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Original article

PLACE AND ROLE OF PLYOMETRICAL TRAINING IN JUNIORS II HANDBALL TEAMS

DĂBULEANU VICTOR¹

Abstract

Aim. The entire basis of training for improving the general and specific motor capacity of junior level II handball players involves many concerns and complex ways of acting, essentially the decisive factor being realized from their performance program.

In modern sports training, the improvement of specific and general motor capacity and the use of plyometrics are performed through a complex, systemic process.

Methods. Application of the questionnaire on coaches of handball from Romania, within the experiment with the aim of finding out the conceptual and informative level possessed by them regarding the use of plyometric exercises in training of cadet handball players.

Results. Interpretation of the data from the questionnaire answered by the coaches regarding the use of plyometric exercises focused on the specific movements of the handball game, informing the experimental sample about the practical application of muscle training programs during training, the content of these programs, focused on plyometric exercises, moments of their application within the training microcycles as well as within the preparatory, pre-competition, competition, and transit periods.

Conclusions. The investigation was applied to obtain some truthful data regarding the approach to muscle training with the help of plyometric means during the training of female handball athletes by coaches from Romania.

Keywords: handball, questionnaire, plyometrics.

Introduction

„The model of the handball player is the starting point in choosing the basic elements, with the help of which the training processes will be designed and carried out” (Mihăilă, 2004). Against the background of the general model, there are also some exceptions given by certain qualities and attributes that determine the respective players to fulfill certain basic roles in the team.

„In the game of handball, the coaches must consider the particularities of the general and specific physical training of the players, the novelties that have appeared in the methodology of approaching this factor of the training in relation to the specific effort of the game” (Mihăilă, 2006). In today's conditions, where the training of various qualities is mandatory, everything is very precise. From our point of view, strength is a decisive quality in the game of handball. Against these premises, Simion, Mihăilă & Stănescu (2011) consider „it necessary, that in the dynamics of junior girls' handball training, new methodologies are found regarding the formation of some competitive player models, to begin with their physical training model”.

„The major role that strength has in the practice of performance handball, requires the modeling of training considering the impact that these motor skills have in obtaining significant results in competitions” (Niculescu, Malusaris & Mateescu, 2008). The hypothesis assumes that by developing a sociological survey based on a questionnaire, it will be possible to identify the opinion of specialists regarding the valorization of the motor qualities of strength based on the use of the plyometric method in junior soccer players (12 - 14 years old).

Objectives

Establish the conceptual and informative level held by the specialists regarding the importance of specific physical training in the training of cadet handball players, using plyometric means.

Methods

For a more comprehensive view in order to have a picture of how to approach muscle training in sports training I thought the development of a questionnaire was necessary.

¹Department of Physical Education and Sport, Faculty of Sciences, Physical Education and Informatics, University of Pitesti, Romania; Corresponding author: cornelia_dab@yahoo.com.

The questionnaire is made up of 17 questions, having an open character, so that we can determine the importance and weight of muscle training in the training of handball players (14-16 years old) with plyometric exercises combined with technical procedures. In composing and choosing the questions, I had a precise objective, with the aim of obtaining some data about how muscle training is carried out in handball players aged 14-16. A number of 20 coaching teachers from all over the country, who have been active and are active at this age level in the training of cadet handball players, kindly answered this questionnaire.

Results

To the question "Do you give greater importance to general physical training compared to specific physical training in training for 14–16-year- old handball players?", 50% of the coaches gave it high importance and 50% gave it medium importance.

Table no. 1. Centralization of results for question no.1 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Very high importance	0	0%
High importance	10	50%
Average importance	10	50%
No importance	0	0%

To the question "In general physical training, what is the percentage used according to the training period at the age of 14 - 16?" the 20 coaches answered:

- Pre-competitive period:	20% - 1
	40% - 11
	60% - 8
- Competitive period:	20% - 7
	40% - 12
	60% - 1
- Preparatory period	20% - 0
	40% - 6
	60% - 14

Table no. 2. Centralization of results for question no. 2 of the questionnaire

<i>Period</i>	<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Pre-competitive period	20%	1	5%
	40%	11	55%
	60%	8	40%
Total			100%
Competitive period	20%	7	35%
	40%	12	60%
	60%	1	5%
Total			100%
Preparatory period	20%	0	0%
	40%	6	30%
	60%	14	70%
Total			100%

To the question, "In handball training, which motor skills are important to develop at the age of 14 - 16?", 50% of the coaches answered skill, 20% suppleness, 30% speed in strength mode.

Table no. 3. Centralization of results for question no.3 of questionnaire

Speed in strength mode	6	30%
Force in resistance mode	0	0%
Skill	10	50%
Endurance	0	0%
Suppleness	4	20%

The question "What are the forms of manifestation of speed that are important in the game of handball, at the age of 14-16 years?" brought the following answers: reaction speed 40%, execution speed 10% and movement speed 50%.

