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INFLUENCE OF JUMPING EXERCISES ON THE DEVELOPMENT OF EXPLOSIVE POWER AT HANDBALL AGED 12 -13 YEARS

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ABSTRACT

Objective. Jumps exercises put in handball training are o good method to develop the as it can be remarked on this essay our intention is to develop the vertical detachment of twelve-thirteen years old (12-13) boys, knowing the fact that the force can not be developed by bar bells at this age.

Research Methods and Procedures. The research was conducted over 6 months, TI has made in September 2005, and the TF in February 2006. The trainings were held both outdoors and in both groups by training room is under the same conditions, the difference exists only in the fundamental experiment in group training where exercises were introduced themselves (which included the independent variable) for the development of explosive power .

The difference in driving systems of the two groups was the application for development exercises explosive power of the experimental group. Otherwise drive systems have followed the general physical and driving qualities, the same for both groups. In the number of training sessions were conducted three workouts per week that was identical for both groups so that the second training experiment group contained the independent variable.

Results. On the experimental group will see the results of subjects in the 3 successive jumps (541.667 ± 21.197 baseline and after six months 573.75 ± 18.563; at a threshold of significance $p \leq 0.0005$), vertical detachment on two legs (33, initial 75 ± 2.179 and 40.917 ± 2.61 after six months, at a threshold of significance $p \leq 0.0005$) foot vertical separation of battle (42.25 ± 2.094 initially and after six months 48.833 ± 2.368; at a threshold of significance $p \leq 0.0005$) increased due to implementation of training programs that contain the independent.

Discussion and Conclusions. Assuming the paper, the behavior of the dependent variable (distance traveled during the long jump 3 successive away with two feet vertically and on foot fighting) in the two groups (experimental group and control group), resulting in application independent variable (placing in training exercises for jumping).

Confirmed the hypothesis, that the method of jumping to handball novice influence of performance of subjects in the experimental group on the distance traveled during the 3 successive jumps, two feet vertical separation and vertical separation foot battle.

Key words: handball, detention, jumping exercises

Introduction

Modernization sport is a complex process of reassessment, the reassessment of what has proved and still proves valuable, and introducing new features requested by current guidance (D. COLIBABA - EVULEŢ, 1998). Continuous modernization of sport must find new methods, procedures and capacity to act in practice and continuous improvement of existing ones, those so-called classical In line with this task of great importance to sports we have developed this work aimed at achieving the higher odds of a goal important enough in general physical training novice athletes namely motor skill development and in particular the development of detention (G. RAŢĂ, B. RAŢĂ, 1999).

Almost impossible due to increased performance (that can not provide results of high level of skills young people have not even above average) to find the most appropriate methods and means of developing a task, and detention is a concern of many experts.

The purpose and tasks work

The purpose of the present work was observed jumping exercises influence on the development of detention at a beginner handball group consists of boys aged 12-13 years. Starting from the initial test is to measure the distance traveled during the three jumps chain, measuring the vertical detachment both run on two feet and breaking the leg of stroke and 6 months after final testing is accomplished in the same conditions as initial testing to see if they have had influence on the performance achieved by the distance traveled during the three jumps chain, the detachment foot vertical separation battle and, in a word on explosive power.

Research hypothesis

Selection and quantification of training is a necessary means outstanding in the current training process. (C. GEVAT, A. LARION, C. POPA, 2007).

Standardization and streamlining of training means the coach can provide sound and effective use of training time by testing exercises (C. RIZESCU, 2005). Given the purpose of the work - ways of developing explosive power legs, using the beginning I started jumping in handball at the following hypothesis:

- Which is contributed by jumping exercises used as a means of training the children start training on the behavior of the dependent variable, namely distance covered during the 3 successive long jump, the vertical detachment on two legs and foot fighting.

Subjects

When performing this experiment was attended by 24 male subjects engaged in group of beginner handball and who have never practiced any sport. The 24 subjects were formed into two distinct groups: the experimental group and control group (children being trained by Professor Georgescu Adrian at Sports Club Medgidia).

Protocol research

The research was conducted over 6 months, TI has made in September 2008, and the TF in February 2009. The trainings were held both outdoors and in both groups by training room is under the same conditions, the difference exists only in the fundamental experiment in group training where exercises were introduced themselves (which included the independent variable) for the development of detente .

Groups of control and has conducted training in the same conditions, not including the training exercises which included the independent variable.

Research monitors the two variables, the dependent variable and independent variable and positive or negative influence of these variables exerted by certain factors throughout the research. Evolution of the dependent variable, namely the evolution of the results on two feet vertically away with that on foot jump shot and three intertwined, like the independent variable is applied in the training and test conditions themselves. Thus both tests (TI and TF) were made in the room at a temperature of between 19-24 degrees in the morning on Monday at 8.30. Testing was done on the first day of the week because the children came after two days in which we are not specific effort, the rest.

Testing the dependent variable (two feet vertical separation that on foot jump shot and three chain) has been made on the parquet, by carrying out two tests, whichever is the best outcome for each subject, is written to achieve treatment statistical data.

Sports equipment during the test subjects was identical. There were no reported injuries or health problems (muscular or otherwise) arising before testing that could adversely affect the performance of subjects.

