OPTIMISATION OF THE PREPARATION AND COMPETITION MODEL OF THE SPECIALISED HANDBALL PLAYER ON CENTERBACK ON JUNIOR I FEMALE

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Abstract

Handball is part of the collective ball sports family where there is direct contact between the players. Each team aims to gain superiority from the other team by masking their own ideas and at the same time guess all the actions of the opponent. In competitions, team activity includes both playing and behaviour actions. The game activities include both sporting and tactical techniques, closely linked to each other, both in the attack phase and in the defence phase. The behaviour actions give the opponent information about the player's status, reactions and intentions. It is noted that in all the teams the height of the group has increased. On average, the height of the players is over 190 cm, and 3-4 players exceed 200 cm height. It can be seen that all teams have 8-9 players with a height of over 190 cm and 3-4 exceptional players. The impressive height and physique of the dedicated handball players is completed with a high-powered motor arsenal. This potential excels through a high level of development of combined drive actions (speed + force, power + speed, skill + force) as well as special technical tactical knowledge.

Introduction

"Handball is a game with a widespread spread at the moment. This popularity is due to the features of this game. The handball game is a dynamic game, in which the actions succeeded quickly from one gate to the other, breathing the spectators "(Cezar Hantău)[1].

According to A. Demeter, according to the requested organ "the effort in the handball game is of the neuromuscular type, with the high

[1] Cezar Hantău, Hanbal, Editura Alpha, Buzău, 2000, p. 9.

demand of all the analyzers, as well as the high degree of psychic solicitation"[2].

I. Bota (1984), in Handball, gaming and training models, shows that "the existence of a game model as well as the modeling of the training allow the coaches to think globally on all aspects of their activity with the athletes"[3].

The player who acts in the handball performance line has the task of deepening the specialisation of the post to the level of craftsmanship, of art. At the same time, each player has to consolidate their accumulated knowledge at junior level I regarding the possibility to work in other positions than in the one he has acknowledged.

For the specialised player in the centre the main subspecialty is on the pivot point. Also, for the attack game, the centre may have subspecialisation on the extreme post (left-right).

If a centre approaches the somatic type of Romanian Handball Federation, regarding the inter-players, as well as depending on the tactical situation at one point of his own team, the specialised player in the centre position may be an intermediate or lateral defender.

For the realisation of sub-specialisations the centre player should have the level of the technical-tactical content of the position he / she occupies in the team. At the same time it is necessary to ensure the general and specific physical training at high parameters, especially if the centre subspecialises on the extreme post, a post in which the players are supposed to have a very good speed of movement and execution, good skill, appropriate force in particular at the lower train level. Particular attention must be paid to speed-resistance – a motor-driven (combined) quality specific to extremes.

According to prof. Kunst Ghermănescu and his collaborators, in order to achieve the specialisation model in the post, there is a need for the following objectives to be achieved:

- continuous improvement of general and special physical training;
- deepening the specialisation on positions to virtuosity and high efficiency;

[2] **Demeter Andrei, *Fiziologia și biochimia dezvoltării calităților motrice*, Editura Sport Turism, București, 1983, p. 48.**

[3] Ion Bota, *Handbal, modele de joc și pregătire*, Editura Sport-Turism, București, 1984, p. 24.

- obtaining posts' specific qualities according to the particularities and requirements of the station where they work most frequently;
- the assimilation of the optimal integration capacity in the collective game; the permanent improvement of the contribution in matches;
- the development of the game concept, for the performance handball players;
- developing the capacity for active and conscious participation in personal and team training[4].

Leon Teodorescu mentions: "For sporting games practiced for performance purposes, scientific training is inconceivable without the application of individualization, becoming the principle of modern training and at the same time a form of application of the principle of accessibility"[5].

Materials and methods

In carrying out this work I started from the following assumptions:

- through individualised training, using the structured and rationalized means according to the specific characteristics of the players in the centre, more rapid progress can be achieved than with the use of only collective training.
- individualised training can be done to improve motor skills or technical procedures, to correct or to update the level of training of deficient players at some stages of the technique or tactics.

The pedagogical experiment was carried out at the junior team I LPS Suceava, coached by coach Pîțu Ilie.

The whole activity took place between August, 8th 2017 and May,8th 2018.

[4]Ghermănescu-Kunst Ioan, Gogâltan Valeriu, Jianu Elena, Negulescu Ioan, 1983, *Teoria și Metodica Handbalului*, Editura Didactică și Pedagogică, București, p. 71.
[5] Teodorescu Leon, *Probleme de teorie și metodică în jocurile sportive*, Editura Sport Turism, București, 1975, p. 37.

