STUDY ON TRAINING METHODS. THE PLAYER IN ZONE 3 AT THE LEVEL OF CADET VOLLEYBALL GAME

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Abstract: *The purpose of the paper is to determine if we can form a complete and complex player from Zone 3 to cadets through the best problem and efficiency of the means used to obtain a maximum yield, in cases of concrete application in the central shooter's volleyball games.*
The work we have prepared based on a study of the cadets group (4 central shooters) from the Suceava Sports High School contributes through the recorded data to the setting up of specific means and methods of volleyball action that are effective in the formation and development of Zone 3 player.
The control group consisted of 4 members of the LPS Piatra Neamţ team, of a level close to the experimental group members.
During the experiment, the subjects of the two groups participated together in the 1st Series of the National Cadet Championship organized by F.R.Volei.

Keywords: *volleyball, cadets, Zone 3, block, attack.*

1. Introduction

Volleyball has a strong development both in terms of maximizing content and structure parameters, as well as the level of players' demand on psychological, biomotorical and tactical tactics [3], [13].

The volleyball game presents a continuous improvement both from the point of view of training the athletes and of the stages of the game, as a result of the advances in the selection, of the sports training methodology, of the complex physical development, of the technical-tactical training, last but not least of psychological training and approach to competition strategy [4], [6], [11].

The player's height grew, being doubled by the strong force in attack and defense, with a focus on the block. The organization of the attack is varied and very rapid, and the organization of the defense is based on both anticipation and placement, as well as on the second line acrobatic play [1], [5], [10].

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In sport games, player training is complex, it must have as its starting point the objective reality of the contest. The pre- and post-competitive period must be based on the competition with its characteristic bases: 40-60% of the success and the knowledge of the opponent [2].

In modern training there are important changes in the conception, content, structure and organization of the athletes training process. These changes are the result of scientific research combined with the practice of coaches [1], [7], [8].

In volleyball training must be complemented by an individualized process of preparing the players performance in the idea of turning to the highest levels of all his motricity [7,8].

2. Material-Methods

The hypothesis of the paper assumes that by means and methods used by their programming, algorithmization and standardization and by their application we can contribute to the improvement of the means, to the formation and improvement of the Z3 players in the volleyball game at the level of cadets-male.

For the formation of a complex and complete player on Z3, we considered that it is necessary to have as a goal of training the best problem and efficiency of the means used to obtain a maximum efficiency in cases of concrete application in the gameplay of the main shooter in volley-ball.

2.1. Methods used in the experiment
1. *Observation method*
The nominees were subject to observation during the internal competitions held within the national cadet-men's championship and during one year of training. The task or the purpose was to collect concrete data, whose analysis allows them to be generalized.

2**. *The method of the experimental observation***
Programming the training for the Z3 player and systematization of the selected means have been experienced by applying them to the training of the athletes.

3*. Statistical and mathematical method*
All data collected from control samples of F.R.V. and personal ones have been mathematically and statistically processed. The "significance between small samples with uncorrelated data", "t" at 5 degrees of freedom in FISHER's Table, and the probability of "p" was established after Fisher's Table at 5 degrees of freedom. [9], [12]

In the research we used players from LPS CSS SUCEAVA, constituting the experimental group and subjects from LPS PIATRA NEAMŢ who formed the witness group.

The experiment was conducted in the competition year 2016-2017, in the sports hall of Suceava Sports High School.

During the experiment we used six tests of the Romanian Volleyball Federation for athletes participating in the Volleyball National Volleyball Championship at the level of cadets. [13]

I also decided to use two personal tests, especially for the volleyball player in zone 3.

F.R.V. tests are the following:
- running 20 m flat;
- long jump from standstill;
- throwing the 2 kg ball;
- displacement 6x4 m;;
- high jump on the spot;

• running of 800 m

The two personal tests are:

1. attack strike from Z3 in the direction of the impulse to Z5 in a circle with a diameter of 2 m (fixed point); the circle must be tangent to the side and bottom line;
2. attack strike from Z3 in reverse direction to Z1 at fixed point.

Measurements performed on subjects in the experiment were:

• height;
• weight;
• amplitude of the arms.

Means used in the experiment to improve the attack hit:

1. Simulating the attack without the ball in the direction of the impulse (left-right);
2. Idem l, with return 90^0 in the inverse direction of the impulse;
3. Attack shot diagonally;
4. Attack shot in the reverse direction of the impulse.

