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STUDY ON THE ROLE OF TRAINING PROGRAMME FOR OPTIMIZING THE SPEED OF EXECUTION AND THE PACE OF PLAY AT THE LEVEL OF HANDBALL PLAYERS - MALE JUNIORS II

Case
Study

Keywords

Male handball;
Junior II;
Rhythm;
Execution speed

Abstract

Objectives: The purpose of this research was to evaluate through the "T" Test the progress made by the subjects under investigation in terms of the evolution of the speed of execution and the speed in the handball at the level of junior male, applying the training program proposed by us. The research was carried out on the number of 32 athletes divided into two groups: 15 athletes in the experimental group and 17 athletes in the control group. The "T" Test was applied to assess the progress achieved by the studied subjects. At the "T" test for speed, testing different directions, agility and body control, the average time of the group of athletes at the end of the training period is 0.81 sec, the progress achieved is 8.4%, while the control group, at the end of the training period recorded a decrease in final test time, averaging 0.25 sec., the progress being 3.2%. Due to the variety of methods, means and materials used during the training program used by us in the training of handball players, male juniors II, there is an increase in speed in different directions, agility, multidirectional control and implicitly visible rhythm and tempo of the game.

The performance of an athlete depends largely on his physical training in addition to other characteristics. Optimal performance thus requires a combination of technical and tactical abilities, as well as a high degree of physical fitness (Gajanana & Swamy, 2013). Many sports on a course or on a field require high-speed movements of the whole body. These are in response to the movement of a ball, of the opponents or teammates. This important component of the athletic performance can be described as agility and is sometimes associated with terms such as speed and rapidity (Young & Farrow, 2006).

In the sport scientific community, the current method of speed development is being modified, with a particular emphasis not only on acceleration, maximum speed and speed development in resistance mode, but also on directional change during speed exercises (Gambetta, 1996; Moreno, 1995; Sayers, 2000).

Due to the fact that emphasis has to be placed on the specificity of training with specific movement patterns, it follows that "the straight-line sprint training has little or no influence on the improvement of the sprint that involves directional changes" (Young, McDowell & Scarlett, 2001).

The increasing speed of body action and technical-tactical manifestation is the dominant trend in all the individual actions of the game, resulting in the visible increase of rhythm and speed of play (Reiman, 2009). The quick attack (counter-attack, phase II, quick-throw or after ball recovery) has become a constant concern for all teams. Clear statistical data show that the finalist teams at Olympic Games and World Championships have scored between 20 and 30% (minimum 18% and maximum 40%) of the goals in such actions. The transition from defence to attack is carried out with great rapidity in almost all occasions of ball recovery, constantly and persistently trying to capture the defence still in the process of organizing. Reducing to the maximum, or even eliminating the organizational phase, with pauses (especially in teams that make attack-defense teams) is present in all teams. The attack continuously exerts pressure on defences by swiftly switching from one action to another, carried out in quick rhythms.

Various tactical or strategy moments will dictate variations in attack pace. Today's fast-paced action at rapid rhythms and rising temples is evident (<http://frh.ro>). Whether we like it or not, sport in general and handball in particular, requires directional changes, the lateral movements being executed in different planes of movement. Because of this, athletes must have the ability to react with force, explosiveness, but also quickly to these situations. In addition to the elements specific to each sport, agility can play a determining role in predicting success in sports.

METHODS

This study was conducted on 32 male athletes practising handball at junior level II (15-16 years), divided into two groups: the experiment group consisting of 15 athletes at the Bucharest Municipal Sports Club and the control group made up of 17 athletes legalized at the Bucharest Sports School No. 2. The "T" Test was applied to the subjects by means of which we assessed the speed in different directions, the agility and body control. Following this test, the progress made by the subjects under investigation regarding the evolution of the execution speed and the speed in the handball game in junior male, before and after the application of the training program proposed in the research was evaluated.

The program implemented in the research included specific handball games in the form of the training program, being applied to the experiment group, three times a week, 15 minutes at the beginning of the training lesson.

Training program 1

1. Rotate around the three cones, left-to-right, the next repeat right-to-left;
2. Touching the right cone with the right hand and the left cone with the left hand, running with an added step between the two arms transversely to the direction of moving, the next repetition changes the direction of moving;
3. Going around the two cones backwards and forwards, the next repetition changes the direction of travel;
4. Running around a cone;
5. Rotation around four cones with diagonal running;
6. Taking over a handball with two hands;
7. Dribbling around two cones transversely to the direction of movement, the next repetition changes the sense of dribbling;
8. Throwing while jumping in the 9-meter area (b);
a. The nine-meter line; b. Recovering the ball from the goal area and returning to point 6, running; c. Running back in formation.

