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POSSIBILITIES TO MODERNIZE THE HANDBALL TRAINING SESSIONS AT JUNIOR LEVEL BY USING THE RHYTHMIC GYMNASTICS APPARATUS

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Abstract

Objectives. The objectives of our research mainly aimed at developing the coordination components, psycho-motricity and suppleness, but also at identifying some attractive and efficient means for the training modernization. The actuality of the topic chosen for this study is given by the changes produced in the handball game playing, determined by its very evolution.

Methods. The study was developed at the School Sports Club 6 of Bucharest and its subjects were the components of the club junior female team. The purpose was to create a training system specific to handball, which leads to the training modernization and increased efficiency. By using exercises with the rhythmic gymnastics apparatus, we mean to influence the coordination development in relation to the ball control by the female players, while performing the technical procedures.

Results. We shall propose exercises performed with the rhythmic gymnastics apparatus, which can highlight the above-mentioned aspect and can also assure the novelty and attractiveness of the training sessions. We think that our scientific approach will provide some interesting perspectives of acting when confronted to the modern handball challenges.

Conclusions. We found out that the utilization of modern materials for the fitness improvement, such as fit-ball, stepper, boss or hoop and clubs from the rhythmic gymnastics, has increased the handball training attractiveness and has also determined the female athletes' more active involvement in the training process.

Key-words: rhythmic gymnastics, handball, performance.

Introduction

Due to the fact that rhythmic gymnastics is a sports discipline that offers a great variability of acting systems based on the utilization of different hand apparatus, we aimed at integrating some of these means in handball training, by hoping that this will help us achieve the objectives of our study.

By introducing some of the rhythmic gymnastics elements in handball training and by combining them with its specific exercises, we mean to increase the classical training attractiveness and, in parallel, to further develop the motricity components that can contribute to the individual technique improvement.

Presently, the top-class athlete model embodies multiple somatic, physiological and psychic aspects, but also aspects related to physical fitness and motor capacities. It should be prepared through appropriate means, but its implementation should be as diversified as possible (Simion, Mihăilă, Stănculescu, 2011).

Training sessions imperatively need modernization, so that they represent a daily challenge for the athletes and stimulate them to actively and consciously get involved in their practice.

Purpose and hypothesis

This study started from the following hypothesis:

- We assume that, by using some of the rhythmic gymnastics means in handball training, we can optimize the specific preparation by improving the performance capacity coordination components in female junior handball players.
- The implementation of some modern preparation methods in handball training can assure the increase of sports efficiency.

The purpose of this study is to take from rhythmic gymnastics some representative preparation means and to adapt them to the handball game specificity.

We hope that, after the implementation of the technical-tactical actions that require a special ability and can be performed only by the skilled athletes, a number of players as great as possible will be able to both assimilate them and perform them with accuracy and efficiency.

The objectives of our study are:

- to modernize the training sessions at junior level, by introducing some preparation means focused on the rhythmic gymnastics techniques, in order to develop the coordination, psychomotricity and suppleness components;
- to prepare and implement a program of adapted means taken from rhythmic gymnastics, which can be introduced in the handball-specific training.

Through the achievement of these objectives, we want to complete the existing training programs, by

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hoping that we shall facilitate the Romanian handball connection to everything that means progress and modernism in the international handball.

Approached topic

The way in which contemporary sport has evolved and the necessity to achieve performances have led, in recent years, to significant progresses in sports science, by determining new approaches and substantiations of sports training (Epuran, 1990).

The continuous modernization of the training process and of the big handball competitions represents a permanent preoccupation for the whole staff of specialists and technicians, who constantly intensify their efforts and professional qualities in order to modernize and reevaluate, at a higher level, the methodology and the techniques for a successful management of the performance handball game.

Practice demonstrates us that, in the existing generations of athletes, the classical methods based on intense training loads, but with means that lack variety, doubled by the training monotony, don't have any more the expected efficiency.

Due to the society evolution, to the easy access to information (internet, specialty sites, media, television), the today's juniors have other responsibilities and multiple preoccupations in their not much available leisure time, which is reflected by their lower and lower interest in practicing performance sports.

The necessity to modernize and diversify the training means comes in reply to the challenges encountered by the technicians during the training sessions at junior level.

The adaptation of classical training methods to the modern handball trends and their diversification should increase the attractiveness of the training sessions up to the point that the today's junior can see in the handball game practice an agreeable way of spending his leisure time and, why not, an opportunity for him to achieve performances.

On the international level, there is a major interest in creating new training means adapted to the modern handball requirements, by keeping, at the same time, to the basic methodology for their introduction and adaptation to the training specific to each sports branch that uses them.

In this sense, the European Handball Federation supports the technicians' attempts by annually organizing specialization courses, where lecturers from different parts of the world present the latest interventions for the training modernization.

For instance, the lecturer appointed by the European Handball Federation, (Pollany, 2010) presented, within one of his courses given in 2011, a new program of training means containing exercises with different objects, such as: frisbee, beach ball, boomerang, badminton shuttlecock.