Subjects under investigation are handball specialists on the centre, components of Suceava team, a team working in the Republican Championship of Juniors I series A.

Table 1- the experiment group consists of the following players:

No.	**Name**	**Attack**		**Defence**	
		Specialisation	**Subspecialisation**	**Specialisation**	**Subspecialisation**
1.	Ș.L.	Centre	Extreme left	Right centre guard	Right intermediate guard
2.	M. R.	Centre	Extreme Right	Central defender (flyer)	Left side defender
3.	V. T.	Centre	Extreme left	Left centre guard	Central defender

During the experiment, the players were subjected to the following control samples:

1. *50 x 30 m* - sustained in series of 5 runs with a pause between of 30 seconds; afterwards the arithmetic average will be made;
2. *the specific sample*-consists in a route.
1. *run 3 x 200 m*; running speeds (5 x 40 m), three series with breaks between them of 1 minute and the average of the three choices will be made;
2. *pent salt* - execute with departure from both legs, alternate 5 step-jump;
3. *throwing the ball at a distance* - with 3-step push with ground support.

Results and discussion

The interpretation of the data was based on the pedagogical observation made during the experiment, using the data obtained from the motor, technical-tactical and anthropometric tests.

Table 2 - anthropometric data of the player Ș.L.

No.	Somatic Pointers	Romanian Handball Federation Model		Ș. L.
		Optimum	Accepted amounts	
1.	Waist	172 cm	168-176 cm	170 cm
2.	Weight	69 Kg	65-73 Kg	66 Kg
3.	T-100 / G ratio	1.04	1.04	1.15
4.	Bi-chromium diameter 38 cm	38 cm	37 cm	38 cm
5.	Bitrohanterian diameter	34 cm	32-36 cm	32 cm
6.	Large- scale	178 cm	174-183 cm	176 cm
7.	Palm opening	22 cm	20 cm	23 cm

Table 3 - anthropometric data of the player M.R.

No.	Somatic Pointers	Romanian Handball Federation Model		M.R.
		Optimum	Accepted amounts	
1.	Waist	172 cm	168-176 cm	172 cm
2.	Weight	69 Kg	65-73 Kg	68 Kg
3.	T-100 / G ratio	1.04	1.04	1.03

No.	Somatic Pointers	Romanian Handball Federation Model		M.R.
		Optimum	Accepted amounts	
4.	Bi-chromium diameter 38 cm	38 cm	37 cm	37 cm
5.	Bitrohanterian diameter	34 cm	32-36 cm	32 cm
6.	Large- scale	178 cm	174-183 cm	178 cm
7.	Palm opening	22 cm	20 cm	22 cm

Table 4 - anthropometric data of the player V.T.

No.	Somatic Pointers	Romanian Handball Federation Model		V.T.
		Optimum	Accepted amounts	
1.	Waist	172 cm	168-176 cm	168 cm
2.	Weight	69 Kg	65-73 Kg	64 Kg
3.	T-100 / G ratio	1.04	1.04	1.15
4.	Bi-chromium diameter 38 cm	38 cm	37 cm	38 cm
5.	Bitrohanterian diameter	34 cm	32-36 cm	32 cm
6.	Large- scale	178 cm	174-183 cm	178 cm
7.	Palm opening	22 cm	20 cm	23 cm

Table 5 - test and score obtained in driving control samples

No.	Control samples	S_1				S_2				S_3			
		I	I	F	F	I	I	F	F	I	I	F	F
1.	5 x 30 m	4,5”	60p	4,4”	70p	4,4”	70p	4,3”	80p	4,5”	60p	4,4”	70p
2.	Technical proof	57”	80p	56, 5”	90p	57”	80p	566 ”	94p	56, 8”	90p	56, 4”	95p
3.	3 x 200m	41,9	81p	41, 4	86p	41, 3	85p	41, 2	90p	41	90p	41, 2	90p
4.	Pent salt	11,8 0	75p	12, 00	77p	12, 30	77p	12, 32	80p	12, 30	77p	12, 33	80p
5.	Throwing the ball	39	80p	40, 5	89p	40	86p	40, 50	89p	40	86p	40, 50	89p
6.	Total of points		**376 p**		**412 p**		**399 p**		**433 p**		**403 p**		**414 p**

