

OPTIMIZATION OF PHYSICAL TRAINING ON THE CENTER PLAYER IN THE HANDBALL SCHOOL REPRESENTATIVE

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Abstract: *Handball is a sports game, being part of the invented games category to meet the demand for the search, change, novelty. Through its sporting play, it occupies a well-deserved place in the sport education sub-domain, the implicit of civilization and sports culture. [3]*

The present paper aims to demonstrate the usefulness and necessity of customizing physical content at junior level III (ages 13-14) specializing on center position in order to be able to join the future of great performers.

The experiment applied on the three subjects that activate on center position from the handball school representative revealed that physical activity undertaken as a game gives efficiency during training. The results achieved when evaluating physical qualities of the subjects' understudy show a significant increase in four out of the five tests used.

Key words: *physical qualities, handball game, physical education, playmakers.*

1. Introduction

The handball game educates team spirit, conscious discipline and organizing spirit, develops and educates initiative, combativeness, the will to overcome hardships, develops the spirit of observation, imagination, practical thinking [10].

The positive effects of practicing handball on the body and the personality of the pupils depend to a large extent on the methodology of teaching this sport game.

Puberty is the period of development of the body that makes the transition between childhood and adulthood. During the puberty, profound changes of the whole organism occur in somatic development, sexual maturation and neuropsychological

development. The age of puberty onset shows large individual variations.

In more and more works of the specialists [5], [9], [11], [15] the main meaning of physical training is formulated as the level of development of the individual's motric possibilities, a level achieved in the systematic exercise of physical activity.

Indeed, the literature is unanimous in the assertion that physical training refers to the value of the morpho-functional indexes of the motric qualities. Theoreticians consider that the value of physical training is determined by the level of development of motor skills [5], [12].

Some specialists believe that physical training should not be limited to the development of motor skills, but it also

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relies on anatomical-physiological premises and coordination, adjustment, and conditional capacities [7,8], [12]

Physical training has its importance in all stages of training, but it is differentiated from one sport branch to another in relation to its specific demands. For athletes, physical training is a starting point and a foundation for addressing the other components of the training [5], [9], [11].

Competitive evolution, regardless of the specific structure of most sport branches, the results obtained are determined by the level of the functional - energetic support, in most of the specialized works it is conceptualized by the physical preparation [2].

Referring to the morpho-functional indexes of motor skills, in the view of some authors, physical training is also determined by the level of development of motor skills, the volume, diversity, and the level of mastery [1], [4]

1.2. The Problems

The good development of the physical education and sports lesson depends on the observance of some general or fundamental didactic requirements that direct and enhance the instructive and educational process. In relation to the content of the curriculum, the themes refer to the instructive-educational components and represent knowledge, skills, motor skills and psychomotor skills [14].

Exercises always aim, irrespective of the organizational form and the social-economic and political formation in which they are performed, the improvement of the physical development and the motric capacities of the subjects.

Handball is the most accessible sports game for pupils in the early stages of the cycle. The content of this game is predominant in basic motor skills (running,

jumping, throwing and catching) that facilitates quick acquisition of basic technical procedures.

The accessibility of this game derives from the fact that it is enough for the pupils to acquire a limited number of technical procedures and to observe the rapid and orderly passage from attack to defense to practice the bilateral game from the first lessons.

The practice of techniques and tactics and the bilateral play can be done in the first stage and within groups of mixed pupils, thus creating a facility for girls who will benefit from models offered by boys' executions. In the long run, bilateral play is recommended to be done separately from the sexes, to avoid the boys' selfish tendencies regarding equal engagement in the game and girls.

Since handball cannot take place in lessons organized internally, even where there is a gym because of the simultaneous programming of two lessons, the two planned thematic cycles should include a minimum of 14 lessons, programming training contents related to the presumptive features of the atmospheric condition.

In the primary cycle, handball technique and tactics are adapted to the bio-psycho-motor skills of pupils aged 9-10. The technical and tactical content that the third-grade student acquires is greatly simplified, limiting to the simplest methods of passes, dribbling, throwing, but also landing and moving.

By the end of the cycle, the student enriches his / her background of specific motor skills, with which he / she can practice the full bilateral game. The educational influences of the game affect not only motor skills, but also the personality aspects, contributing to the achievement of the objectives of the physical education activity, namely to socialize the pupil and to establish relationships with the peers.

The handball game is a specific activity of formative manifestation and practice, as it accumulates in time all the positive effects resulting from the physical exercise on the body of the athlete. These effects are both physical, mental and moral.

1.3. Materials and Methods

The experiment was carried out on the pupils (13-14 years) that activate on centre position in the handball representative team which consists of 3 pupils (boys). We worked with this group of subjects 3 hours/week during physical education classes. Lessons were held in the school yard and in the high school gym.

The experiment consisted of training the pupils of the handball team through specific action systems, dynamic games and application paths containing handball procedures.

