristic of Morphometric Parameters in Right-Handed and Left-Handed of the II Period of Childhood

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**Abstract** The analysis was carried out on 10-year-old children of secondary school №7. The results of the study showed that 10-year-old left-handed children lagged somewhat behind in physical development (body weight and chest circumference) compared to right-handed children of the same age, while the height and size of the left hand increased significantly.

**Keywords** Anthropometric indicators, Height, Body weight, Interhemispheric asymmetry

## 1. Relevance of the Topic

Today children's applause is relevant and does not have the problem of a certain approach in the field of pedagogy and physical education. Some researchers have developed methods for teaching squirrels to the right, while others, on the contrary, have a positive attitude to the phenomenon. An individual approach has not been developed.

In our opinion, this problem requires one solution, since different forms of training and retraining of the left hand can negatively affect their physical and mental development. The issue of a differentiated approach to teaching (the teacher takes into account the individual characteristics of a student or a group of students in the learning process) is the basis of modern pedagogy [1].

The negative attitude towards the left hand has a long history and is reflected in the events, actions and attitudes associated with the right and left hand in different cultures [2].

As a rule, in different cultures, positive qualities are associated with the right side, negative - with the left. Perhaps this is one of the manifestations of the right-left attitude, as in different cultures.

Many researchers note that among left-handed children there are children who are able to perform motor movements at a high level, but there are also certain difficulties in performing awkward and incoherent movements and developing skills [7,11,19].

This is probably due to the congenital left hand. The advantage of the left hemisphere lies not only in the

superiority of the left hand in performing motor movements, but also in the distribution of various functions (motor, visual, sensory, etc.) between the right and left hemispheres as a kind of reflection of interhemispheric asymmetry [1,10].

We are often confronted with similar views of the left hand and relationships like this. Perhaps the decisive factor is negligence, misunderstanding of the biological mechanisms of flattery, and most importantly, the inability of children to accept a variety of individual differences, their abilities, inclinations, differences in reactions, under the influence of the same factors, these individual characteristics [2].

The number of left-handers in the world has a positive trend: if in 1928 3.3% of left-handers and 4.7% of left-handed men were identified, then in 1973 - 8.8% of left-handers and 10.4% of left-handers. Left-handed men, 1978-1988 Over the years, the number of left-handers increased by 12.4%, and left-handed men - by 13.9%. The increase in the number of students in schools in Ishim in 1998 was 5.2%, in 1999 - 6.1%, in 2000 - 5.5%, in 2001 - 7.5%, in 2002 - 7.9%, in 2003 - 8.3%, in 2004 - 8, 6% [12,22].

A decrease in intellectual abilities of a protein may have only one cause - it is a developmental pathology, but healthy proteins can also have remarkable abilities, there are plenty of such data [2].

Lefties have peculiarities of visual perception of information. It was found that the well-being of the visual system is especially characteristic of left-handed children [11,18,20].

On the contrary, cases such as asthenic neurosis are more common in children of primary school age. This is accompanied by a decrease in working capacity and activity, increased fatigue, and rapid fatigue. The peak of activity is observed only in the first two lessons, after which a decrease

in endurance and motor movements is observed in children. In the following hours, children feel tired, lethargic and lose interest in new information [1,5,23].

It is recommended to start teaching children at school, as well as problems with such disorders as coordination of movements, including the lack of fine motor skills of the leading hand and the perception of body shapes through the program, the whole system discusses exercises for corrective work has significant opportunities in practice [6,11,16,21].

The analysis of the available literature showed that the anthropometric parameters in one or another part of the body were not studied individually and to a certain extent in the "left-handed" complex for children. There is no data on the morphometric parameters of the body parts of left-handed children depending on age and sexual demorphism.

All this requires a deep study of the problem and analysis of the data obtained in the future.

## 2. Objective of the Study

To study the comparative characteristics of morphometric indicators in children and adolescents 10 years old.

## 3. Research Material

Conducted on the basis of bilateral agreements of the Bukhara State Medical Institute in secondary school No. 7 in Bukhara (No. 517 dated 02.05.2020). Children were divided into 2 groups (n = 40): I - 10-year-olds group (n = 20); II- The results of a survey of a group of 10-year-old children (n = 20) were studied.

To carry out anthropometric measurements, the method of anthropometric research of children was used (morphometric features of assessing the physical development of children and adolescents - guidelines // Shomirzaev N.Kh., Ten S.A., Tukhtanazarova I., 1998). Anthropometric studies included measurements of height, body weight, arm length, and chest circumference.

Mathematical processing was carried out directly from the general data matrix Excel 7.0 using the capabilities of STTGRAPH 5.1, indicators of standard deviation and presentation errors were identified.

## 4. Research Results and Discussion

Studies have shown that 10-year-old left-handers had a height of 126.4 to 150.2 cm, on average  $134.6 \pm 1152$  cm, and in a right-wing woman of the same age - from 126.1 to 142.3 cm, an average of  $134.4 \pm 0.768$  cm.

The body weight of a left-handed woman ranged from 22.3 kg to 36.5 kg, on average  $29.05 \pm 0.696$  kg, and in a right-handed woman of the same age - from 23.5 kg to 44.5 kg, on average  $30.3 \pm 1.008$  kg.

The length of the left arm ranged from 53.2 cm to 63.4 cm on average in 10-year-old left-handers,  $57.5 \pm 0.48$  cm on

average, and from 52.0 to 61.3 cm in right-handed people, on average  $55.6 \pm 0.432$  cm.

Chest circumference in left-handed people averaged  $63.05 \pm 0.504$  cm, and in right-handed people - on average  $65.7 \pm 1.032$  cm.

Anthropometric studies among left-handed and ruling children showed that the right-hander was 0.20 cm lower than that of the left-hander of the same age, and that the body weight of the left-hander was 1.25 kg higher than that of the left-hander of the same age.

In 10-year-old left-handers, the length of the left arm turned out to be 1.90 cm longer than in right-handers. The size of the thoracic circumference turned out to be 2.65 cm wider on right-handed people than on left-handed people of the same age.

## 5. Conclusions

According to the data obtained, 10-year-old children lagged slightly behind in physical development (body weight and chest circumference) compared to children of the same age, on the contrary, there was a significant increase in the height and length of the left arm.

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