5. Attack kick in addition to a self-block with detachment on the spot;
6. Attack shot with low, medium, low pass (fast, short)
7. Attack shot at the auditory signal (whistle) after performing lateral movements (left-right), with normal thrust:
8. Idem 5,6,7 with the marking of the places where the ball will be sent from the strike (circles, squares, benches, chairs).
9. Lift attack in which the teacher throws the ball, and the player executes the attack shot in the 6th area of the opponent's pitch to the audible signal (whistle or beaten smoothly).

3. Results and Discussions:

After initial and final tests, the following results were obtained:

Table 1

Experimental Group - Initial Tests

Crt. No.	Name and surname	Running 20 m flat	Throwing the 2 kg ball	Long jump from standstill	High jump on the spot	Running of 800 m	Displace-ment 6×4m	Attack from Z3 to Z5	Attack from Z3 to Z1
								A	S
	1	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8
1.	C.E.	3,4″	4,60 m	2,00 m	47 cm	3,21′	7,2″	10	8
2.	Ş.T.	3,6″	4,80 m	2,05 m	50 cm	3,15′	7,3″	10	9
3.	B.V.	3,4″	4,70 m	2,00 m	47 cm	3,05′	7,1″	10	8
4.	B.G.	3,3″	4,40 m	2,00 m	47 cm	3,25′	7,5″	10	7
	x	3,425	4,625	2,0125	47,75	3,165	7,275	8	6,5
	S	0,036739	0,036926	0,012422	0,031414	0,027484	0,023475	0,102062	0,088823

A= number of attempts

S= number of successful attempts

The control group - tests initial   Table 2

Crt. No.	Name and surname	Running 20 m flat	Throwing the 2 kg ball	Long jump from standstill	High jump on the spot	Running of 800 m	Displace-ment 6x4m	Attack from Z3 to Z5	Attack from Z3 to Z1
								A	S
	1	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8
1.	R.Ş.	3,6″	4,40 m	2,00 m	45 cm	3,30′	7,4″	10	7
2.	P.D.	3,7″	4,30 m	1,90 m	44 cm	3,25′	7,5″	10	6
3.	I.E.	3,5″	4,50 m	2,00 m	45 cm	3,10′	7,3″	10	7
4.	N.A.	3,4″	4,60 m	2,05 m	47 cm	3,10′	7,3″	10	7
	x	3,55	4,45	1,9875	45,25	3,1875	7,375	6,75	5,5
	S	0,036366	0,029011	0,031655	0,027808	0,032338	0,012982	0,074074	0,234726

A= number of attempts
S= number of successful attempts

Experimental group - final tests   Table 3

Crt. No.	Name and surname	Running 20 m flat	Throwing the 2 kg ball	Long jump from standstill	High jump on the spot	Running of 800 m	Displace-ment 6x4m	Attack from Z3 to Z5	Attack from Z3 to Z1
								A	S
	1	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8
1.	C.E.	3,3″	4,70 m	2,10 m	51 cm	3,10′	7,0″	10	10
2.	Ş.T.	3,4″	5,00 m	2,15 m	51 cm	3,08′	7,1″	10	9
3.	B.V.	3,3″	4,80 m	2,15 m	48 cm	3,07′	7,0″	10	10
4.	B.G.	3,3″	4,70 m	2,10 m	48 cm	3,10′	7,1″	10	9
	x	3,325	4,8	2,125	49,5	3,0875	7,05	9,5	7,75
	S	0,015038	0,029463	0,031655	0,034991	0,004858	0,008189	0,060774	0,123539

A= number of attempts
S= number of successful attempts

The control group – final tests   Table 4

Nr crt	Name and surname	Running 20 m flat	Throwing the 2 kg ball	Long jump from standstill	High jump on the spot	Running of 800 m	Displacement 6x4 m	Attack from Z3 to Z5	Attack from Z3 to Z1
								A	S
0	1	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8
1.	R. Ş.	3,5″	4,50 m	2,05 m	47 cm	3,20′	7,3″	10	8
2.	P. D.	3,5″	4,45 m	2,00 m	46 cm	3,20′	7,4″	10	8
3.	I. E.	3,4″	4,60 m	2,10 m	48 cm	3,05′	7,2″	10	7
4.	N. A.	3,4″	4,65 m	2,05 m	50 cm	3,00′	7,2″	10	7
	x	3,45	4.55	2,05	47,75	3,1125	7,275	7,5	6,5
	S	0,016735	0,020063	0,019915	0,035766	0,033117	0,013161	0,07698	0,0888823

