THE INFLUENCE OF THE SPECIFIC MEANS OF HANDBALL ON THE DEVELOPMENT OF MOTOR QUALITIES AT HIGH SCHOOL STUDENTS

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Abstract: Given the importance of handball in physical education classes as well as performance sports, we propose that in this paper we make a theoretical and methodical contribution on explaining some aspects regarding the use of the most efficient means of action , for the development of motor quality speed and skill with specific means of handball at high school level. In this experiment, we chose and used the following control samples: speed running 30m flat; 30 m dribbling on the right, 30m dribbling through the goalposts ; triangle movement; throwing with the handball ball at a distance of three steps. To verify the proposed hypotheses, we have called for a constructive experiment in classes IX A and IX B. In the experiment that we conducted, we performed two tests: initial testing (September 2016) and final testing (May 2017) depending on the school schedule. After a careful analysis, we can conclude that there has been an increase, from one state to the next, in each of the samples supported by students.

***Key words** : skill, speed, physical education, handball*

Introduction

Given the importance of handball in physical education classes as well as performance sports, we propose that in this paper we make a theoretical and methodical contribution on explaining some aspects regarding the use of the most efficient means of action, for the development of motor quality speed and skill with specific means of handball at high school level. Physical education is a component of general education along with intellectual, aesthetic, moral and technical-professional education.

It is obvious the need for progress in the mentality of all specialists in the field of physical exercise, offering new models of analysis, explanation, interpretation and application of physical education. The defining picture of physical education must include equally distributed influence on body and mind, thought and action, non-verbal language and expression. [1]

Physical education is an instructive-educational process aimed at raising, shaping, cultivating the physical capacities of people. It is a process deliberately built and developed for improvement, physical development and motor capacity, depending on the age and gender peculiarities, the integration requirements, the specifics of some professions, etc.

Some authors regards physical education as a "human activity of systematic and conscious physical exercises, carried out as a bilateral instructive-educational process, in order to achieve well-defined objectives, among which the priority is to improve the physical / body development of the subjects, improvement of skills and motor skills of the subjects".[2]

„The qualitative specificity of physical education does not consist in the fact that it is a motor activity, but in the way this activity is carried out, in the objectives pursued and the emphasis placed on the formative value of the training". [3]

Physical education is accessible to all ages and has general and differentiated instructional and educational objectives on each specific subsystem: physical education of the younger generation, professional physical education, military physical education, physical education of the elderly, etc.

Materials and methods

- selecting and reviewing a specialized literature and official documents, in line with the theme of the paper;
- establishing the research sample;
- the psychomotor and somatic knowledge of the age stage in order to accurately measure the effort in the use of handball specific means
- establishing the research methods to be used during the experiment

"The development / education of motor skills is based on the mobilization of the energetic resources of the body, so through systematic effort, not only nervous type (attention, memory, abstraction and generalization etc) but also muscular".[4]

Underlining the importance of co-ordination in life, J. Weineck considers the overall coordination capacity as a result of "multi-purpose driving learning that is manifested in various areas of daily life and athletes and allows the rational and intensive fulfillment of all driving tasks kinds[5].

In this experiment, we chose and used the following control samples: speed running 30m flat; 30m dribble on the right line; dribbling among 30m; triangle movement; throwing with the handball ball at a distance of three steps.

To verify the proposed hypotheses, we have called for a constructive experiment in classes IX

A and IX B. In the experiment that we conducted, we performed two tests: initial testing (September 2016) and final testing (May 2017) depending on the school schedule. The preparation and deployment of the experiment covered the following stages: planning the content of the activity; the systematization of handball specific means that will be used in the development of motor skills speed and skill; elaboration of samples and control rules; performing initial testing and final testing; analysis and interpretation of the data obtained; formulation of the conclusions and methodological recommendations.

Results

To analyze the final results obtained in the experiment we conducted, we performed two tests for somatic and motor development: initial testing (October 2016) and final testing (May 2017). Based on the results obtained in the two tests, we calculated the arithmetic mean for each control sample, followed by statistical processing of the indicators: standard deviation (As), coefficient of variability (Cv) and deviation from mean (Am).

After a careful analysis and, as can be seen in the graphical representations, (which we will present below), we can conclude that there has been an increase, from one state to the next, in each of the samples supported by students (see tables and samples).