The content of the experiment included technical procedures inserted in handball games. We sought through the final tests the knowledge of the level of education / development of basic motor skills.

Checking the teaching learning process was done through five controlled tests which consisted of: Shuttle run, Long jump from standstill, Traction, Endurance, Testing the strength of the abdominal muscles

Statistical and mathematical data processing included the average, standard deviation and Student Test.

1.4. Presentation of Results

The applied tests have as argument the evaluation of the programming and planning process of the motor content for the pupils enrolled in the experiment. Data are shown in Table 1.

Table 1

Statistical results obtained by the subjects at the physical tests

Calculated coefficients	Physical Tests									
	Shuttle run (sec.)		Long jump from standstill (m.)		Traction (no. reps)		Endurance (1000m.) (min.)		Testing the strength of the abdominal muscles (no. reps)	
	<i>I.T.</i>	<i>F.T.</i>	<i>I.T.</i>	<i>F.T.</i>	<i>I.T.</i>	<i>F.T.</i>	<i>I.T.</i>	<i>F.T.</i>	<i>I.T.</i>	<i>F.T.</i>
<i>Mean</i>	10,63	9,633	2,15	2,383	5	9	3,323	3,083	21,66	28,33
<i>Standard deviation</i>	0,152	0,321	0,05	0,076	1	1	0,025	0,076	1,527	1,527
<i>Student Test</i>	t = 1,7 p > 0,05		t = 14,3 p < 0,05		t = 4,89 p < 0,05		t = 7,9 p < 0,05		t = 5,35 p < 0,05	

I.T. – Initial testing, *F.T.* – Final testing

2. Discussion

In terms of the physical tests, the values recorded by the three leading players in the research field have improved significantly.

They obtained increases for all tests, the highest value being recorded in the test for the power quality. In the traction test, an increase of 4 points was achieved and in the test of the abdominal muscular force

the value of the mean increased from 21.66 to 28.33.

Significant differences were recorded for four of the five tests, this being demonstrated by the calculation of t , which obtained values at a significance threshold $p < 0.05$.

- *Shuttle run*

At the beginning average value was 10.63 and in the end it reached 9.63. The standard deviation initially recorded a value of 0.152 versus 0.321 in final testing.

Looking at the difference between the averages at the two moments of the test it is pointed out that the calculated t has a value of 1.7 at the significance threshold $p > 0.05$, which shows that there are no significant differences between the results obtained by the pupils.

- *Long jump from standstill*

At the beginning of the experiment an average value of 2.15 was recorded and one of 2.38 at the final testing.

Regarding the difference between the averages, it is pointed out that the calculated t has a value of 14.3, for the players on the center position and is higher than the table " t " at the significance threshold $p < 0.05$, this data revealing significant differences between the two test points.

- *Traction*

At the beginning of the experiment an arithmetic mean of 5 executions was recorded to finally reach 9 executions.

Regarding the difference between the averages in the two testing moments it is emphasized that the calculated t has a value of 4.89 and is higher than the table " t " at the significance threshold $p < 0.05$,

this data revealing significant differences between tests.

- *Endurance (1000m.)*

In the initial testing it was found that the average of the subjects was 3.32 with an average error of 0.025, and in the final test the mean value decreased, reaching 3.08, with a standard deviation of 0.076. Looking at the difference between the averages, it is pointed out that the calculated t has a value of 7.9 and is higher than the table " t " at the significance threshold $p < 0.05$.

- *Testing abdominal muscle strength - 30sec.*

In the initial testing it was found that the pupil scored an average of 21.66, with an average error of 1.527, and in the final test the average increased, reaching 28.33, with an average error of 1.527. Regarding the difference between tests, it is pointed out that the calculated " t " has a value of 5.35 and is higher than the table " t " at the significance threshold $p < 0.05$.

3. Conclusions

We can see a change in the game play style of the center player, with the tendency to become as inventive, technical and courageous as possible in using a variety of technical techniques and tactical actions, both individual and collective, to attack. Account will be taken of the specific individual qualities required in the game.

- It is necessary to provide a greater share of psychological training as performance dependency and this factor of sport training are obvious.

- Selection of the most effective means of action to achieve the optimal model plays a crucial role in the progress of the center player as quickly as possible.

- Individualization of training both as a principle and as a working method, applies to all athletes, but is especially recommended to playmakers, regardless of their level.

- The effort in the teaching process must be made in relation to the individual peculiarities of the subjects and with great care for the achievement of the proposed tasks and objectives. The alternating effort with rest must not be neglected.

- The factors that determine the training process at the player's center level are closely interdependent with the methods and forms of organizing the training.

- The weight of sports training factors should take into account periods and stages of training.

- Workouts should be as varied as possible to avoid monotony and boredom.

- It is necessary to make a judicious planning of the training during the entire competition year.

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