

STUDY REGARDING THE ANTHROPOMETRIC PROFILE OF THE 7TH GRADE STUDENT

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Keywords: students, somatic parameters, tests.

Abstract:

This study represents the anthropometric evaluation of the seventh grade students, from the Technological High School “Iorgu Vârnav Liteanu” Liteni, Suceava County. To carry out this study we researched the theoretical ideas of specialists in the field of somatic assessment, we appreciated the degree of development of functional capacity in students and we initiated a procedure structure specific to anthropometric measurements in children in the seventh grade. Research proves the effectiveness of the methodical practice of physical exercise on normal growth and harmonious development, on increasing functional capacity and improving sports results in juniors and children of both sexes. The purpose of this experimental study on the anthropometric profile of the seventh grade student is to identify the results of the two measurements, initial and final, comparing them and recommending means of somato-functional development in physical education to discover an ideal body shape human.

Introduction

It can be seen at the most children in recent years, an accelerated growth in terms of body development [3] therefore the values of height and weight are higher than in the past, maturity occurring faster. If the child's developmental process is earlier, then the period of the developed adult also appears earlier. It can be said that this accelerated growth is taking place in better developed countries from a socio-economic perspective, regardless of the position on the planet and regardless of the climate in that area.

Some researchers note the difference between children raised in villages and those in the city, noting that children raised in the city have a faster growth in height compared to those in the villages, and the chest circumference and weight do not increase at all at the same rate.

Research proves the effectiveness of the methodical practice of physical exercises on normal growth and harmonious development, on increasing functional capacity and improvement of sports results in juniors and children of both sexes.

Due to the growing acceleration, an increasing number of children are involved in sports and competitions. If, on the one hand, it is advisable for all individuals to practice as much movement as possible, both in an organized setting and in their free time, on the other hand there is the intervention of overload, fatigue and accidents.

Some research proves the effectiveness of physical exercise in an organized environment on the human body, through a normal harmonious growth and development, improving learning outcomes and sports competitions, engaging in as many activities where effort is put, regardless of age and gender.

Puberty [2], [4] begins in girls at the age of 11-12 years and in boys at 12-13 years and lasts until 13-14 years, respectively 14-15 years, this period being considered a second phase of morphological maturation. Through these great transformations that the human body undergoes, a new morpho-physiological and psychological form of the future young man is determined [6].

According to some authors [1], [5] the development of somatic-morpho-functional indices leads to a harmonious physical development of the human body, achieving one of the fundamental objectives of physical education.

Material-method

To obtain the results on somatic indices, we used a battery of tests on height, weight, arm span, bust height, abdominal perimeter, sole length.

The research methods used in the experiment were: the bibliographic study method, the observation method, the anthropometric measurement method, the mathematical method and the graphical and tabular method.

The method of bibliographic study - in order to accomplish this work I studied specialized works.

The method of observation consists in carefully following the students from the initial moment to the final moment.

Method of anthropometric measurements - to assess the degree of physical development of students we used the following anthropometric

measurements: height, weight, bust height, abdominal perimeter, arm width, sole length.

Statistical method - in order to process the results from the initial tests and the final tests from a statistical-mathematical point of view we used the following indicators found in the literature: absolute amplitude, arithmetic mean, standard deviation and coefficient of variability.

Graphic and tabular method - the presentation of the data obtained from the research through graphs and tables that allow the correct evaluation by the researcher, from one test to another.

Results and discussions

The subjects who participated in this study are students at the Technological High School "Iorgu Vârnav Liteanu", Liteni city, Suceava county. The research was conducted with the help of 22 pupils, from the seventh grade, 10 boys and 12 girls, and the measurements used in the experiment took place in the gymnasium of the high school.

No.	Name	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
1.	C.A.	168	50	84	71	165	25
2.	D.S.	160	37	77	75	150	24
3.	G.G.	156	36	81	67	152	22
4.	G.E.	149	30	74	60	139	22
5.	H.A.	160	47	80	66	157	23
6.	H.E.	162	50	85	70	159	24
7.	I.G.	162	54	84	85	160	26
8.	L.A.	149	33	74	70	153	22
9.	L.L.	155	48	80	76	150	23
10.	M.S.	166	49	86	69	166	23
11.	P.M.	149	37	75	62	144	22
12.	P.S.	160	50	76	77	165	23
	A_a	19	24	12	15	27	4
	X	158	43,41	79,66	70,66	155	23,25
	+/-S	6,49	8,16	4,41	6,87	8,55	1,28
	Cv%	4,10	18,79	5,53	9,72	5,51	5,50

Table 1. Initial anthropometric measurements, girls, the 7th grade, average age 13 years

