PREPARING BEGINNERS HANDBALL, CORRELATIONS BETWEEN TECHNICALS INDICES

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Abstract

Introduction. The game of handball, characterized by accessibility, spectacular and a great dynamism is constantly changing and evolving. A basic requirement of modern handball is the exploitation of creative capacities players three basic components of sports training, physical, technical and tactical. Concept of unit training, the junior handball is a requirement more often expressed by many technicians. It is the more necessary, as is the need for the educational process at the level of the echelon to be within the limits of the corresponding coordinates peculiarities of age, gender and priority objective, the growth of a large number of authentic values for high performance handball (Rizescu, 2006). Handball game follows the same rules, which can add without fear of being wrong, and a thorough technical training conducted in support of the development of basic motor skills (Acsinte, Eftenie, 2000; Rizescu, Ciorbă, 2008; Cicma, 2011), the beginners, achievements prerequisite stage called mass base of handball performance.

Methods. The experiment was conducted at the elementary handball 10-11, the experiment group of School Sports Club no. 1 Constanta and the control group School Sports Club Medgidia. We applied four tests: passing the wall, passing two away games, dribbling through cones 30m and shot on target.

The methodological basis of the work is the applied research methods: literature review, pedagogical observation, testing method (technical training) teaching experiment, comparative method, statistical and mathematical method of processing and interpretation of data.

It was assumed that the development and practical application of a system of specific performance, staggered in the technical preparation of the handball sport training beginners to promote their essential technical training level showed evidence of specific control while leading the development of correlations that will positively influence the art handball beginners.

Rezuntate. The data obtained are presented in tables as statistics, arithmetic mean, standard deviation, coefficient of variation and statistical significance by using Student test at $p < 0.05$.

Discussion. The values of the experimental group made most indices are higher than those of the control group which is statistically significant at $p < 0.05$. Correlative matrix presents four of the six statistically significant correlations.

Conclusions. Applying technical training program based on specific timing means has led to significant increase in index values technical training in the experimental group compared with the experimental group, which confirms the research hypothesis.

Keywords: handball, technical training, scheduling exercises.

Introduction

Concept of unit training, the junior handball is a requirement more often expressed by many technicians. It is the more necessary, as is the need for the educational process at the level of the echelon to be within the limits of the corresponding coordinates peculiarities of age, gender and priority objective, the growth of a large number of authentic values for high performance handball (Rizescu, 2006). Major international handball competitions (European Championships, World Championships, Olympic Games) have allowed some teams of specialists, making records, which showed statistically the top teams, exemplary physical training, on which all players have reached a high level of technical and tactical mastery, which allows application matches, with high efficiency systems play in attack and defense. But even in these conditions worldwide supremacy belonged teams in the most difficult situations they found appropriate resolutions against game systems in attack and defense. Game situations were favorable capitalized based on technical feasibility and general tactical knowledge, properly applied, through technical and tactical actions and combinations of all these advantages and disadvantages amid recovery systems play in attack and defense (Kunst-Ghermanescu et all 1983: Werner, Heinz, Gerd, Raimund, 1995: Hantau, 2002: Mihăilă, 2004). For those we consider important technical training, thorough and efficient, made right at the beginning of the prospective handball sports activity.

It is recognized that to achieve valuable results

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in sports games at the junior level, which guarantee achieving great performance from senior year training period must be spread over a period of 8-10 years old (Kunst-Ghermanescu et all, 1983; Baştiurea, 2005). This step increased efficiency to the extent they are taken into account as contributory factors and the limiting of performance. In addition the quality of the educational process - education is of critical importance in making models of training and playing at junior level.

The process of preparing the novice groups would seek to realize a range of driving motor skills compared to advanced, which will become more narrow specialization. The aim is to improve the technical training of athletes motor behavior, which causes multiple possibilities to solve the ever-changing situations that arise in competitions.

For learning technical procedures we go through stages of learning any act, action or motor skill. According to expert opinion in the field (Weinek 1983; Cârstea, 1999; Dragnea, 1996) stages of learning sport technology are:

1. Representation of motion information and training phase, the athlete creates the foundation design and the process that is to be taught, based on the explanations and intuitive means.

