WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 4, Issue 7, July, 2023

COMPARATIVE CHARACTERISTICS OF MORPHOMETRIC PARAMETERS IN RIGHT-HANDED AND LEFT-HANDED CHILDREN OF THE II PERIOD OF CHILDHOOD

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

Keywords: anthropometric indicators, height, body weight, hemispheric asymmetry, dynamometry

The 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 of teaching squirrels to the right, while others, on the contrary, have a positive attitude to the phenomenon. No individual approach has 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 question of a differentiated approach to learning (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 relationships 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 ones 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 clumsy and uncoordinated movements and developing skills [7,11].

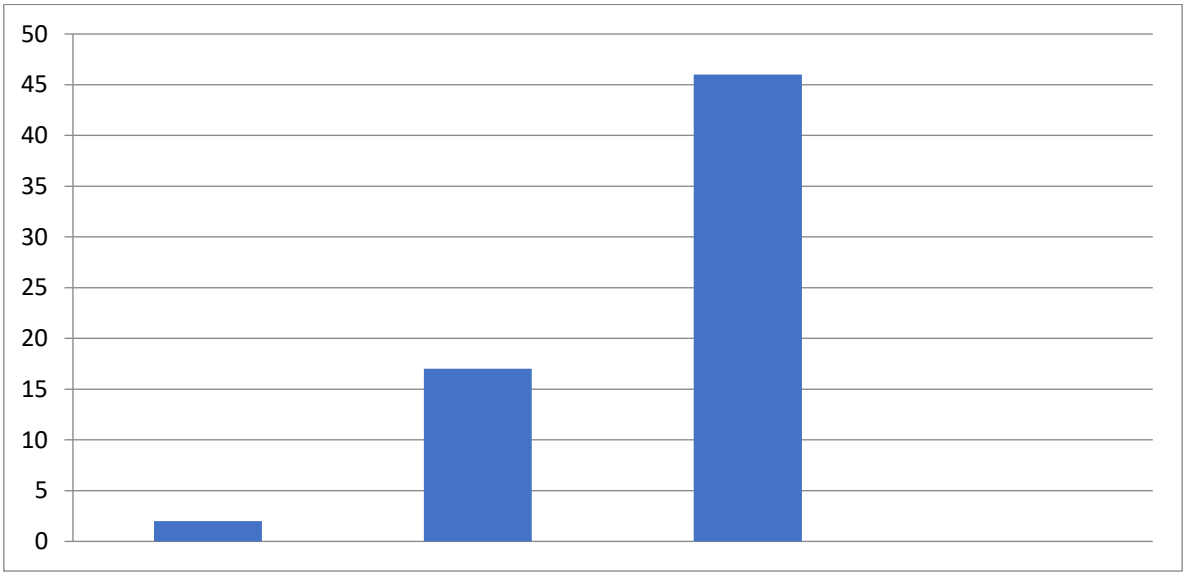
This is probably due to a congenital left hand. The advantage of the left hemisphere lies not only in the superiority of the left hand in performing motor movements, but also in the distribution of various functions (motor, visual, sensory, etc.) Between the right and left hemispheres as a kind of reflection of interhemispheric asymmetry. [1,10].

The achievement of dexterity is not only the predominance of the left hand when performing motor actions, but as a certain reflection of interhemispheric asymmetry means the distribution of various functions between the right and left hemispheres.

The theory of functional asymmetry of the cerebral hemispheres has a long history of scientific thinking. The brains of right-handed and left-handed people were first studied in 1871 by the English anatomist Ogle. He discovered that the brain of a normal person is mirror-symmetrical to the brain of a normal person.

A study conducted in the UK in the 1970s showed that approximately 11% of men and women aged 15-24 years suffer from this disease, compared with only 3% in the 55-64 age group [17].

There is still no clear understanding of the nature of left-handers. The version that most people use is that the choice of right or left hand depends on two genes (one gene determines which hemisphere controls speech, the other determines which hand controls the "speech" hemisphere). The role of heredity also lies in the fact that the probability of having a child with a cleft palate is no more than 2%, but if one of the parents has a cleft, then it increases to 17%, and if both have a cleft, then the probability increases to 46%.



In a study conducted by the BBC news agency by Swedish scientists, pregnant women who underwent ultrasound examination in the late stages of pregnancy were 32% more likely to give birth to a small baby.

There is evidence that left-handers and right-handers are emotionally different. Left-handers have great creative, especially artistic abilities and more emotions than right-handers. Many historical figures and geniuses were left-handed. Among them are artists Pablo Picasso, Michelangelo Buonarotti, Leonardo da Vinci, rulers and generals Charles, Napoleon Bonaparte, Alexander the Great, Julius Caesar, writers Lewis Carroll and Nikolai Leskov, scientists James Maxwell, Ivan Pavlov, musician Henri Paul Poyn.

It turns out that there is even a World Day of Lefties, which has been celebrated annually since 1992 on August 13! The Day of lefties is designed to draw attention to: the problem of retraining left-handed children (teachers or parents) to write with their right hand in society leads only to psychological trauma; then manufacturers and designers of household goods will need to make products taking into account the convenience of children.

We often encounter similar views on the left hand and such relationships. 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 has increased by 12.4%, and left-handed men - by 13.9%.The increase in the number of students in Ishim schools in 1998 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] The decrease in intellectual abilities of proteins may have a single cause - it is a developmental pathology, but healthy proteins can also have remarkable abilities, there are plenty of such data [2].

Lefties have the features 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].