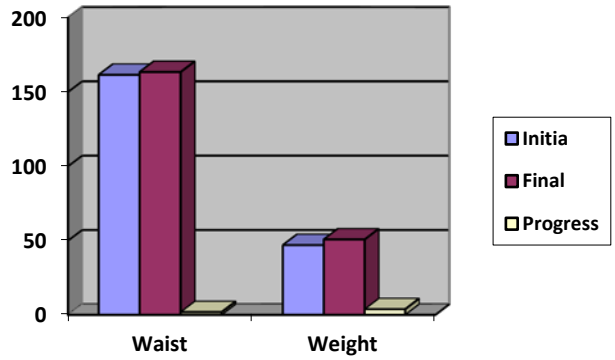

Figure no 1. Progress at somatic level – the experimental group

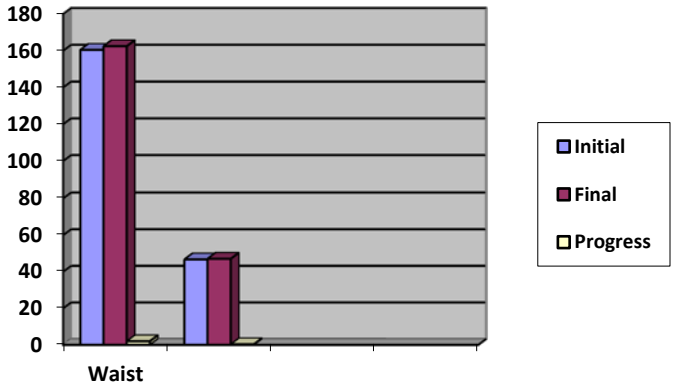

Figure no 2. Progress at somatic level - the control group

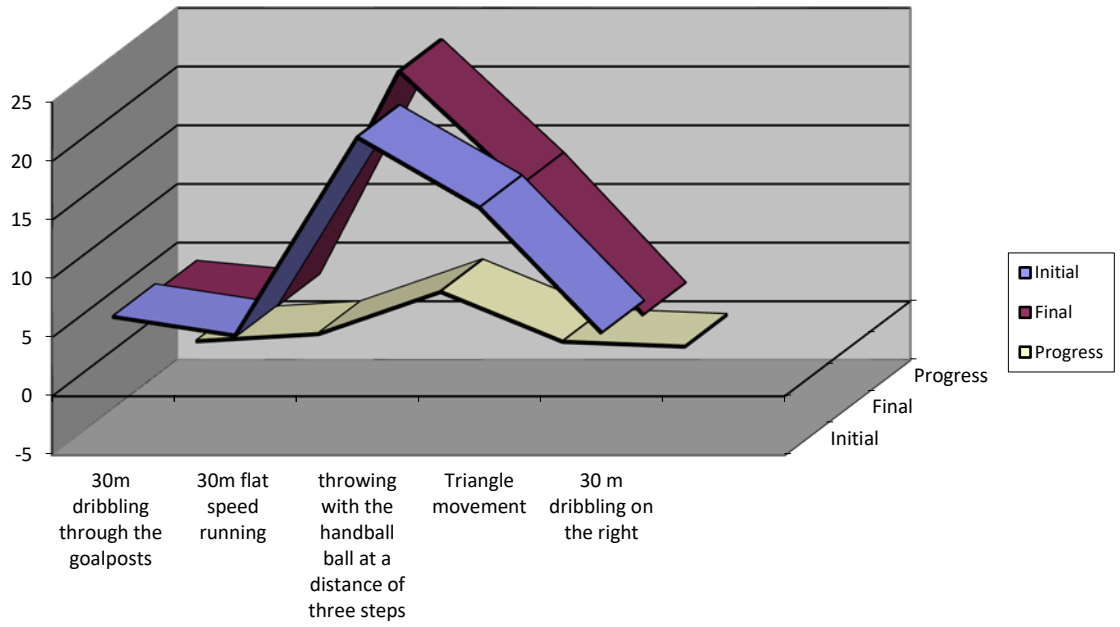

Figure no 3. Progress achieved at the motor level - experimental group

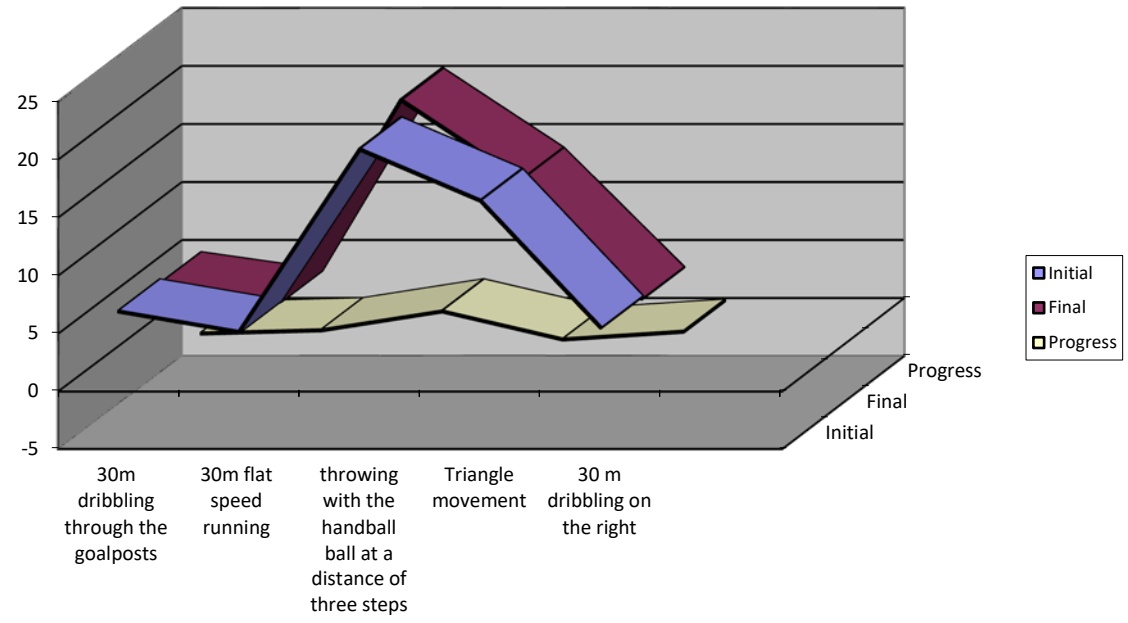

Figure no 4. Progress achieved at the motor level - control group

Analyzing the results recorded in the table we can conclude that the differences between the two groups included in the experiment are significant, the experiment group having better results both in the initial and the final tests, which shows that the means used were effective and confirmed the hypothesis. The behavior of both groups, expressed by the statistical indicators, reveals the group homogeneity.

The results of the final measurements show at the somatic level growth variations within normal limits in the control group and slightly increased above this limit in the experimental group. This highlights the fact that the dynamics of the processor of growth take place according to the biological characteristics, on the one hand, but also under the influence of the educational act, on the other.