Training program 2

1. In figure eight, go round two rows of three cones sequentially disposed in the direction of moving, the next repetition changes the direction of running;
2. Jumps on the left leg over 4 cones placed in successively in the direction of moving, for the next repetition change the leg;
3. Running on the left side and back to two wheels in the direction of travel, the next repeat changes the direction of running;
4. Going around a cone;
5. Side run between two strings (4 to 4) arranged transversely to the direction of travel;

6. Throwing the medicine ball between two cones (b) and (c) with two hands on the chest, recovering the medicine ball and returning to the cone (b);
7. Taking over a handball ball with two hands;
8. Dribbling with shooting in the 9-meter area (d);a. Recovering the ball and returning to the workshop (7);b. Running back in the race.

RESULTS

Experimental research - Experimental group vs Control group - Comparative analysis of the average of the results obtained on the statistical-mathematical indices after the application of the training program - "T" test - see Table 1 and Table 2 In the independent t test for unparaleled dispersions having $p < 0.001 < 0.05$, for $t = 7.736$ and $df = 22$, a statistically significant difference is observed between the mean scores of the subjects of the two groups in the "T" test for speed, agility and multidirectional body control. The average value is 8.76 for the experiment group and 10.12 sec for the control group.

It follows that the average is lower in the experimental group with 1.36 (13.39%) sec. The magnitude of the effect (2.74) shows a very large difference between the average results obtained by the athletes of the two groups. The results are homogeneously dispersed in both groups. Graph 1 shows the mean values corresponding to the results of the subjects of the two groups at the final tests.

CONCLUSIONS

Due to the variety of methods, means and materials used during the practice used by us in the training of handball players, male junior masters, it is noted that they lead to the optimization of the technical training by enriching the mobility abilities repertoire, the development of conditional and coordinating capacities, consolidation and

improvement skills and general and specific mobility skills, the development of the creativity of the handball players, II-male juniors and implicitly the visible increase of the rhythm and the speed of the game.

In the "T" test for speed testing different directions, agility and body control, there was a decrease in the average time achieved by the athletes of the experimental group at the end of the training period by 0.81 sec., The progress achieved was 8.4%. By comparison, the control group at the end of the training period shows a decrease in the time to final testing, on average, by 0.25 sec. Progress is of 3.2%.

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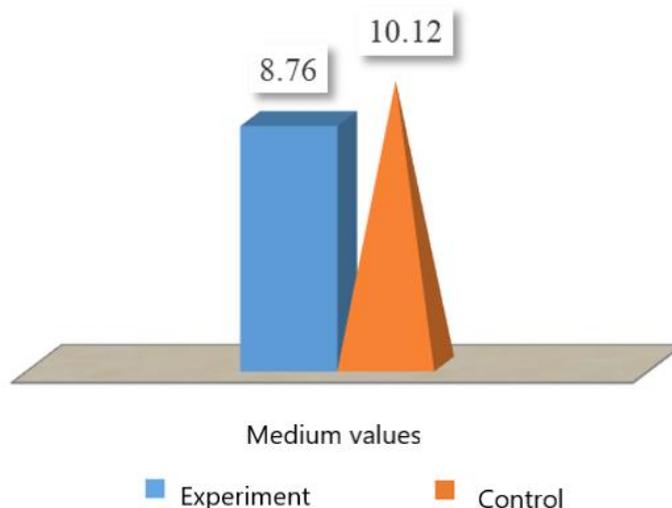
Tables & Figures

Table 1
Experimental Research – the experimental group vs the control group - the T test

Groups	Average	Difference	Median	Standard Ab.	Minimum	Maximum	Amplitude	Variation Ratio
Experiment	8.76	-1.36	8.8	0.26	8.4	9.2	0.8	3.0%
Control	10.12		10.0	0.63	9.3	11.2	1.9	6.2%

Table 2
Experimental Research – The Independent T test

Groups	Average	Difference	Median	Standard Ab.	Minimum	Maximum	Amplitude	Variation Ratio
Experiment	8.76	-1.36	8.8	0.26	8.4	9.2	0.8	3.0%
Control	10.12		10.0	0.63	9.3	11.2	1.9	6.2%



Graph 1
Experimental Investigation - Group Experiment vs. Control Group -Average test values - "T" test