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EFFECTIVENESS OF DEVELOPMENT SPECIFIC RESISTANCE IN FOOTBALL GAME ON IMPROVING EFFICIENCY FORWARDS JUNIOR (17-18 YEARS OLD)

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Abstact: *In this research we started from the premise that the development of specific resistance will lead to optimize the competitive striker players. The material presented deals with the influence of applying the proposed training program for the development of specific resistance in the experimental group on performance of striker players. To assess the efficiency forwards player, both the experimental group and the control group, in the initial games and the final games, we watched and recorded parameters, based on the video that matches. In the experimental group, to assess the efficiency of competitive players evolving positions of forwards in the final game, there is progress compared to the initial games (P <0.01), compared with the results achieved by attackers control group (P> 0.05).*

Key words: *specific resistance, efficiency, forwards, 17-18 junior, football.*

1. Introduction

The explanatory dictionary of the Romanian language, the notion of efficiency is defined as the ratio between the obtained and effort in an activity; efficiency. Effectiveness of actions depends on a number of technical and tactical aspects.

The term technical and tactical, as the name suggests, combines tactical execution with biomechanical orientation, namely efficiency and performance depend on: specific skills related to the choice of means of selecting opportunities, speed of decision, courage and risk taking [8].

With regard to the assessment of competitive performance, they can be grouped in ways used in sports games and specific assessment methods football game.

In the game of football, competitive performance evaluation is done by the following ways:

a) notes and marks awarded to players [12], [13];

b) from 1-10 points to some qualities: physical condition, speed, power, strength, technique game in attack, defense and at times fixed strategy game in attack, defense and fixed moments [11], [13] ;

c) the pursuit of game aspects relating to: carrying tactical plan, tactical discipline, psycho-physical strength, teamwork, diversity suture passes and pulled the gate, set pieces efficacy, duration of keeping the ball [5], [6], [7];

d) the registration of game parameters

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related to: total of possession of the ball during the actual play of the team, during an attack or defense actions, relations game between two or more players, the strike in the 3 areas of land defense force, losing the ball in the zone, regaining ball zone, report actions shots, shots ratio goals [1], [2];

e) the registration of indicators related to the game: for possession of the ball (in percentage or minutes) score, number of shots on goal and on target, number positions out of the game, number of fouls, yellow and red;

f) the registration of individual parameters specific game station [3];

g) methods of analysis in simple notation (number of holes, number of passes that nicely for possession) and computerized analysis notation [4], [9], [10].

Our research aims to demonstrate the scientific and practical, specific resistance development effectiveness in optimizing the return game football game football players of strikers.

2. Objectives of the research

Research was started from the assumption that the development of specific resistance training junior footballers 17-18 years will help optimize game performance. In this respect the experiment was oriented in two directions:

- check the efficiency of application exercises to develop specific resistance in optimizing physical and technical factor;
- check the efficiency of application exercises to develop specific resistance on competitive performance enhancer.

3. Material and Methods

The research took place in two teams of juniors 17-18 years of Brasov, FC Brasov which formed the experimental group, or CSS Brasov - control group. Note that the control group had similar conditions in the experimental group training: a land of grass, licensed coach, without conditions and means of recovery, sports equipment, same old players.

The research was conducted in three phases, as follows:

1. In the first phase, from January 2009 - May 2010, making analysis of literary sources on sports training in general and especially the juniors 17-18 years, we have established research direction. We organized research experiment ascertaining physical parameters and techniques nationwide to juniors of 17-18 years.

2. The second phase, from May 2010 - April 2011 addressed prior experiment which aimed to assess the level of physical and technical training junior football teams belonging experiment, witnesses and other teams in the same echelon as compared to scales set by Romanian Football Federation U18 category. In this phase shift was made initial control samples and standards and evaluating performance junior footballers undergo initial research in official games. Also, this stage of the research program aimed at establishing basic pedagogical experiment.