The legend:
S - the subject
I - initial testing
F - final test#

The evolution of the aspect of technical-tactical content during the experiment can be seen from the following tables:

Table 6 - the score obtained in testing the technical-tactical content in attack

Technical-tactical content in attack on the game phase	**S_1**		**S_2**		**S**
	I	**F**	**I**	**F**	**I**
Phase I - demarcation to the opposite side of the counterpoint counter;	7	9	8	9	7
- a long pass in on the counterattack.	9	10	8	9	8
Phase II - speeding;	9	10	8	9	8
- catching and bouncing the ball in 2-3 players, running;	8	9	8	9	7
- dribble with change of direction;	9	10	7	9	8
-overrun: feint, penetration; direction change, penetration;	9	10	9	10	7
- arranging players infiltrated in the semicircle;	7	9	9	10	7
-throwing at the gate jumping;	9	10	9	10	8
- throwing at the gate from the jumping plunger;	8	9	7	8	7
- demarcation to the semicircle;	7	8	9	10	7
- catching the ball in contact with the opponent;	8	9	7	8	8

Technical-tactical content in attack on the game phase	S_1		S_2		S_3	
	I	**F**	**I**	**F**	**I**	**F**
- pivot steps.	8	9	8	9	7	8
Phase III -dribbling	9	10	8	9	8	9
- horseshoe passing	8	9	8	9	8	9
- pivot steps.	9	10	9	10	7	8
- **Phase IV** - catching the ball in succession;	8	9	8	9	7	9
- direct and indirect demarcation;	8	9	7	9	8	9
- simple and double crossing;	9	10	9	10	8	9
- throws at the gate from 9 m;	8	9	9	10	8	9
- ball blocking, without ball, leaving the block;	7	9	8	10	7	8
- pivot involvement;	7	8	8	9	7	8
- overrun, change of direction, penetration;	9	10	9	10	8	9
- change of direction, pivoting, penetration;	8	9	9	10	8	9
- arm rotation;	9	10	9	10	7	8
- throwing at the gate jumping	9	10	8	9	7	8
- throwing at the gate with added steps;	8	9	8	9	8	9
- throwing the gate along the hip;	8	8	9	10	7	8
- throwing at gate from jumping plunger.	8	9	8	9	8	9

Technical-tactical content in attack on the game phase	S_1		S_2		S
	I	F	I	F	I
Total of points in attack	**230**	**261**	**223**	**245**	**211**
Average for attack	**8,21**	**9,32**	**7,96**	**8,75**	**9,53**

The legend:
S - the subject
I - initial testing
F - final test

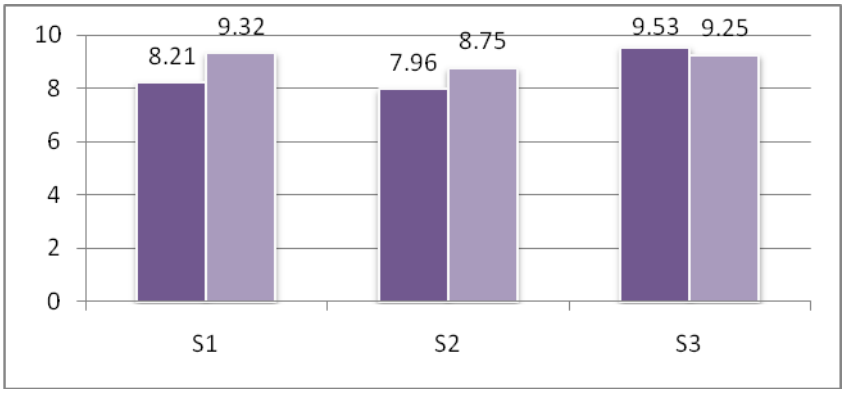

Figure 1 Graphical representation of the results obtained in the technical-tactical testing in attack

Table 7 - the score obtained in testing the technical-tactical defensive content

Technical-tactical content in attack on game phases	S_1		S_2		S_3	
	I	F	I	F	I	
Phase I	9	10	8	10	9	