No.	Name	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
1.	A.G.	162	42	83	64	159	24
2.	B.B.	164	45	82	69	164	24
3.	B.R.	157	43	80	62	158	25
4.	C.R.	164	44	77	78	162	25
5.	C.C.	160	44	80	70	155	24
6.	L.I.	160	37	76	66	149	24
7.	M.S.	165	40	84	66	163	24
8.	P.B.	171	42	87	74	166	26
9.	T.C.	160	43	79	72	157	25
10.	T.G.	150	50	69	86	152	24
	<i>A_a</i>	21	13	18	24	17	2
	X	161,3	43	79,7	70,7	158,5	24,5
	+/-S	5,51	3,36	4,98	7,21	5,44	0,70
	Cv%	3,41	7,81	6,24	10,19	3,43	2,85

Table 2. Initial anthropometric measurements, boys, the 7th grade, average age 13 years

No.	Name	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
1.	C.A.	170	57	86	71	170	26
2.	D.S.	161	40	78	76	152	24
3.	G.G.	161	40	82	69	158	23
4.	G.E.	154	38	74	62	143	22
5.	H.A.	162	48	80	69	162	23
6.	H.E.	167	52	86	72	161	24
7.	I.G.	166	63	85	87	176	26
8.	L.A.	153	34	74	70	157	23
9.	L.L.	157	50	80	76	152	23
10.	M.S.	166	51	86	69	166	23
11.	P.M.	153	40	75	62	148	23
12.	P.S.	169	60	77	80	165	24
	<i>A_a</i>	17	29	12	15	33	4
	X	161,58	47,75	80,25	71,91	159,16	23,66
	+/-S	6,18	9,37	4,73	7,08	9,47	1,23
	Cv%	3,82	19,62	5,89	9,84	5,94	5,19

Table 3. Final anthropometric measurements, girls, 7th grade, average age 13 years

No.	Name	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
1.	A.G.	165	52	85	66	161	25
2.	B.B.	165	62	82	73	165	26
3.	B.R.	160	50	81	69	165	27
4.	C.R.	164	44	77	78	162	25
5.	C.C.	163	48	81	73	160	24
6.	L.I.	160	45	77	70	159	24
7.	M.S.	166	46	84	68	165	25
8.	P.B.	176	54	87	76	173	26
9.	T.C.	162	48	79	73	164	25
10.	T.G.	153	60	72	87	162	24
	A_a	23	18	15	11	14	3
	X	163,4	50,9	80,5	73,3	163,6	25,1
	+/-S	5,81	6,15	4,42	6,03	3,94	0,99
	Cv%	3,55	12,08	5,49	8,22	2,40	3,94

Table 4. Final anthropometric measurements, boys, 7th grade, average age 13 years

	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
A _a	20	18,5	15	19,5	22	3
X	159,65	43,20	79,68	70,68	156,75	23,87
+/-S	6	5,76	4,69	7,04	6,99	0,99
Cv%	3,755	13,3	5,88	9,95	4,47	4,17

Table 5. Mean initial anthropometric measurement, class VII

	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
A _a	20	23,5	13,5	13	23,5	3,5
X	162,49	49,32	80,37	72,60	161,38	24,38
+/-S	5,99	7,76	4,57	6,55	6,70	1,11
Cv%	3,68	15,85	5,69	9,03	4,17	4,56

Table 6. Mean final anthropometric measurement, class VII

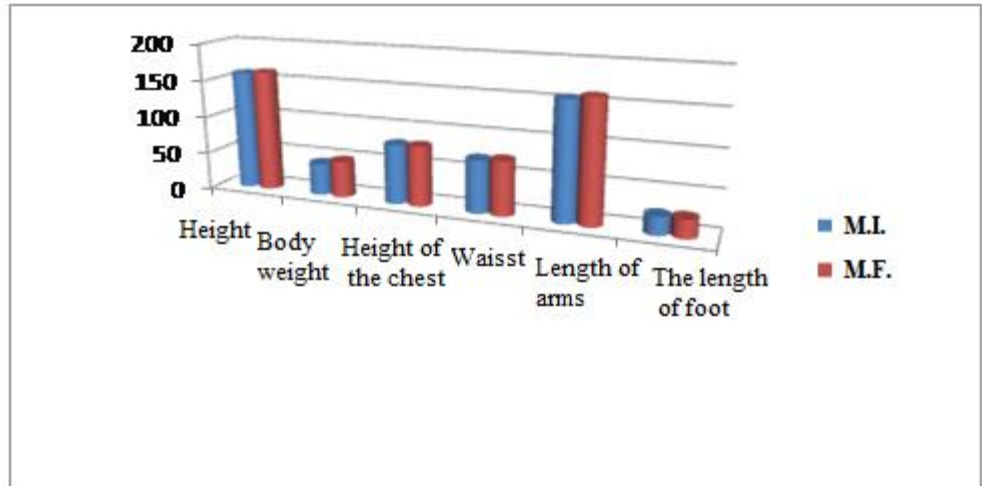


Figure 1. Initial and final middle-class measurement

Comparing the results obtained at the initial measurement with the results from the final measurement, the average per class, it is observed in the above representation that the height has an increase of 2.84 cm, the weight increases by 6.12 kg, the height of the bust increases by 0.69 cm, the abdominal perimeter increases 1.92 cm, the wingspan increases by 4.6 cm, and the length of the sole has an increase of 0.51 cm.