3. The third stage was the completion of the experiment by passing tests and final control rules and competitive performance evaluation in the last official games. Basic pedagogical experiment was conducted according to the research compiled during the period February 2011 - May 2012. Subsequently, we processed and interpreted the data obtained in the course of research, we made the final conclusions and proposals aimed at optimizing game performance by developing specific resistance of 17-18 juniors.

4. Results and discussions

To assess the efficiency of the offensive player of the game, both the experimental

group and the control group, in 5 games initial and final 5 games we watched and recorded in observation protocols, based on the video that matches, the following parameters game: assists precise, overtaking opponent, shots on goal, goals, balls rebounds and distance covered in the match.

The results of the parameters registered game players who have evolved forwards positions in the experimental group and control group, in the initial and final games, are summarized in Table 1.

Table 1

Mean values of parameters registered game positions - forwards - the initial and final games of the experimental group and control group

Nr. Crt.	Parameters of game	Group of subjects	Initial games	Final games	t	P
			M ± SD	*M ± SD*		
1	*Assists precise (number)*	EG	19,45±0,55	21,61±0,52	3,93	<0,001
		CG	19,60±0,56	20,05±0,54	0,79	>0,05
	t; P	EG-CG	0,19; >0,05	2,08; <0,05	-	-
2	*Overtaking opponent (number)*	EG	7,05±0,19	7,68±0,14	3,94	<0,001
		CG	6,88±0,20	7,04±0,18	0,80	>0,05
	t; P	EG-CG	0,63; >0,05	2,78; <0,01	-	-
3	*Shots on goal (number)*	EG	1,80±0,17	2,41±0,13	3,81	<0,01
		CG	1,83±0,19	1,97±0,16	0,78	>0,05
	t; P	EG-CG	0,12; >0,05	2,09; <0,05	-	-
4	*Goals (number)*	EG	0,63±0,07	0,82±0,03	3,17	<0,01
		CG	0,60±0,06	0,66±0,05	1,00	>0,05
	t; P	EG-CG	0,33; >0,05	2,67; <0,05	-	-
5	*Ball rebounds (number)*	EG	3,22±0,23	4,09±0,20	3,95	<0,001
		CG	3,10±0,27	3,35±0,26	0,92	>0,05
	t; P	EG-CG	0,34; >0,05	2,24; <0,05	-	-
6	*Distance covered (meters)*	EG	7248,00±207,08	8039,09±188,30	3,87	<0,01
		CG	7318,00±208,14	7475,96±200,00	0,75	>0,05
	t; P	EG-CG	0,24; >0,05	2,05; <0,05	-	-

Legend: EG=experimental group, CG=control group, M=average, SD=standard deviation, t=test Student, P=significance level, n=number of subjects

Note:

P		0,05	0,01	0,001
t	f=19	2,093	2,861	3,883
	f=38	2,025	2,713	3,570

Assists precise game parameter (Table 1 and Figure 1), in initial games the forwards in the experimental group, there was an arithmetic mean of 19.45 accurate passes, and those in the control group had an average of 19.6 passes. In the final game, forwards the experimental group performed precisely 21.61 assists, compared with the control group whose average was 20.05 good passes. It is noted that the experimental group was greater progress between the average final games, original games against average versus the control group.

The variable "t" in the experimental group is regarded as having a good value, than the materiality threshold (P<0.001) and the control group has a value below the threshold of significance (P>0.05), an insignificant difference recorded in statistical terms. The variable "t" to end the tests between the two groups, indicating progress statistically significant (t=2.08, P<0.05).