2. Stage movements rough or poorly differentiated feature first practical executions where the main information received verbal indications sport comes from their coach.

3. Step fine coordination and strengthening of technical procedures are usually performed correct movements or relative standard conditions varied execution has rhythm and amplitude accuracy is executed with raised index speed, strength and endurance.

4. Step to performed with the procedures technical perfecting and it is higher indices of efficiency and in the most varied conditions.

Knowing the theoretical aspects of learning in sport to be solved increase its efficiency in terms of the multitude of techniques in the game of handball. Handball game follows the same rules, which can add without fear of being wrong, and a thorough technical training performed in support of the development of basic motor skills (Acsinte, Eftenie, 2000: Rizescu, Ciorbă, 2008; Cicma, 2011), the beginners, is a prerequisite to achieving the objectives of the round table base called handball performance.

Wishing, and the professional obligation to get immediate results, from the children, modeling training and the game itself has a large share in the preparation of beginners.

Models present handball profile with physical traits, technical and tactical need to achieve. At the end of each stage is provided a model which should lead to the achievement of the whole educational process developed at that stage.

Physical parameters (development and physical training) provided for each model is the most pretentious ceiling is higher plane of ambition. In addition, between development trends of international handball is given precedence value increased physical component (type somatic and motor skills).

Technical and tactical side models also has a high level of ambition. The items provided are gradually phased in line with the age biomotrice potential that, given the idea that the end of the first stage, children begin to have appropriated most of the technical repertoire of the game.

It was considered that the level of beginners in the game of handball, with the physical component, technical training is contributing significantly to the preparation of future perfection handball. This frees the attention of athletes allowing them make the right decisions (Roman, Batali, 2007; Baştiurea, Stan, Mihăilă, 2013) in this regard has developed a training methodology based on a specific means used in preparing children beginners. Following the literature review, pedagogical observations during the experiment, interviewing coaches and based on research results was developed technical training methodology based on application specific means spaced, which can be considered a sound scientific training . The methodology can successfully complete the gaps in the process of preparing the children start in the game of handball.

In analyzing the technical preparation of novice handball players out of the reality that the technique is one that provides economy and efficiency in the execution of movements (Kunst-Ghermanescu et all, 1983).

Level technical event is conditioned by the development of motor skills, basic and specific, and tactical preparation, psychological and theoretical. Ensure the physical training is an essential condition for beginners learning the technique. To these are added the driving experience of every child, luggage motion skills and original. The process of preparing the novice groups would seek to realize a variety of motor skills, what we call the basic technique of the game of handball. We emphasize that the essence of the training program applied in our experiment, aimed at acquiring faster and at a higher level of technology in the beginners group.

Methods

The methodological basis of the work is the applied research methods: literature review, pedagogical observation, testing method (technical training) teaching experiment, comparative method, statistical and mathematical method of processing and interpretation of data.

It was assumed that the development and practical application of a system of specific performance, staggered in the technical preparation of

the handball sport training beginners to promote their essential technical training level showed evidence of specific control while leading the development of correlations that will positively influence the art handball beginners.

As evidence of measurable testing technique were used as follows:

- Passing the wall. Subject at 3 m of wall running and catching the ball bird for 30 seconds, the highest speed . Record the number of complete executions .

- Dribbling through cones 30 m sample consists of performing multiple dribbling the highest speed 30 m, including seven cones placed at distance of 3 meters from each other , the first is placed 6 feet from the start line. If you encounter technical fouls (double dribble,

steps , foot) or it gets out of control , the sample is canceled. Is given two attempts , registering the best . Time to first movement performed to mark the 30 m line is timed in seconds and tenths of seconds .

- Passing two away games. In groups of two , 4 m distance between subjects , bird running and catching the ball travel a distance of 30 m Not allowed technical mistakes (steps , double) , huge or losing control of the ball. Are timed in seconds and tenths of seconds , completing the 30 m

- Shot on target. Subjects will perform five throws from the line of 7 m , the gate handball divided into nine rectangles (Figure 1), each corresponding a number of points. Sample result is given by the sum of the points made.

5	3	5
2	0	2
4	1	4

Figure 1. Gate handball shot on target.

Along with conducting the tests was conducted and a training process that included an introduction to the basic technique of handball through specific "school ball" in order to test and specific physical training, and technical training.