All these exercises were presented in the handball gym and were adapted, with the mentions that they can be adapted to the long-term training objectives and that their presentation form depends on the coaches' creativity.

The current trend in the training methodology utilization compels the technicians to be permanently connected to the novelties in the modern handball game, generated by the society evolution characteristics.

The present study gets along with these trends, the idea of using some means specific to rhythmic gymnastics taking into account that juniors' preparation is polyvalent, in order to assure the multilateral development of all the factors that influence their performance capacity. Consequently, we shall use both classical and modern training means, their selection being made according to some age-related morphological particularities and to the athletes' performance level.

Why exercises with the rhythmic gymnastics apparatus?

The present study mainly aims at creating some possibilities for the handball training modernization, but, at the same time, we underline that the implementation of the rhythmic gymnastics means will have an influence on the body functionality and will improve (Macovei, Ganciu, Ganciu, 2010):

- the muscle tone;
- the joint mobility, the extensibility and elasticity of the muscular tissues and ligaments;
- the capacities of control over one's own movements;
- the different types of coordination at the inter-segmental and inter-muscular levels;
- the control of the movement amplitudes;
- the control of the movement execution durations and pace;
- the control of the movement execution plans and directions.

The used methodology resorts to means from the rhythmic gymnastics domain and aims at developing the coordination components, so important to the learning and consolidating of the handball-specific technical procedures.

Coordination and movement are elementary requirements for the development of the capacity to practice handball, and in the coordination education, an important role is played by the amount of accumulated information (Bon, 2009).

By using exercises with hand apparatus, we mean to influence the coordination development in relation to the ball control by the female players, while they perform the technical procedures.

These exercises enable us to act on three levels: motricity, psycho-affective communication and

creation. By their implementation, we shall influence (Macovei, 2007):

- the harmonious physical development;
- the education of the capacity to perceive and reproduce through the body movement;
- the education of the capacity to grip and manipulate different apparatus;
- the acquisition of a specific motor repertoire, able to improve the athletes' movement capacity;
- the capacity to perform successive and fluent movements.

According to the sports training principles, by using some training means taken from other sports branches, we can achieve a more efficient modeling, which helps the players enrich their technical-tactical knowledge and define their personality (Cârstea, 2000).

The utilization of apparatus that differ among them through their form and material provides the subjects a multitude of opportunities and results in the development of a wide range of motor capacities, most of them coordination-related capacities.

The modern training characteristic is given by the technical-tactical orientation transfer among different sports games.

This transfer allows generalizations synthesized in characteristics of the actuality and of the trends in course of being confirmed (Teodorescu, 1975).

Utilitarian applications

The study was conducted at the School Sports Club no. 6 of Bucharest, it had for subjects the girl junior handball players of the club team and it took place in the period August 2012 to February 2013.

We enjoyed the collaboration of the team's woman coach, who accepted to introduce in the athletes'

training program the set of exercises proposed by us in this study.

Exercises were introduced in the team's training program 2 times a week, on Mondays and Tuesdays.

The team's involvement in the Girls' Junior National Championship determined us to introduce the exercises with apparatus only in the first training part, under the form of play, which included relays and some exercise circuits that aimed at developing the coordination components.

The sets of exercises represent combinations of arm and leg movements proper to rhythmic gymnastics.

They were performed with different hand apparatus and adapted so that the handball-specific objectives can be achieved.

Exercises had a ludic character, because the play facilitates spontaneous actions, develops motor intelligence, generates pleasure and diversity and allows the natural influencing of the coordination capacities (Garcia, 1990).

We present in the following tables the exercises proposed for the training program.

Exercises with hoop (table 1), under the form of play, influenced the anticipation capacity, the decision-making capacity, the motor reaction capacity, the spatial-temporal orientation capacity, all these being important to the achievement of individual and collective technical-tactical actions during a handball match playing.

The introduction of gymnastics hoops in the composition of exercises, in order to improve the ball control and the ball passing rhythm, provided the athletes new modalities to solve their training tasks, in relation to this aspect.

Table 1. Exercises with hoop

Exercises with hoop



Hoop transportation:

– while running, one hand guides the hoop and the other performs dribble moves with the ball.

Dribble through the hoop:

– with hoop placed around the body, alternating dribble moves from inside the hoop (Kissling, 1995).

Ball through the hoop:

– in couples: a player rotates the hoop on floor, then both of them try to pass the ball between them through the hoop, until it falls down.

Exercise under the form of play for warming-up:

– application of the handball rules and game on all the playing field

The point is scored thus:

A player holds the hoop overhead, so that his teammates can pass the ball among them through the hoop. The point is validated only when the ball passes through the hoop and is caught by a player from the same team as that one who has passed the ball through the hoop. If not so, he losses the possession of the ball.

Exercises with clubs (table 2) aimed at improving the ball manipulation, by positively influencing the

individual ability. These exercises involve the action of the fist and the wrist joints.