Actuation systems (the actual exercise of the training) were designed for the physical body with emphasis on speed of implementation force (without weight), detention and technical. In the preparation had an important role in implementing technical exercises themselves because the child had to acquire the correct mechanism to achieve coordination movements very good. Resistance has not been neglected; being developed in game motion weighted less in the preparation. Force had a higher share in developing the upper limb and trunk to the development of lower limbs. Explosive power of completed quality motive force for development of lower limbs. In the speed to pursue the development of amplitude, frequency movements, reaction speed and in particular the speed of execution.

The difference in driving systems of the two groups was the application for development exercises detention of the experimental group. Otherwise drive systems have followed the general physical and driving qualities, the same for both groups. In the number of training sessions were conducted three workouts per week that was identical for both groups so that the second training experiment group contained the independent variable.

Results

Table nr.1

GROUPS	Testarea	P	Distance traveled during the 3 successive jumps cm.	Vertical separation on two legs cm.	Foot vertical separation of battle cm.	Waist cm.	Weight Kg.
EXP	INITIAL	M ± Ds	541,667±21,197	33,75±2,179	42,25±2,094	160,167±11,51	50,33±10,272
		Cv	3,913%	6,456%	4,956%	7,013%	20,408%
	FINAL	M ± Ds	573,75±18,563	40,917±2,61	48,833±2,368	161,333±11,19	50,83 ± 10,241
		Cv	3,235%	6,379%	4,849%	7,014%	20,146%
CONTROL	INITIAL	M ± Ds	539,583±20,038	34,083±1,881	42,75±2,301	160,417±11,14	50,33±10, 272
		Cv	3,714%	5,519%	5,382%	6,949%	20,408%
	FINAL	M ± Ds	540±19,268	34,833±1,749	43,333±2,229	161,5±10,85	50,75±9,965
		Cv	3,568%	5,021%	5,144%	6,718%	19,635%

Discussions

In the present study were followed over 6 months, several parameters such as distance covered during the 3 successive long jumps away with two feet vertically and on foot fighting, size, weight.

Assuming the paper, the behavior of the dependent variable (distance traveled during the long jump 3 successive away with two feet vertically and on foot fighting) in the two groups (experimental group and control group), resulting in application independent variable (placing in training exercises for jumping).

On the experimental group will see the results of subjects in the 3 successive jumps (541.667 ± 21.197 baseline and after six months 573.75 ± 18.563; at a threshold of significance $p \leq 0.0005$), vertical detachment on two legs (33, initial 75 ± 2.179 and 40.917 ± 2.61 after six months, at a threshold of significance $p \leq 0.0005$) foot vertical separation of battle (42.25 ± 2.094 initially and after six months 48.833 ± 2.368; at a threshold of significance $p \leq 0.0005$) increased due to implementation of training programs that contain the independent.

Results of control group subjects in the 3 successive jumps (539.583 ± 20.038 baseline and after 6 months 540 ± 19.268, at a threshold of significance $p \leq 0.05$), vertical detachment on two feet (34.083 ± 1.881 initially and after 34.833 ± 1.749 six months, at a threshold of significance $p \leq 0.01$) and vertical detachment battle foot (42.75 ± 2.301 initially and after six months 43.333 ± 2.229, the threshold of significance $p \leq 0, 01$) increased only by application programs which did not contain the independent variable.

It is noted that the successive jumps 3 (experimental group 541.667 ± 21.197, 539.583 ± 20.038 control group, at a threshold of significance $p \leq 0.05$), vertical detachment on two legs (the experimental group 33.75 ± 2.179, group 34.083 ± 1.881 control, at a threshold of significance $p \leq 0.05$) and vertical detachment foot battle (the experimental group 42.25 ± 2.094, control group 42.75 ± 2.301, at a threshold of significance $p \leq 0.01$) difference between experimental group and control group on initial testing is significant but a small threshold, which means that at the beginning of the experiment subjects in both groups were very slightly different on the results achieved by During the 3 successive long jump, vertical separation on two legs and foot vertical separation of battle since the subjects have not practiced any sports.

The difference between the two groups of test subjects in the final 3 successive jumps (the experimental group 573.75 ± 18.563, 19.268 ± 540 control group, the threshold of significance $p \leq 0.0005$), vertical detachment on two legs (group experiment 40.917 ± 2.61, 34.833 ± 1.749 control group; at a threshold of significance $p \leq 0.0005$) foot vertical separation of battle (the experimental group 48.833 ± 2.368, 43.333 ± 2.229 control group at a threshold of significance $p \leq 0.0005$) due to the introduction of training programs experiment group independent variable (jumping exercises). On the tests applied, results in the 3 successive jumps, two feet vertical separation and vertical separation foot battle if we can confirm that the effects of introducing the work and training programs jumping exercises are positive (significant) in children aged 12 -13 years.

Conclusions and proposals

Confirmed the hypothesis, that the method of jumping to handball novice influence of performance of subjects in the experimental group on the distance traveled during the 3 successive jumps, two feet vertical separation and vertical separation foot battle, which leads to the following conclusion:

- *Jumping method improves explosive power, significantly influencing the outcome of the distance covered during the 3 successive jumps, two feet vertical separation and vertical separation foot battle to handball novice aged 12 to 13 years.*

Size and weight of subjects over 6 months of days have evolved differently (significant difference between experimental group and control group on the TI and TF) so that did not influence the results of two groups, the distance covered during the 3 successive jumps, breaking the upright on two legs and foot vertical separation of battle.

We believe that placing the preparation handball jumping exercises is beneficial in enhancing performance detente legs, but it is conducted on a longer period of time, at least one year and on this basis we propose a model for training in composition to finds himself jumping exercises

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