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THE INFLUENCE OF THE DEVELOPMENT OF SPECIFIC RESISTANCE THROUGH THE GAME METHOD ON THE OPTIMIZATION OF THE DEFENSIVE PHASE IN THE U17 JUNIOR FOOTBALL

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Abstract: *In this article, the author intends to conduct a comparative analysis of the results of the experiment in initial and final games for signs of efficiency of U17 junior footballers playing in defense. In research started from the premise that the development of specific resistance by the game method will lead to optimize the competitive players. The experiment was conducted in two U17 junior team. The results of the study conducted experimental group were better than those of the control group, the improved efficiency defense. Analysis of recorded data confirms research program used thus verified.*

Key words: *influence, game method, specific resistance, defense, soccer, junior U17.*

1. Introduction

Physical training is considered as the system of measures that ensure the functional capacity of the organism, the development of morphofunctional indices, the development of basic and specific motor qualities, the improvement of motor skills and abilities and a good state of health [4, 5, 6, 7], [11, 12]. Several authors consider that the sides of physical training are the general physical training and the specific physical training [2, 3, 4], [7], [9], to which, other authors add multilateral physical training [8], [10].

In the content of specific physical training increases the number of motor qualities engaged and as such the process of their development involves a richer and more complicated mixture. Exercises aimed at improving specific physical training must aim at two directions: the development of combined motor qualities specific to football and the improvement of motor skills and abilities, motor acts with or without the ball, which achieve the efficient performance of the technical-tactical actions required by the football game [2, 3, 4], [7], [9],[11, 12].

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Gârleanu D. states that "the resistance developed at a high level allows the players to execute all the technical-tactical procedures in playing conditions, without visible efforts and without their effectiveness and precision disappearing" [7].

The work done to develop resistance is a continuous struggle to delay as much as possible the appearance of the phenomenon of fatigue in making an effort of a certain intensity, knowing that fatigue is the main factor that limits the manifestation of resistance in time [13].

In 11-player football competitions, the demand for physical capabilities is very intense. The physical factor is manifested by superior efforts; the background of physical capacities must be very well developed. The orientation of the game is based on a superior physical training and is characterized by actions carried out with great speed in conditions of resistance to the specific efforts of the football game. It goes without saying that in order to achieve this, an improvement of the preparation method is required.

In modern sports training, in the training of juniors in football, it is recommended that training be carried out in the context of the game, in conditions close to the game and in conditions similar to the game. This methodical orientation leads to the creation of effective behaviours of the players by stimulating them within the training process to understand the game situations through permanent information, in decision making and in triggering the motor action.

2. Objectives

In our research, we started from the premise that the use of the game method through drive systems in the form of low-field games, conditional games and themed games designed to develop specific resistance will lead to the optimization of the performance in defense at the U17 junior team, in the game of football.

3. Material and Methods

The pedagogical experiment was carried out at the ACS Kids Tampa junior U17 team (experimental group) and at the CSS Brașovia junior U17 team (control group). The experimental group used in the preparation the syllabus proposed by us, a curriculum designed to develop specific resistance through the method of games, in which there were small side games, conditional games and themed games, with objectives that targeted individual, group or team tactical principles and subprinciples in the defensive phase. During the study, in the training program of the experimental group, 2-3 trainings were planned in the weekly cycle with themes and objectives oriented to the development of specific resistance through the game method.

The duration of the pedagogical experiment was 8 months (October 2020 - May 2021). The working strategies, within this approach, were the following:

- recording the parameters of the game in defense made by the experimental group and the control group in 6 initial matches;
- elaboration of a training program of the experimental team for the development of specific resistance by the method of games;

- the implementation of the programme drawn up as part of the preparatory process;
- recording the parameters of the game in defense made by the experimental group and the control group within 6 matches, obtaining the final data of the experiment;
- processing and interpretation of the data obtained,
- the formulation of the findings of the experiment.

4. Results and Discussions

The results obtained by the subjects at the parameters of the game in defense at the level of the team in the initial games (October 2020) and in the final games (May 2021) were centralized in Table 1.