A= number of attempts
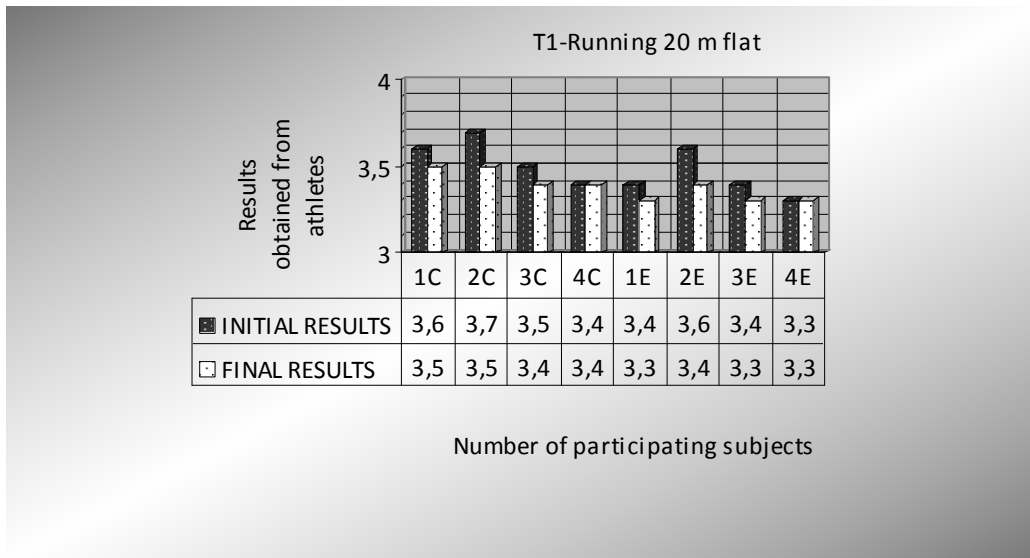S= number of successful attempts

Fig. 1. *Result of running 20m flat*

E= Experimental group
C= The control group

There is an improvement in the final test time for the experimental group components. The hypothesis is confirmed in 70% of cases.
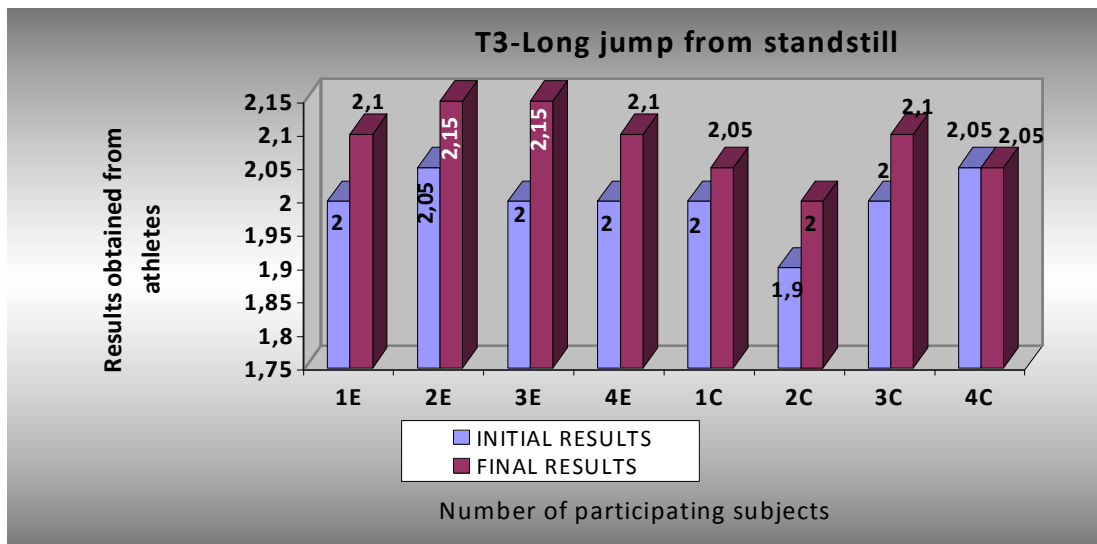