The research was conducted in the School Sports Club no. 1 Constanta unit athlete with outstanding Romanian handball the children and juniors, where he formed the experimental group and School Sports Club Medgidia of operation control group. Both groups were made up of 25 girls aged 10 to 11 years. Subjects continued their training schedule prepared by the teachers based on group, the difference being that the experimental group for basic training technique used drives selected and staggered special.

We present specific scheduling means used for the technical preparation of the experimental group.

I. School ball - M

M 1. Juggling ball, 4 x 1 min, 30 sec break

M 2. Cross the bridge, 5 x 1 min, 30 sec break

M 3. Ball under the bridge, 5 x 1 min, 30 sec break

M 4. Ball in wave 5 x 1 min, 30 sec break

M 5. The ball traveling (by side), 5 x 1 min, 30 sec break

M 6. Relay with transport balls (different sizes), 4 x 30 m, rest 45 sec

M 7. Relay with two ball rolling, 4 x 30 m, 45 sec break

II. Catching and passing the ball - P

P 1. Defend the city, 4 x 2 min, 30 sec break

P 2. Hot ball, 4 x 2 min, 30 sec break

P 3. Ball captain, 4 x 3 min 30 sec pause

P 4. Ball nations, 2 x 5 min, 1 min break

P 5. Pass number called 4 x 4 min, 30 sec break

P 6. Chase balls, 2 x 5 min, 1 min break

P 7. Passing the 2 and 3 players, place, 5 x 2 min, 1 min break

P 8. Passing triangle, bordering the ball, 6 x 2 min, 45 sec break

P 9. Passing the square 6 x 2 min, 45 sec break

P 10 Assists in running between 2, 3, 4 players without and roll, 8 x 30 m, rest 45 sec

P 11. Spools simple 5 x 2 min rest 1 min

P 12. Double spool without and roll, 5 x 3 min 45 sec pause

P 13. Square moving, single and two-ball, 4 x 4 min, 45 sec break

P 14. Inter-level left and right, passing the string broke and retracted, 4 x 2 min, 45 sec break

P 15. At the level of inter left, right and center cross, passing the string broke and retracted, 3 x 3min, 30 sec break

P 16. In groups of four, Inter and extreme penetration passes in successive free throw or extremes or international level, 3 x 5 min rest 1 min

P 17. Settlements in the attack, without pivot, passing in successive penetrations without throwing or 3 x 5 min, 1 min break

III . Shot on goal - Ap

Ap 1 . Target ball , 2 x 5 min , 30 sec break

Ap 2 . Throw one cried , 2 x 5 min , 30 sec break

Ap 3 . Wild duck , 2 x 6 min , 1 min break

Ap 4 . Ball under the strap, 2 x 5 min , 30 sec break

Ap 5 . Ball tower, 2 x 6 min , 1 min break

Ap 6 . Take down the ball , 2 x 6 min , 1 min break

Ap 7 . Contest throw away (tennis ball or rounders), 4 x 2 min , 30 sec break

Ap 8 . Shot on goal from the spot (vertical or horizontal Trainers Weights hitting 3 x 10 throws

Ap 9 . Shot on goal divided into nine rectangles 3 x 7 throws

Ap 10 . Passing shot on goal preceded by the different positions of attack , 3 x 10 throws

Ap 11 . Shot on goal preceded by huge 3 x 10 throws

AP 12 . Passing shot on goal preceded horseshoe 3 x 5 throws

Ap 13. Throws the ball crossed steps 3 x 10 throws

Ap 14. Shot on goal from the jump , followed by assists, 3 x 10 throws

Ap 15 . Shot on goal from the 7 m , 4 x 2 throws

IV. Dribbling - D

D 1. Ball on the trail, 6 x 30 m, 45 sec break

D 2. Race in huge numbers, 2 x 5 min, 30 sec break

D 3. Dribbling through obstacles, 6 x 30 m, 30 sec break

D 4. Dribbling of running straight, 6 x 30 m, 30 sec break

D 5. Simple spools huge (20-30 m), 4 x 2 min, , 45 sec break

D 6. Dribbling through seven benchmarks without and roll, 2x 8 executions, , 45 sec break

D 7. Relay with huge, groups of 4 players, 6 x 30 m, 30 sec break

D 8. Dribbling, ball, grip, dribbling, throwing, 2 x 10 executions, 1 min break

Results

Data from initial and final testing of the two groups of subjects are interpreted statistically and presented in Table 1.