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, rapid fatigue. The peak of activity is observed only in the first two lessons, after which children experience a decrease in endurance and motor movements. In the following hours, children feel tired, sluggish and lose interest in new information [1,5].

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

An analysis of the available literature showed that anthropometric parameters in one or another part of the body were not studied individually and to a certain extent in the children's complex "levscha". There is no data on morphometric parameters of 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.

The purpose of the study:

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

Research material:

Conducted on the basis of bilateral agreements of the Bukhara State Medical Institute in secondary school No. 7 of Bukhara (No. 517 dated 02.05.2020). The children were divided into 2 groups (n = 40): I - group of 10-year-old left-handed children (n = 20); II- The results of the survey of the group of 10-year-old right-handed 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 - methodological recommendations // Shomirzaev N.H., Ten S.A., Tukhtanazarova I., 1998). Anthropometric studies included measurements of height, body weight, arm length, chest circumference and muscle strength.

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

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ISSN: 2776-0979, Volume 4, Issue 7, July, 2023


Research results and discussion

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

The body weight of the left-handed woman ranged from 22.3 kg to 36.5 kg, on average 29.05 ± 0.696 kg, and in the right-handed woman of the same age - from 23.5 kg to 44.5 kg, on average 30.3 ± 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 ± 0.48 cm on average and from 52.0 to 61.3 cm in right-handers, on average 55.6 ± 0.432 cm.

The chest circumference in left-handers averaged 63.05 = 0.504 cm, in right-handers - on average 65.7 = 1.032 cm (Table No. 1).

Muscle strength in left-handers averaged 12.9 = 0.3 kg, while in right-handers it averaged 10.75 = 0.3 kg (Table No. 1).

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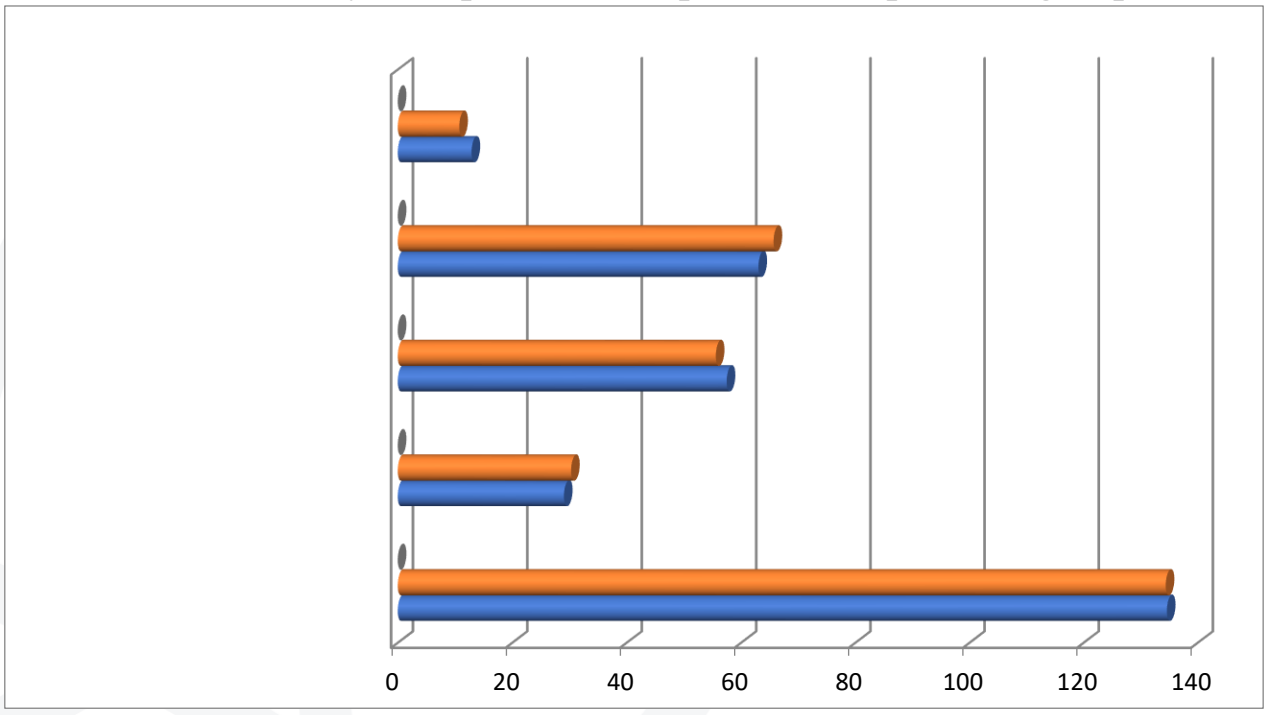
Table No. 1. Physical activity of 10-year-old children in the study development indicators

№	Indicators	10 year old children (n= 40)	
		Lefties (n = 20)	right-handed (n = 20)
1	Height, cm	134,6± 1,152*	134,4 ± 0,768
2	Body weight, kg	29,05 ± 0,696	30,3 ± 1,008
3	Left arm length, cm	57,5± 0,48	55,6 ± 0,432
4	Chest circumference, cm	63,05 ± 0,504*	65,7± 1,032
5	Muscle strength, kg	12,9±0,3*	10,75±0,3

Note: * - reliability level p ≤ 0.05 compared to the previous group



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

In 10-year-old left-handed people, the length of the left arm was 1.90 cm longer than in right-handed people. The size of the thoracic circumference turned out to be 2.65 cm wider than in left-handed women of the same age. The muscle strength of left-handers turned out to be 2.15 kg stronger than that of right-handers of the same age.

Conclusions:

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

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