At motor level there is an evolution of the results recorded by both groups. In the experiment group, progress is visible in all the tests, but the best result is recorded in the dribble test among the jaws (6.77 initially, 6.07 "final), which shows that the means used for speed and skill education were effective and (6.07 "final experiment group, 6.58" final control group), confirming once again the above results. The differences between the group experiment and control group are also present in the graphs below.

Table no 1. Comparative analysis between the two groups

No.	Sample	Experiment group	Control group	Difference	Experiment group	Control group	Difference
		Initial	Initial		Final	Final	
1	Waist	161,45cm	160.45cm	1,0 cm	163,45cm	162,45cm	0,9cm
2	Weight	46,95kg	46.75kg	0,20 kg	50,75g	47,1kg	3,75kg
3	30m dribbling through the goalposts	6.77”	6.94”	-0,17”	6,07”	6,58”	-0,51”
4	30m flat speed running	5.17”	5.17”	0	5,08”	5,09”	-0,01”
5	Throwing with the handball ball at a distance	22.05m	20.9m	1,5m	25m	22,45m	2,55m
6	Triangle movement	16.07”	16.48”	-0,48”	15,32”	15,61”	-0,29”
7	Dribbling in a straight line	5.40”	5.50”	-0,1”	4,24”	5,30”	-1,06”