Table 1. Dynamic of technical training (experimental group n = 25, control group n = 25)					
Indices	Group	Initial testing		Final testing	
		M ± DS	CV	M ± DS	CV
Passing the wall (nr./30sec)	experiment	16,16±1,74	10,81%	18,84±1,74 a i	9,27%
	control	16,36±2,09	12,83%	17,72±1,72 b	9,70%
Passing two away games (sec)	experiment	7,01±0,24	3,42%	6,03±0,30 c j	5,12
	control	6,93±0,22	3,30%	6,29±0,18 d	3,00%
Dribbling through cones 30 (sec)	experiment	7,09±0,26	3,72%	5,82±0,30 e k	5,22%
	control	7,05±0,29	4,11%	6,00±0,30 f	5,05%
Throwing on target (points)	experiment	11,72±1,96	16,79%	19,92±1,95 g l	9,82
	control	12,72±2,22	17,50%	18,56±2,06 h	11,11%

a – t=1,42, p>0,05   not statistically significant (n-1)
b – t=0,54, p>0,05   not statistically significant (n-1)
c – t=5,73, p<0,001   statistically significant (n-1)
d – t=3,15, p<0,001   statistically significant (n-1)
e – t=3,14, p<0,001   statistically significant (n-1)
f – t=3,29, p<0,001   statistically significant (n-1)
g – t=5,78, p<0,001   statistically significant (n-1)
h – t=5,10, p<0,001   statistically significant (n-1)
i – t=2,28, p<0,05   statistically significant (n-2)
j – t=3,58, p<0,001   statistically significant (n-2)
k – t=2,14, p<0,05   statistically significant (n-2)
l – t=2,39, p<0,05   statistically significant (n-2)

Legend: M = Average; DS = Standard deviation; CV = Coefficient of variation; n = number of students

Also were calculated and correlations between indices technical training conducted by the experimental group. The correlative matrix in Table 2, the correlation index is provided at the end of the experiment technical training.

Table 2. Matrix indices correlative technical training				
	Passing the wall	Dribbling through cones 30m	Passing two away games	Throwing on target
Passing the wall		**0.284**/*p<0,05*	**-0,768**/*p<0,001*	**0,731**/*p<0,001*
Dribbling through cones 30m			**-0,210**/*p>0,05*	**0,01**/*p>0,05*
Passing two away games				**-0,684**/p<0,001
Throwing on target				

Legend: r ≤ 0,273, p<0,05; r ≤ 0,354, p<0,01; r ≤ 0,443, p<0,001; ▭ statistically significant correlations

Discussion

In the literature we find few studies analyzing the technical aspects of preparing beginners handball. There are researches that have shown that there is statistically significant between technical execution (technical parameters) and somatic development (anthropometric indices of different ages) (Mohamed et al., 2009; Baştiurea, Stan, Mihăilă, Cretu, 2011). For those we refer to some data that we find at the Romanian Handball Federation (FRH).

Passing the wall. In this sample, which is achieved contretemps, growth is evident at the end of research, especially in the experimental group who go from 16.16 ± 1.74 assists, initial testing at 18.84 ± 1.74 assists, final testing, 2.68 assists progress and control group 16.36 ± 2.09 to pass, initial testing at 17.72 ± 1.72 assists, final testing, 1.36 assists progress. The differences between the averages of each group between the two tests are statistically significant at p <0.05. Initial testing both groups show average group homogeneity and final testing variability coefficient values (9.27% and 9.70%) indicating high homogeneity of the group. Applying Student's t test for independent samples to final testing, we note that the difference between means is statistically significant value of t = 2.28 threshold of significance p <0.05.