Technical-tactical content in attack on game phases	**S_1**		**S_2**		**S_3**	
	I	**F**	**I**	**F**	**I**	**F**
- speeding;						
- ball intercept;	8	9	8	9	9	10
- the surveillance mark;	8	10	8	9	8	10
- stopping the ball attempt by placement.	8	9	7	8	8	9
Phase II -the fundamental position: high, medium, low;	8	9	8	9	7	8
- on-the-ground movement: back running, step-by-step moving, back retreat, two-leg jumping;	8	9	8	9	8	9
- attacking the opponent with arms and body at the goal-throw;	8	9	8	9	8	9
- close surveillance mark;	7	8	7	8	8	9
-doubling;	8	9	8	9	8	9
- the exchange of opponents;	9	10	7	8	7	9
- closing the penetration columns;	8	9	8	9	8	9
- blocking the throws at the gate;	8	9	7	8	7	8
- removing the ball from the opponent dribbling.	8	9	8	9	9	10
Phase III - step-by-step on-the-ground moving;	8	9	8	9	8	9

Technical-tactical content in attack on game phases	S_1		S_2		S_3	
	I	**F**	**I**	**F**	**I**	
- slipping;	8	9	8	9	8	
- opponent exchange	8	9	8	9	7	
Phase IV - the fundamental position: high, medium, low;	8	9	8	9	8	
- on-the-ground movement;	8	9	8	9	9	
- attacking the opponent;	8	9	8	9	8	
- marking	8	9	7	8	8	
- taking over and surrendering the opponent;	8	9	8	9	8	
-doubling;	7	8	8	9	7	
- slipping;	8	9	7	8	8	
- removing the ball from dribbling in overtaking;	8	9	7	8	8	
- the wall at the 9 m throws;	8	9	8	9	7	
- blocking throws at the gate;	8	9	8	9	8	
- defence actions in (numerical) inferiority;	8	9	8	9	8	
- collaborating with the goalkeeper.	8	9	9	10	8	
Total of points in attack	**224**	**253**	**218**	**247**	**222**	
Average for attack	**8**	**9,03**	**7,78**	**8,82**	**7,92**	

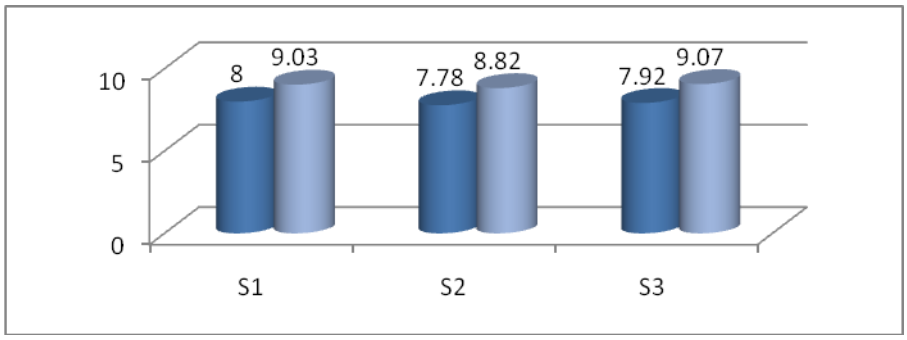

Figure 1 Graphical representation of the results obtained in the technical-tactical defence testing

Table 8 - the score obtained in the technical-tactical test

No.	S_1		S_2		S_3	
	I	**F**	**I**	**F**	**I**	**F**
1.	230	261	233	245	211	259
2.	8,21	9,32	7,96	8,75	7,53	9,25
3.	224	253	218	247	222	254
4.	8	9,03	7,78	8,82	7,92	9,07
5.	8,01	9,17	7,87	8,78	7,66	9,16

Legend:
1. Total points for attack
2. Arithmetic average for attack
3. Total defence points
4. Arithmetic average for defence
5. General average.

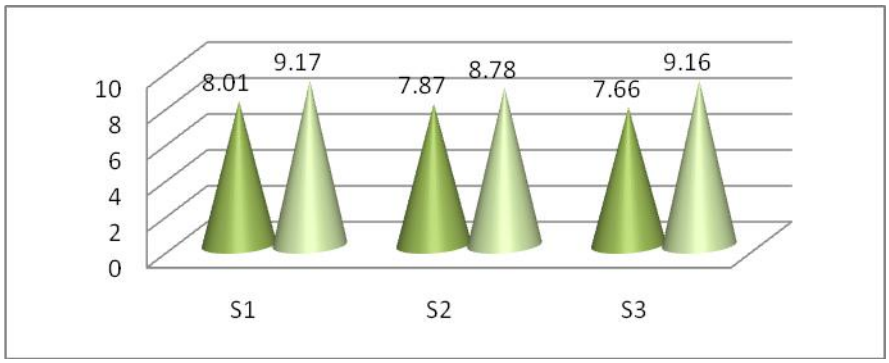

Figure 3 Graphical representation of the results obtained in technical-tactical testing

Table 9 - testing and control samples score for Ș.L.