Table 1

Average values of the game parameters recorded in defense at the team level in the initial and final games of the experiment group and control group

No. Crt.	Parameters of the game in defense	Groups of subjects	Initial games	Final games	t	P
			$\overline{X \pm m}$	$\overline{X \pm m}$		
1.	*Rebounds*	E	27,8±1,26	44,4±1,2	4,59	P<0,001
		C	31,2±1,28	33,8±1,65	1,24	P>0,05
	t; P	E-C	0,883 ; P>0,05	4,172 ; P<0,01		
2.	*Rebounds from pressing*	E	6,2±0,58	11,8±0,86	5,39	P<0,01
		C	7,4±0,51	9,2±0,58	2,32	P<0,05
	t; P	E-C	1,549 ; P>0,05	2,5 ; P<0,05		
3.	*Shots received towards goal*	E	8,8±0,58	6,6±0,6	2,63	P<0,05
		C	8±0,44	7,8±0,66	0,25	P>0,05
	t; P	E-C	1,089 ; P>0,05	1,342 ; P>0,05		
4.	*Shots received on goal*	E	4,8±0,37	2,8±0,37	3,78	P<0,01
		C	5±0,32	4,2±0,37	1,63	P>0,05
	t; P	E-C	0,408 ; P>0,05	2,646 ; P<0,05		
5.	*Goals conceded*	E	1,6±0,54	0,4±0,24	3,46	P<0,01
		C	1,4±0,24	1,2±0,2	0,63	P>0,05
	t; P	E-C	0,577 ; P>0,05	2,53 ; P<0,05		

E = Experimental group; C = Control group

In the *Recoveries* parameter (Table 1 and Figure 1), the experimental group made a greater progress between the average of the final games, in relation to the average of the initial games compared to the control group. The criterion "t" for the average values of the final games by the two groups indicates statistically significant progress in favour of the experimental group (t = 4,172; P<0,001).

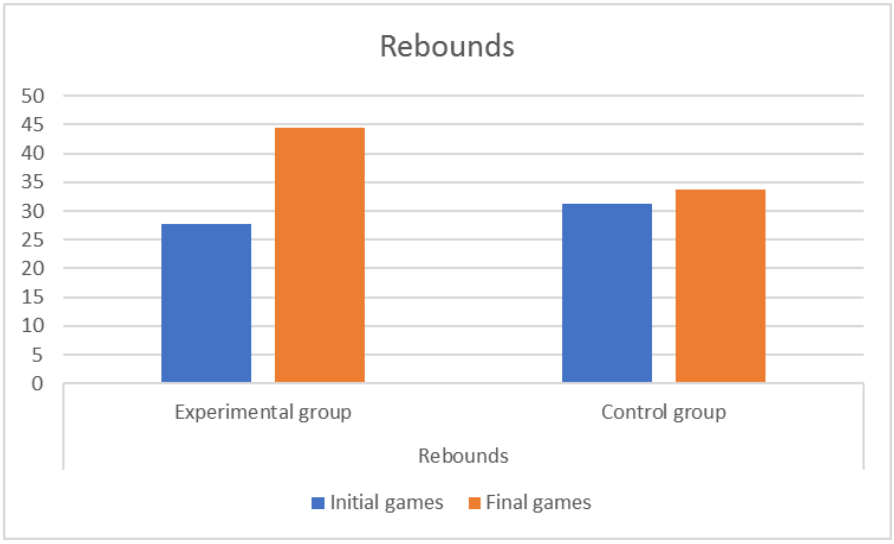

Fig. 1. *Dynamics of the game parameter averages of Rebounds in experiment group and control group*

Comparing the dynamics of the arithmetic mean to the game parameter *Recoveries from pressing* (Table 1 and Figure 2), it is noticed that the experimental group recorded values superior to the control group. The differences recorded between the two groups in the initial games were not significant, the value of the calculated "t" being less than that of the tabular "t", at the materiality threshold of more than 0.05. In the final games, however, between the two investigated groups, the variable "t" shows significant increases in values, being above the significance threshold (t=2.5; P<0,05). Although both groups recorded significant differences between the initial and final games, there are noted the different thresholds of significance, respectively P<0,01 in the experimental group, compared to P<0,05 in the control one.

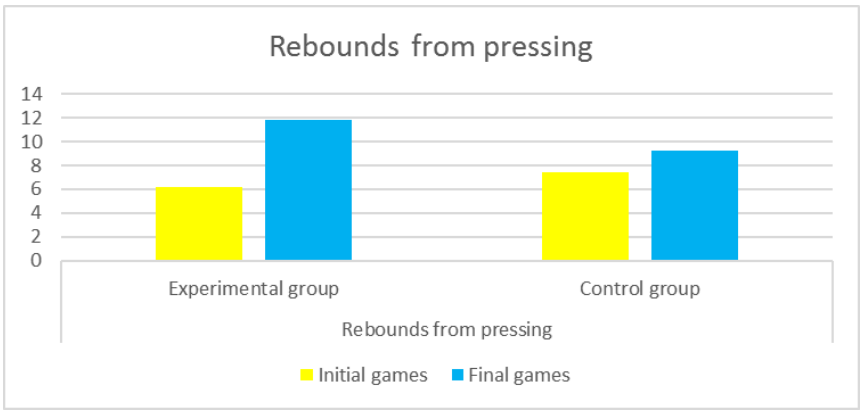

Fig. 2. *Dynamics of the average values of the game parameter Recoveries from pressing in the experiment group and control group*