Passing two away games. Average initial testing results are very similar in the two groups, 7.01 ± 0.24 sec in the experimental group and 6.93 ± 0.22 sec in the control group. When final testing, the difference between the average experimental group is for that record an average of 6.03 ± 0.30 sec, as compared to 6.29 ± 0.18 sec to the control group. Progress made by the two groups at initial testing at final test is statistically significant at a significance level of p <0.001 experiment group and p <0.001 control group. We find that the two tests both groups have values of the coefficient of variation which signifies high homogeneity.

Significance of difference between groups in final testing environments is statistically significant in favor of the experimental group to a value of t = 3.58 at a significance level of p <0.001.

Dribbling through cones 30m . FRH indicate preliminary selection rules for performing this experiment on 30 m, but in a straight line . Subjects in our experiment were subjected to conduct this test in a more complicated shift among landmarks . Comparing the results , we note the development of high performance model in all subjects . Thus , the experimental group is timed initial testing with a time of 7.09 ± 0.26 sec , and final testing of 5.82 ± 0.30 , thus an improvement of 1.27 times sec . Initial testing of the control group recorded an average of 7.05 ± 0.29 sec times , and the final testing 6.00 ± 0.30 sec , realizing they progress 1.09 sec . Groups show high homogeneity of the group in both tests , and the differences between the averages of each group in the two tests are statistically significant at p < 0.01 . Also the difference between media groups , experimental and control , the final test is statistically significant for t = 2.14 threshold of significance p < 0.05.

Throwing the target. Evidence strongly conditioned by the accuracy Technical execution, on target throwing the following values, the initial testing, the experimental group 11.72 ± 1.96 points and 12.72 ± 2.27 control group, and the final test, the experimental group 19, 92 ± 1.95 points and 18.56 ± 2.06 points control group. Progress of the two groups is recorded in accordance with the initial testing both groups have an average uniformity group, and final testing only the high homogeneity of the experimental group.

The difference between the averages of each group between initial and final tests are statistically significant at a significance level of p <0.001. We emphasize that the difference between media groups in final testing, statistically significant value of t = 2.39 at a significance level p <0.05.

And this sample the contribution of the special technical training group performed the experiment contributed to superior results compared to the control group.

Correlative analysis of the research indices during the experiment is that we will lămurii the links between them, in terms of technical training, but

between technical training and physical training, general and specific.

The correlative matrix in Table 2, the correlation index is provided at the end of the experiment technical training. It is observed that most of the research techniques indices, correlated significantly with each other. Passing the wall positively correlated with dribbling through cones ($r = 0.284$ $p < 0.05$) and throwing on target ($r = 0.731$ $p < 0.001$), but negatively correlated with the travel passes ($r = -0.768$ $p < 0.001$).

Dribbling through the cones passes do not correlate with the displacement ($r = 0.210$ at $p > 0.05$), but no throwing on target ($r = 0.01$ to $p < 0.05$). Passing of throwing away negatively correlated with the target ($r = -0.703$ $p < 0.001$).

Of the six correlations found that four statistically significant correlation (both positive and negative), and the two of them the correlation is insignificant. The existence of correlations between indices technical preparation shows that when we work to improve one of them will positively or negatively influence other indices. Increase performance on Wall passes will lead to a positive change in the results from dribbling through cones and throwing on target, but a decrease in the value of the result to the travel passes, which means an improvement in performance.

Results from dribbling through cones, did not influence the results of the other tests except the wall passes. Increasing throwing on target performance will result in an improvement of the results in the displacement passes. We note that of the six possible correlations between parameters of technical training four correlated both positive and negative, statistically significant. And this confirms that acting to improve a technique will positively influence other techniques, except for dribbling through cones.

Conclusions

Literature review on the matter investigated and advanced experience in handball, highlighted the fact that in practice sport training from beginners, including the game of handball, applied a number of methods to increase the efficiency of training athletes. One of these would be staggering technical preparation of novice handball, where to date no well-reasoned methodology for selecting and applying means well determined purpose sports training of beginners handball.

One of the basic criteria to prepare is preparing technical beginners handball players. Following techniques clearly shows the dynamics of the experimental results, where the majority of samples tested were superior to the control group. The most conclusive results at the end of the pedagogical

experiment were recorded technical evidence such as on target throws, wall passes, and passes two away games.

Applying technical training program based on specific timing means has led to significant increase in index values technical training in the experimental group compared with the experimental group, which confirms the research hypothesis.

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