Table no. 4. Centralization of results for question no. 4 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Reaction speed	8	40%
Execution speed	2	10%
Repetition speed	0	0%
Movement speed	10	50%

Next question "At the age of 14-16, do you feel that the speed needs to be improved?" brought unanimous answers from the coaches: 100% yes.

Table no. 5. Centralization of results for question no. 5 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Yes	20	100%
No	0	0%
I don't know	0	0%

To the question "What methods do you use for improving the forms of manifestation of speed in handball training lessons for cadets 14 - 16 years old?", we do not think that the answers of the coaches reflect the reality of the training lessons considering that the plyometric method is used quite rarely: the answers were 30% the plyometric method, handicap method 20%, games and relays 10%, plyometric method combined with technical-tactical procedures 40%.

Table no. 6. Centralization of results for question no. 6 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Plyometric method	6	30%
Alternative method	0	0%
The handicap method	4	20%
Games and relays	2	10%
Plyometric method combined with technical tactical procedures	8	40%

To the question, "Do you consider that through the development of the strength capacity, speed capacity also improves?" the answers were significantly different: 15% very much, 30% a lot, 55% a little.

Table no. 7. Centralization of the results for question no.7 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Very much	3	15%
A lot	6	30%
A little bit	11	55%
Insignificantly	0	0%

To question no. 8 "In sports training for the development of strength capacity, do you use plyometric exercises?" the coaches had the following answers as a proportion: 60% a lot, 35% a little, 5% insignificantly.

Table no. 8. Centralization of the results for question no. 8 of the questionnaire

<i>Answer</i>	<i>No. of answers</i>	<i>Percentages</i>
Very much	0	0%
A lot	12	60%
A little bit	7	35%
Insignificantly	1	5%

"Do plyometric exercises have an immediate effect?" is question number 9 and the coaches answered this way next: 20% yes and 80% no.

Table no. 9. Centralization of results for question no.9 of the questionnaire

Answer	No. of answers	Percentages
Yes	4	20%
No	16	80%
I don't know	0	0%

Last question, number 10 "Do you use combinations of contraction regimes with technical-tactical procedures in muscle training?" had the following answers: 30% yes, 10% no, 60% sometimes.

Table no. 10. Centralizing the results to the question no. 10 of the questionnaire

Answer	No. of answers	Percentages
Yes	12	60%
No	6	30%
Sometimes	2	10%

Discussions

The objective of a contest determines the appropriate selection of the means required for its success. The means are not preconceived, but imposed by the structure and request of the contest (Bompa, 2003). We consider that, starting from the main forms of organization of sports activity, we will find that each of them, through their particularities, imposes certain means appropriate to the objectives that are proposed to be achieved (Preda, 2005).

Conclusions

After studying the specialized literature, in conjunction with specific discussions, with the specialists who deal with the activity in this age group, it was highlighted that the use of plyometric strength development programs is very effective, but care must be taken to design and follow them by the teacher/coach, who is specialized in this activity.

Most of the interviewed coaches also believe that it is impossible to talk about performance sports without a general and specific physical training carried out through planning according to the training stages and with rationalized and standardized means according to the level of training. Most of the questioned specialists used well-known and generally applied methods in their training, not being familiar with modern training methods that produce beneficial results for performance sports. In addition, most coaches consider it essential to establish objective tests to determine the level of general and specific physical training in junior handball players (12 - 14 years old). The improvement and perfection of the technical elements and procedures in handball must be achieved by means that ensure correct execution from a biomechanical viewpoint and efficiency from a physiological point of view. In children and juniors, the dosage of effort must be done with great care, avoiding both monotony by using the same training means, as well as their too great diversity, which does not allow correct motor skills to be fixed.

Based on the results of observational investigations at this age, it is recommended to use means to improve strength, depending on the motor capacity and adaptation to the specific effort.

References

- Bompa, T. O. (2003). *Totul despre pregătirea tinerilor campoini*, București, Editura Ex Ponto.
- Mihăilă, I. (2004). *Handbal. Pregătire fizică specifică diferențiată*. Chișinău: Editura Valinex.
- Mihăilă, I. (2006). *Handbal. Optimizarea pregătirii fizice specifice la echipele de juniori*. Craiova: Editura Universitaria Craiova.
- Niculescu, M., Malusaris, G. & Mateescu A., (2008). *Elemente de pregătire musculară aplicată*. Craiova: Editura Universitaria Craiova.
- Preda, D. C. (2005). *Modelul capacității de performanță a jucătorilor și echipei de handbal*, Revista Citius Altius Fortius, Universitatea din Pitești.
- Simion, G., Mihăilă, I. & Stănescu, G., (2011). *Antrenament sportiv – Concept sistemic*. Constanța: Editura Ovidius University Press.