Table 2. Exercises with clubs

Exercises with clubs	
	<p>Ball transportation on the clubs: – ball is equilibrated on the body of the club and is transported while running, without letting it fall down.</p> <p>Dribble moves with the club: – club grip on its neck, while its body touches the ball so that dribble moves are performed without losing the ball control.</p> <p>Small circles: – clubs are rotated around the grip point – the fist; rotations are performed in the sagittal, frontal and horizontal plans (Macovei, 2007).</p> <p>Mills: – performed in all the plans</p>

Exercises with ribbon (table 3) aimed at developing the arm-leg movement coordination and at improving the locomotor apparatus functionality.

Table 3. Exercises with ribbon

Exercises with ribbon	
	<p>Leaps over the ribbon: – horizontal circular underfoot balance with leap over the ribbon</p> <p>Spiral on the floor: horizontal <i>spiral</i> on floor, with passage through the ribbon drawing (S. Macovei, 2007).</p>

Exercises with rope (table 4) had for goal to improve the ball perception and passing in the conditions encountered during a match, but also to develop the rhythmicization capacity.

Table 4. Exercises with rope

Exercises with rope



Exercises performed by four players:

– two players hold the rope and rotate it, the third skips the rope and passes the ball to his teammate.

Exercise: “the snake”:

– a player holds the rope at one end and rotates it around him, so that the rope is stretched and doesn't touch floor. His teammate, positioned at about 2 meters away from him, will skip the rope each time when it arrives in front of him.

Skips:

– horizontal circular underfoot balance and skips over the folded rope held in one hand at both ends.

Exercises with ball (table 5) had for goal to develop the ball control and also to improve the capacity of kinesthetic differentiation.

Table 5. Exercises with ball

Exercises with ball



Dribble moves:

– exercise with two balls, one of handball, the other of rhythmic gymnastics. Alternating and simultaneous dribble moves, without losing the ball control.

Ball passing, exercise in couples:

– each player has a gymnastics ball.

– players pass the handball ball among them.

– before catching the handball ball, each player throws overhead the gymnastics ball and, after he passes the handball ball, he tries to catch the gymnastics ball before it touches floor.

The exercises proposed by us were used in the competitive period, but they can also be used in the pre-competitive period.

We mention the possibility to create sets of exercises adapted to the preparation period or to the training objectives.

The utilization of these means allows the technicians to juggle with them and to diversify the modality of introducing them in the training program.

The utilization of exercises with apparatus specific to rhythmic gymnastics complete the existing system of means, by facilitating the handball technique assimilation and learning, as well as the creation of a set of exercises that can be introduced in the handball-specific training.

The utilization of these training means improves the coordination capacity components, such as: spatial orientation capacity, rhythm capacity, capacity of

differentiating and leading the body movements, motor learning capacity, balance capacity, ambidextrousness.

A low coordination level renders difficult the assimilation and learning of the handball-specific technical procedures, which reflects how it is important to use these means almost in each training session, at junior level.

We can thus avoid educating some future senior handball players who are not able to fully master the technical procedures necessary to practice the handball game at the performance level.

Discussions

The handball training modernization enjoys the attention of the specialty federations that promote different researches within the specialization courses for coaches.

The idea to develop the coordination-related aspects, so necessary to the handball player, by using



some complementary means, is accepted and promoted by different authors or lecturers participating in the international courses for the coaches' upgrading.

Bon (2009) recommends the utilization of balls having different sizes (for instance, those of volleyball, basketball, field tennis), in order to develop the coordination skills specific to the technique with the ball.

In the same train of ideas, Tamljanovic (2010) presents, in his methodical lessons, handball-specific exercises, by using sticks, rolls, fit-balls and bosses, already consecrated objects due to their beneficial influences on the development of coordination skills.

By adhering to these conceptions, we used in the present paper some means from the rhythmic gymnastics, which we adapted to the handball game specificity.

The motivation and the originality of our approach consist in the formative-educative valences of this discipline and in its major implications on the development of the coordination components.

The exercises introduced in the training program aimed at developing some coordination components necessary to assimilate the basic handball technique, in parallel with the increase of the lesson attractiveness.

Conclusions

We think that the introduction of exercises with apparatus proper to rhythmic gymnastics in our girl athletes' program represented a beneficial and attractive activity that diversified and completed their preparation, by placing a special emphasis on the coordination development.

By analyzing, through the observation method, the female junior players' qualitative evolution during the training sessions, we noticed an improvement of their self-confidence, but also of the confidence in their physical and technical-tactical capabilities.

We hope that the introduction of these means in the female junior players' program can represent a methodical intervention appropriate to the training conception improvement.

The training modernization will create new interesting perspectives of acting when confronted to the modern handball challenges and the utilization of these exercises will provide the athlete the possibility

to find an efficient solution to the stimuli encountered during the game playing.

By stimulating the attractive character of the training sessions, that should develop the athletes' active involvement in the game playing, we also aim at increasing the interest in this sports discipline, reflected by the more and more increased number of children eager to practice handball.

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