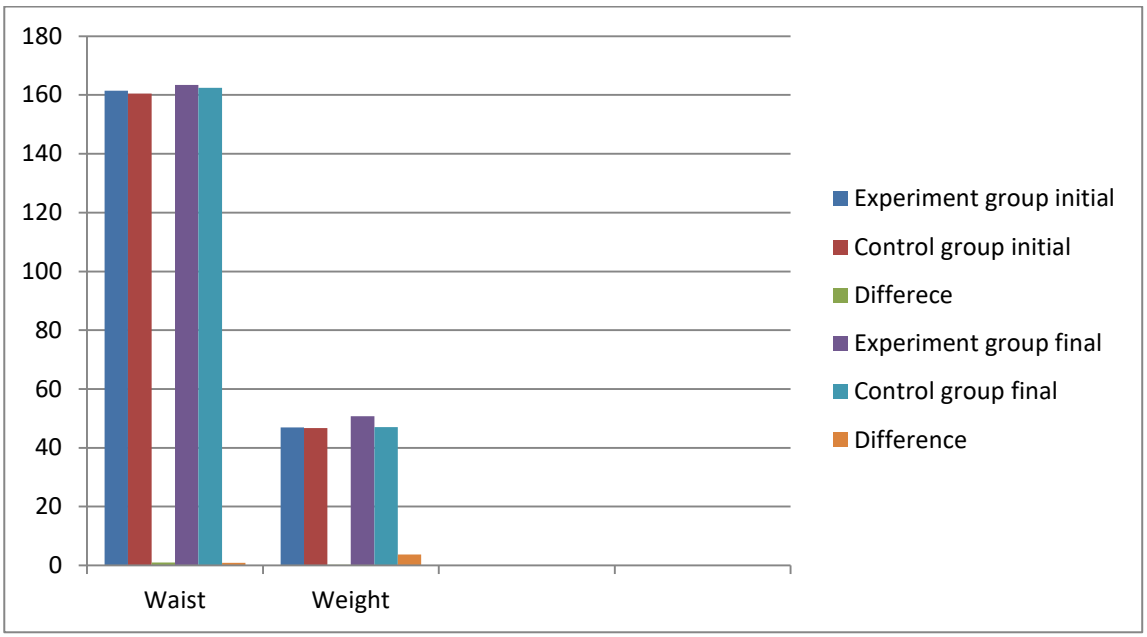

Figure no 5. Comparison of the initial and final results at the somatic level between the two groups

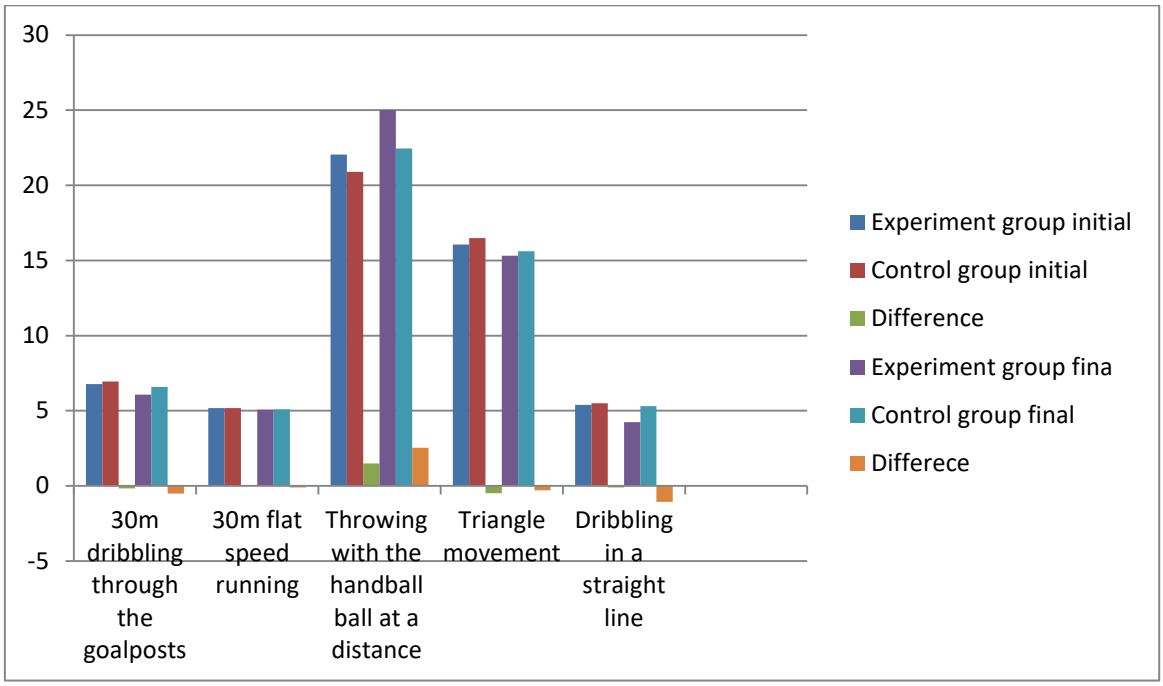

Figure no 6. Comparison of initial and final motor results between the two groups

Conclusions

The means of action specific to the handball game, which we have chosen and used in the development of motor skills, speed and skill, have proven to be effective.

Samples and control rules used in the initial and final testing were significant and consistent with the pupils' age and their level of training.

The comparative analysis between the results obtained in the two tests showed an improvement in the final test versus the initial test.

All these higher or lower increases in the results at all samples highlight the effectiveness of the chosen and used means.Also, this efficiency of the lesson also demonstrates that it was rigorously planned / designed and methodically organized by the physical education teacher.

Following the somatic measurements, we found that there is a relationship of proportionality between the waist and weight, the pupils being in the model of the gymnasium graduate for the respective classes.

The teacher must always be concerned with the proper guidance and promotion of talented children to sports venues.

The psychomotor and somatic knowledge of the pupils' age stage is very important in order to accurately measure the effort in the use of handball specific means, while respecting the physiological principles of the physical education lesson.

For better skill in sports games, ambidextrous is recommended in all exercises, even if time is missed with execution, but it is a win for a future handball player.

References

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