We can say that this increase in the total number of recoveries and in the number of recoveries by pressing proves that progress has been achieved at the experimental group in the defense phase, this arguing the efficiency of the development of the specific resistance in optimizing the competitive efficiency.

Analyzing the results recorded at the parameter *Shots received towards goal*, it is noticed that the experimental group recorded values of the initial average of 8.8 shots received towards goal, and the control group the value of the average obtained at the initial games of 8 shots. The calculated variable "t" (t=1,089, P>0,05) shows that, in the initial games, at this game parameter there are no statistically significant differences between the two groups, these being homogeneous (Table 1 and Figure 3).

In terms of progress, in the experiment group there is a reduction in the number of shots sent by opponents towards goal of 2.2 shots, while in the control group the reduction of the average number of shots was lower, respectively 0.2 shots.

Fig. 3. *Dynamics of the average values of the game parameter Shots received towards goalin the experiment group and control group*

At the game parameter *Shots received on goal*, in the initial games the average values recorded by the two groups are close, 4.8 shots received at the experimental group and, respectively, 5 shots received at the control group (Table 1 and Figure 4). It is noted that variable "t" indicates progress above the materiality threshold in the final games in favor of the experimental group (t = 2,646; P<0,05).

Fig. 4. *Dynamics of the average values of the game parameter Shots received on goal in the experiment group and control group*

In the parameters of the game in defence regarding the number of shots towards goal and on the space of the goal managed by the opposing team, there is a greater progress in the experiment group compared to the control group. These advances may also be the result of better tactical preparation at the level of the experiment group, but they can also be attributed to a better physical training of the players in that group as a result of the implementation of the training program aimed at developing the specific resistance proposed by us. With the increase in the level of development of specific resistance through the exercise program in the form of low-field games, conditional games and themed games in the members of the experimental group, they have improved the quality of their marking and placement in the defense phase, they were harder to overcome in duels with opponents, they had the physical ability and willingness to effort to judiciously cover areas of the pitch, to close the penetration lanes to their own goal and to block opponents' attempts to complete.

At the Goal conceded parameter, in the initial games, it was found that the value of the arithmetic mean in the experimental group was 1.6 goals conceded, with an error of the average of 0.57, while in the control group the average value was 1.4 goals conceded, with an error of the average 0.24 (Table 1, Figure 5). In the final games, the arithmetic mean value in the experimental group reaches 0.4 goals conceded per game, with an average error of 0.24, while the average value in the control group reaches 1.2 goals scored, with an average error of 0.2.

Fig. 5. *Dynamics of the average values of the game parameter Goals conceded in the experiment group and control group*

5. Conclusions

The interpretation of the values of the parameters regarding the game performance of the entire defending team, resulting from the recordings made in the 6 initial games and 6 final games, leads to the following conclusions regarding the optimization of the game efficiency in defense:

- it was possible to increase the number of balls removed from the opponent and the number of successful recoveries following the pressing action, in the final games compared to the initial games;
- the development of specific resistance led to the more efficient realization of the requirements of the tactical principles: the permanent creation of numerical superiority in the defensive phase, total defense play, the determination of the opponent to make mistakes by applying a proper placement and an aggressive marking, reducing the number of mistakes, performing actions in due time;
- fulfilling the playing principles of modern football in defense: focusing the game on the direction of the opposing attack, achieving the balance in defense, controlling the withdrawal, organizing and reorganizing the recovery of the ball;
- the competitive performance of playing in defense at the level of the whole can be optimized by using the game method in order to develop the specific resistance of the football game, the training program being thus verified.

Practical recommendations:

- the use of the game method through drive systems that stimulate the players to solve concrete situations in the context of the competitive game, with an attractive and emulative character within the preparation of the U17 junior team, correlated with the specifics of the effort in the football game;
- the awareness of sport speed athletes of the need for adequate physical training in general and specific resistance developments in particular;
- the exercises performed by the method of games and used in trainings

for the development of specific resistance to have a dynamic character that would require junior footballers and from a technical-tactical and psychological factors.

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