Fig. 2. *Result of long jump standstill*

E= Experimental group
C= The control group

And in the T3 test, the progress of the experimental group is noticeably higher

than the control group, in 70% of cases   the hypothesis is confirmed.
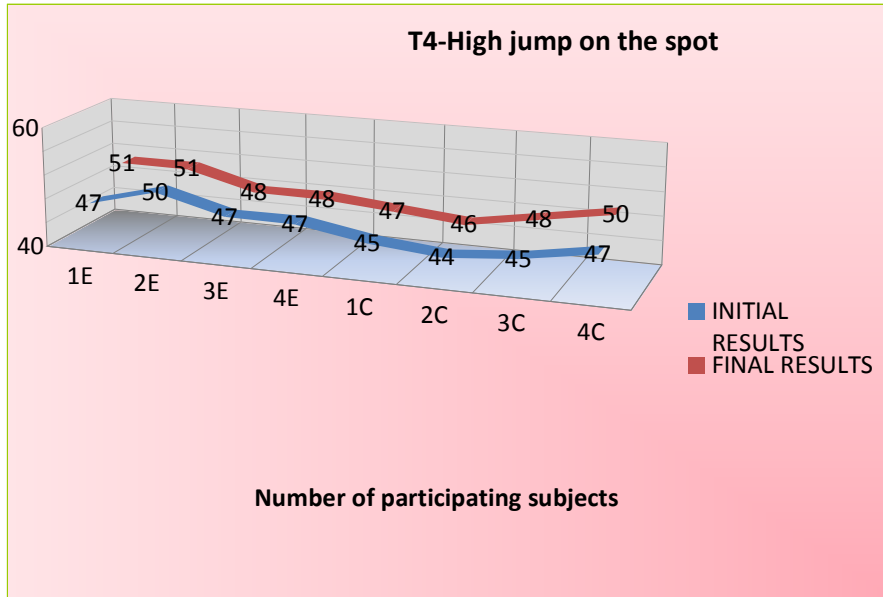

Fig. 3. *Result of high jump on the spot*

E= Experimental group
C= The control group

The increase in the final test scores can be observed in the T4 test and here the   hypothesis is confirmed in 70% of the cases.
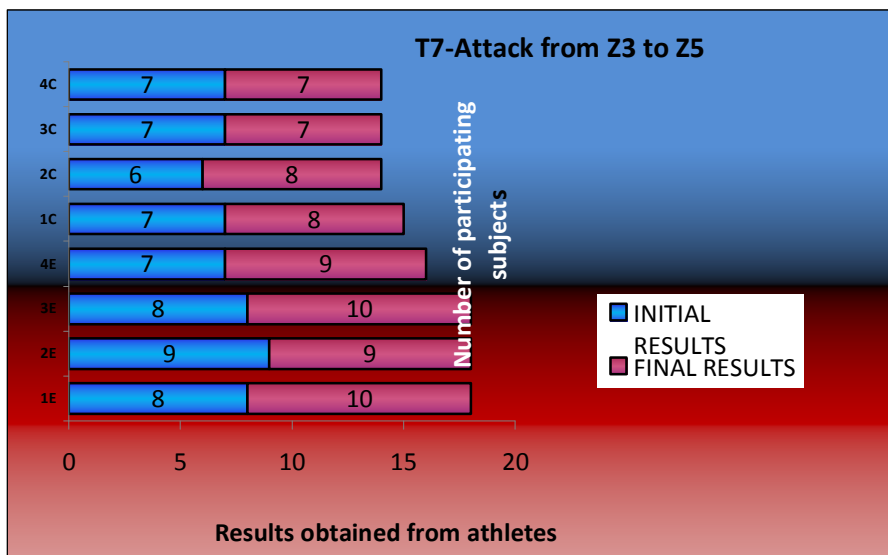

Fig. 4. *Result of Attack from Z3 to Z5*

E= Experimental group ; **C**= The control group

The personal test T7 efficiency of the experimental group compared to the control group is obviously higher after the final test. Having a confirmation of the 70% hypothesis.

4. Conclusions and Proposals

Following the experiment, the hypothesis from which we left was confirmed by comparing the results obtained in the initial tests with the final ones, observing the progress of the experimental group.

Achieving a greater number of data will enable us to establish with a certain degree of relative strength the model of the volleyball player viewed from the perspective of the main technical and tactical structures and movement involved, as well as the tasks of the model of each player on Z3, in relation to the specific tasks in the team and their inclinations and skills.

Particularly important for each performance team is the existence of at least 3 center players, of which 2 will be in the base formation, forming the central axis of a team.

Lately, we have found that there is a small number of players specializing in Z3 in national teams and even in divisional teams, due to a narrow specialization in the cadets, as well as the decrease of the selection base.

This deficiency can be remedied by strictly applying the measure that Z4 specialized players also act on zone 3.

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