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STUDY REGARDING SPORTS TRAINING INFLUENCE OF THE SOMATIC AND FUNCTIONAL DEVELOPMENT ON CHILDREN IN ELEMENTARY SCHOOL

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Throughout history, sports games have seen lots of changes of technical, tactical, physical and in terms of displaying the competitions rules and modalities of training especially the emergence of new plans, methodologies and objectives. In this study we started from the assumption that sports training specific minihandball game have beneficial influence on indices of development somatic and functional of primary school children are in the process of onset of puberty and the number of hours of sport will «accelerate» children anthropometric indices and functional development. Subjects included in this research were 28 in number, were divided equally into two groups (experimental and control). Research findings confirm the hypothesis, from which we started, namely sports training resulted in visible influence of all somatic and functional indices of children from the experimental group.

Keywords: sports training, development somato-functional, children, handball.

Introduction. The current level of modern technical mastery of large-scale gaming competitions and not only training must shift from quantitative to the qualitative and effective, based mainly on precision and rigor thoughtful and planned instructional approaches. Sports training/physical education class, like any other interdisciplinary activity is subject to permanent innovations, which sometimes occur in very dynamic alert her, leaving behind and the best specialists eager good documentation.

Physical education and sport practiced under medical supervision – systematic and fair sport, is the most efficient morphological and functional development of harmonious and fair and not only the growing organism.

Physical education lessons should impart students a range of skills, values and attitudes.

In our field, these values are printed children in all primary, secondary or high school and meet with the means of physical education and sport, the main one being exercise presented in several forms – one of the means being even play handball or handball when talk to primary school children.

Working with children requires a different approach especially when you initiate them into a game and as a long-term goal we start with performance but not at this age.

Besides applying the correct methodology has great importance formation of an accurate representation of the execution of technical elements, this being achieved by the teacher's correct explanation, demonstrations and pictures, permanent corrections, revisions of the main components of the underlying mechanism etc.

Material and methods. The subjects of this study were divided into two groups of equal size. The experimental group comprised students aged 8-10 years belonging to the CSU handball team of Suceava.

The other group the control group through which I found if training contributed to somatic and functional development, was made up of students of III-rd and IV-th class of a school from the same region which is featuring physical education classes according to the curriculum for primary education.

We conducted the research over a period of approximately four months (January 2016 May 2016)

and started with choice of the topic, samples of work, and will then participate in some training children aimed at initiating children in the game of handball.

In our research we started from the following assumptions:

1. If handball specific training methods has beneficial influence on indices of somatic and functional development of primary school children are in the process of puberty onset.

2. If the number of hours of sport will «accelerate» the development of anthropometric indices functional group of students belonging handball CSU Suceava having positive effects on the harmonious development compared with students of the same age from another class that has normal program of Physical Education and Sport.

This paper proposes to evaluate the physical and functional development based on morphological and functional parameters and indices of students belonging handball team CSU Suceava.

Work tasks:

– choosing the experimental group and the control group;

– establishing anthropometric measurements, functional and the somatic indices;

– measurement of the two groups of pupils;

– planning the children training;

– methods selection in order to obtain a beautiful physical development indices, the correct nutrition in the experimental group;

– evaluation of all children and mathematical and statistical interpretation of obtained data.

The methods used in the research were: bibliographic documentation method, observation method, experiment, testing method, data processing methods, statistical and mathematical method, and graphical method of interpreting the results.

The means used to develop the somatic and functional indices of the children in the experimental group included: exercises to develop motor skills; ball exercises; simple multiple dribbling exercises; exercises for throwing handball; exercises for movement in the field and for the fundamental position; games for learning specific technical elements handball.

Results. Regarding the tested subjects were measured somatic and functional parameters for

both the experimental group and those in the control group. Evolution parameters were graphically represented.

Table 1
Data regarding the results of experimental and control groups on the initial and final testing

Nr. Crt	Testing	Average – experimental group		Average – control group	
		I. T.	F.T.	I.T.	F.T.
1	Height (cm)	142,3	144,78	140,53	141,67
2	Weight (kg)	39,25	43,11	42,53	43,07
3	Arm span (cm)	140,09	142,34	139	140,11
4	Thoracic perimeter (cm)	63,4	65,3	69,6	70,2
5	Abdominal perimeter (cm)	59,78	61,11	64,21	63,13
6	Hip perimeter (cm)	35,15	36,2	35,84	35,98
7	Arm perimeter (cm)	22,68	25,21	23,33	23,67
8	BMI	19,79	21,13	20,1	20,56
10	Report of the arm span at waist	97,38%	99,97%	96,98%	97,65%
11	Chest elasticity index	6,64	9,35	5,92	6,13
12	Ideal hart rate	81,35	78,2	79,42	79
13	After workout hart rate	140,07	138,4	143,78	143,85
14	Respiratory rate	23,64	23,2	24	24,2

Măsurători antropometrice

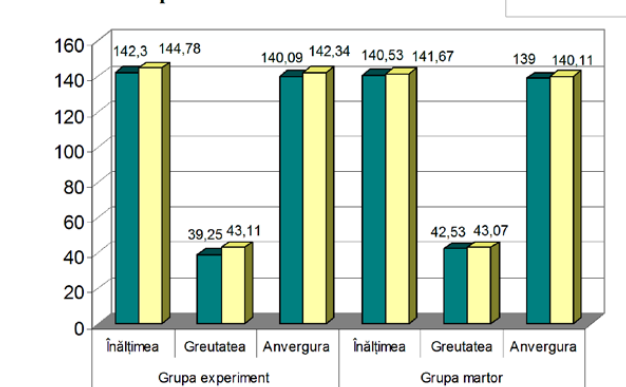


Chart 1. Anthropometric measurements for experimental and control groups

In the first chart are presented data anthropometric measurements (height, weight, arm span) of both groups.