	F/M	Height	Body weight	Height of the chest	Waisst	Length of arms	The length of foot
m ⁱ	girls	158	43,41	79,66	70,66	155	23,25
m ^f		161,58	47,75	80,25	71,91	159,16	23,66
m ⁱ	boys	161,3	43	79,7	70,7	158,5	24,5
m ^f		163,4	50,9	80,5	73,3	163,6	25,1

Table 7. Mean and final measurement for girls and boys, 7th grade

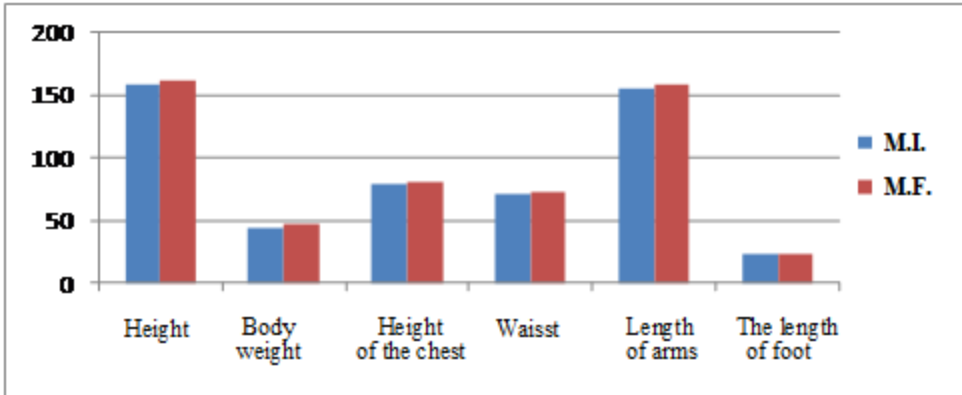


Figure 2. Initial and final measurement of average girls

Comparing the results obtained at the initial measurement with the results from the final measurement, the average girls, it is observed in the above representation that the height has an increase of 3.58 cm, the weight increases by 4.34 kg, the height of the bust increases by 0.04 cm, the abdominal perimeter increases 1.25 cm, the wingspan increases by 4.16 cm, and the length of the sole has an increase of 0.41 cm.

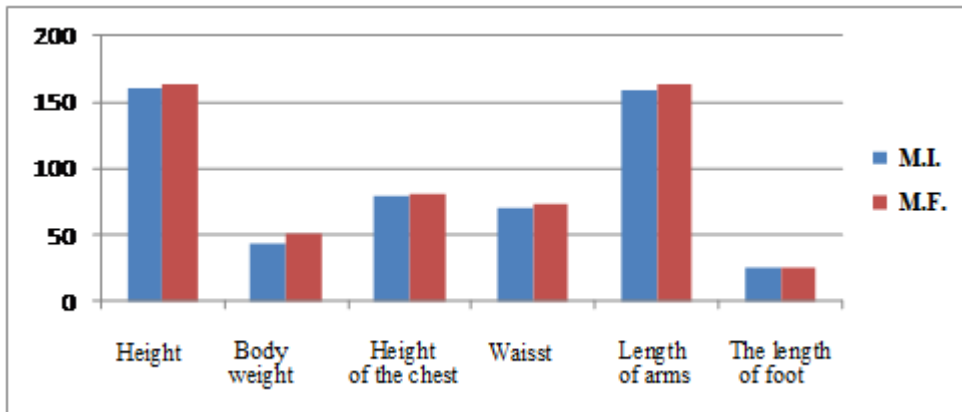


Figure 3. Initial and final measurement average boys

Comparing the results obtained at the initial measurement with the results from the final measurement, the average girls, it is observed in the above representation that the height has an increase of 2.1 cm, the weight increases by 7.9 kg, the height of the bust decreases by 0.8 cm, the

abdominal perimeter increases by 2.6 cm, the wingspan increases by 5.1 cm, and the length of the sole increases by 0.6 cm.

Conclusions

Following the analysis and comparative interpretation of the results of anthropometric development indicators, of the subjects subjected to research, a higher level results in the final measurements, thus confirming the positive influence of physical exercises practiced during physical education and sports classes, but also in free time. on student development.

We must take into account the period of childhood where major changes occur from a biological, physiological, psychological and social point of view, where there is also the physical maturation of children which is the road to a healthy adult body. The changes differ for both girls and boys, but their age also matters a lot, simultaneously with a healthy diet, enough sleep and practicing exercises in all its forms.

Physical development is represented by bodily development: height, weight, muscles, glands, brain, sense organs. Nutrition and health play a very important role in body development. Physical development is also accompanied by mental development. By psychic development is meant the complex process of formation, growth and maturation of the functions, qualities and psychic abilities of children.

Maintaining an optimal state of health, practicing physical exercises in an organized environment, but also in free time, the development of motor qualities, all lead to a healthy and well-developed body.

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