No.	Control samples	S_1			
		I	I	F	F
1.	5 x 30 m	4,5”	60p	4,4”	70p
2.	Technical proof	57”	80p	56,5”	90p
3.	3 x 200 m	41,9	81p	41,4	86p
4.	Pent salt	11,80	75p	12,00	77p
5.	Throwing the ball	39	80p	40,50	89p
6.	Total of points		**376p**		**412p**

Table 10 - testing and control samples score for M.R.

No.	Control samples	S_1			
		I	I	F	F

1.	5 x 30 m	4,4”	70p	4,3”	80p
2.	Technical proof	57”	80p	56,6”	94p
3.	3 x 200 m	41,3	85p	41,2	90p
4.	Pent salt	12,30	77p	12,32	80p
5.	Throwing the ball	40	86p	40,50	89p
6.	Total of points		**399p**		**433p**

Table 11 - testing and control samples score for V.T.

No.	**Probe de control**	**S_1**			
		I	**I**	**F**	**F**
1.	5 x 30 m	4,5”	60p	4,4”	70p
2.	Technical proof	56,8”	90p	56,4”	95p
3.	3 x 200 m	41	90p	41,2	90p
4.	Pent salt	12,30	77p	12,33	80p
5.	Throwing the ball	40	86p	40,50	89p
6.	Total of points		**403p**		**414p**

In the anthropometric measurements, we note that all the selected players match the amounts accepted by the junior I handball model.

Somatic changes are unlikely because the players are junior I and therefore the growth process is over. But some changes in weight and waist / weight ratio may occur.

A qualitative jump from the initial test to the final test can be seen through the score in the driving tests.

Also, obvious progress also appears in comparing the results obtained in the initial and final testing of technical-tactical content.

Conclusions

After the results obtained during the experiment, after comparing the data and the statistical-mathematical interpretations, I reached the final conclusions:

– the stage of development of motor skills remains an important factor in acquiring, consolidating and improving the technical-tactical content for each (occupied) position in the team;

– the improvement of the technical-tactical content specific to the position occupied in the team can be accomplished very well by acting through the specific individualisation after the collective training programme and can act directly on the specific aspects of the centre post;

– taking into account the team-building of the player that evolves in the centre position on which individualised training is carried out, she is very well accommodated both in the team and in the collective training in the handball game;

– the specific motor skills can be developed or improved accordingly by acting individually according to the position occupied in the team, the collective training being insufficient.

References

[1] Ion Bota, *Handbal, modele de joc și pregătire*, Editura Sport-Turism, București, 1984, p. 24.

[2] Cezar Hantău, Hanbal, Editura Alpha, Buzău, 2000, p. 9.

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OPTIMIZAREA MODELULUI DE PREGĂTIRE ŞI CONCURS A JUCĂTOAREI DE HANDBAL SPECIALIZATĂ PE POSTUL DE CENTRU LA JUNIORI I – FEMININ

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Cuvinte cheie: handbal, model de pregătire și concurs, centru, juniori

Rezumat

Handbalul face parte din familia sporturilor colective cu mingea unde există un contact direct între jucători. Handbalul reprezintă un joc cu o largă răspândire la ora actuală. Această popularitate se datorează caracteristicilor acestui joc. Echipele urmăresc ca fiecare dintre ele să-și obțină superioritatea față de cealaltă echipă prin mascarea ideilor proprii și în același timp intuiască toate acțiunile adversarului. În cadrul competițiilor, activitatea echipei include atât acțiuni de joc cât și acțiuni de comportare. Acțiunile de joc cuprind atât elemente din tehnica sportivă precum și din tactică, strâns legate între ele, executate în faza de atac cât și în faza de apărare. Se observă că la toate echipele media de înălțime a lotului a crescut. În medie, înălțimea jucătorilor este de peste 190 cm, iar 3-4 sportivi depășesc 200 cm înălțime. Se poate vedea că toate echipele au în componență 8-9 jucători cu o înălțime peste 190 cm și 3-4 jucători de excepție. Înălțimea și fizicul impresionant al handbaliștilor consacrați sunt completate și de un înalt arsenal motric. Acest potențial excelează printr-un înalt nivel de dezvoltare a acțiunilor motrice combinate (viteză+forță, forță+viteză, îndemânare+forță) precum și de asemenea a cunoștințelor tehnico-tactice deosebite.