We can see that the handball training means influenced the evolution of the parameters to the experimental group, the control group parameters remained the same, and the differences are hardly visible.

At the initial assessment of students from the experimental group height parameter achieved an average of 142.3 cm, and at the control an average of 140.53 cm. The difference between the first test group was 2.48 comparing to the 1.14 in the other group.

Same for the other parameters arm span weight increases are visible in the first group with which has worked, which leads us to confirm the assumption made earlier.

Dimensiuni circulare

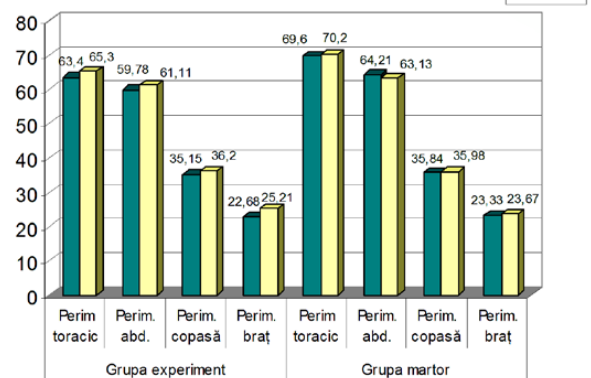


Chart 2. Dimensions of the thorax, abdomen, and arm thigh on the experimental and control groups

The following chart (Chart 2) is passed circular dimensions of the thorax, abdomen, and arm thigh.

Like in the above chart (Chart 1) there is a visible change in the parameters of the experimental group than the control which took part only in Physical Education lessons without other workouts.

Handball team recorded: average growth of 1.9 cm at the perimeter of the chest, abdominal 1,05 cm average at 1.05 to the thigh area a difference of 2.63 cm at the perimeter of the arm.

Increases of children in the control group are insignificant and do not exceed those of the group conducting training 2-3 times a week in addition to physical education classes.

Indici antropometrici

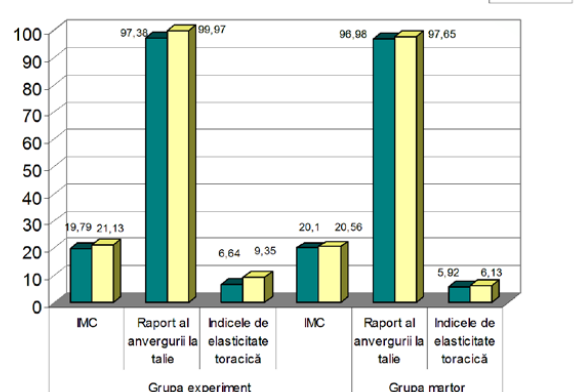


Chart 3. Anthropometrical index for the experimental and control groups

Regarding BMI we see an average increase of 1.34 in the experimental group due to the increase in height and 0.46 for the control group.

The report of the arm span to the waist is 99.97% at final testing of the experimental group compared to the control group 97.65.

Last index – the index of chest elasticity recorded increasing growth due to the large volume of work that has undergone target group during handball training.

We note the difference from the first group of 2.71 cm, to 0.21 cm only for the control group.

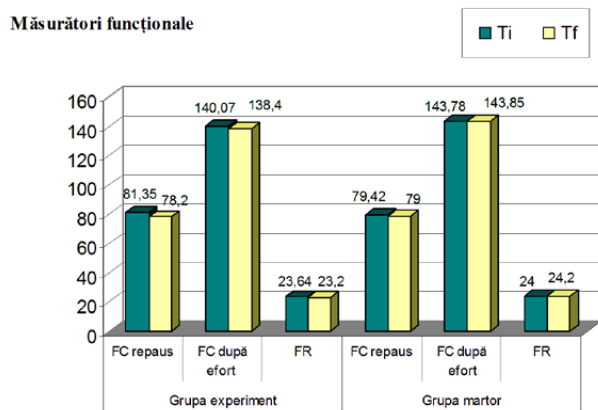


Chart 4. Groups average of functional indices

The last graph (Chart 4) are represented the groups average of functional indices. We observe the most obvious increase in the number of heartbeats per minute after efforts.

If the initial test average pulse increased to 140.07 beats per minute at the end there were 136.4 beats per minute which means greater adaptability of the body after exercise training children initiation game over a long period of time.

In control group on the first test we have an average of 143.78 beats per minute, and at the end

a small change was registered (a slight increase) on the hart rate parameter.

Conclusion. The research which was aimed the morphological and functional assessment for school children and identifying the contribution of sports training on these indicators target group was reached the following conclusions:

1. Physical activity is conducted appropriate to carry from childhood through the ages that contains mini versions of the game;

2. According to the analysis and representation shows that sports training has resulted in visible influence for all functional and somatic indices to the experimental group;

3. Independent variable applied on the experimental group namely a model of handball specific training to go to the physical body with a harmonious balance indices;

4. The greatest influence of the preparation can be seen on elasticity index and heart rate after exercise; this is because the experimental group achieved a working volume much higher than those in the control group;

5. As a general conclusion of the preliminary research, it can be said that sports training brings influences on physical and functional development of children.

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