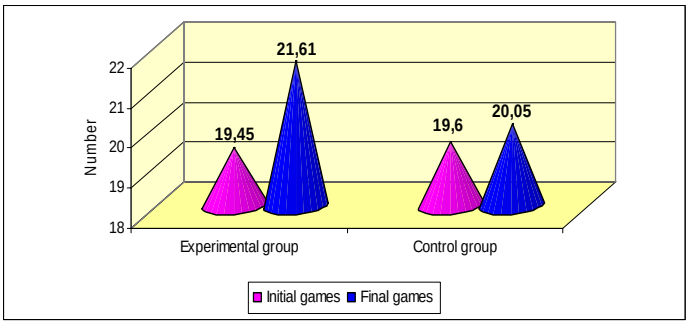

Fig. 1. *Dynamics of average values of the parameter game Assists precise registered at forward of the experimental group and the control group*

Overtaking opponent parameter (Table 1, Figure 2), in the initial games, it was found that the arithmetic mean value of successful action forwards the experimental group is 7.05 individual overruns made, while the control group were managed 6.88 passes to the opponent. In the final game, the average value of individual overflows in the experimental group reached 7.68, while the average in the control group exceeded reaches 7.04.

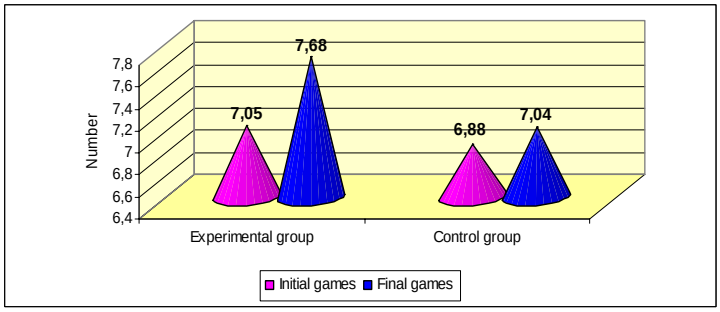

Fig. 2. *Dynamics of average values of the parameter game Overtaking opponent registered at forward of the experimental group and the control group*

Comparing the results of the initial and final games of the experimental group highlighted that "t" calculated is greater than "t" spreadsheet materiality P<0.001, demonstrating significant differences between tests. Regarding the control group, the value of "t" calculated is greater than that of "t" statistic, resulting in significant differences between tests, the significance level P<0.05.

Shots on goal game parameters (Table 1 and Figure 3), the initial games, the average values of the two groups are similar, actions completed the gate and 1.8 per game average in the experimental group, 1.83 in the control group. In the final game, however, it is found that the experimental group completed forwards averaged 2.41 actions per game, while the control group was less progress, from 1.83 to 1.97 shots.

Thus, analyzing the results recorded on the game concluded with the completion actions performed by one of the attackers, statistical and mathematical calculation shows that the variable "t" do not show differences between groups over materiality, initial games (P>0.05).

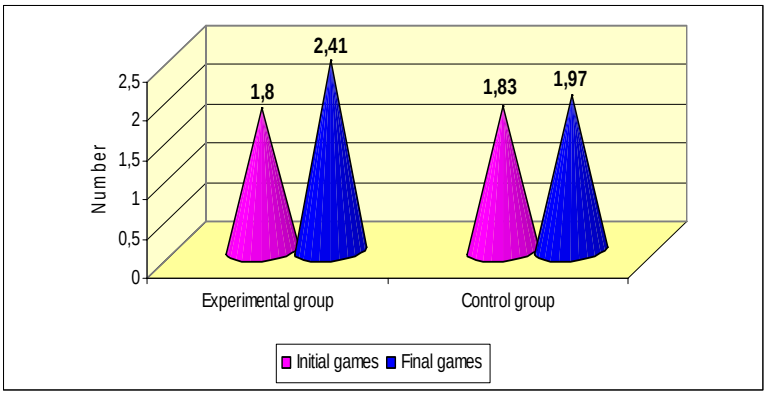

Fig.3. *Dynamics of average values of the parameter game Shots on goal registered at forward of the experimental group and the control group*

By comparing the initial and final data of the game, is highlighted in the experimental group significantly different (t=3.81, P<0.01), in the control group the differences were not statistically significant (t=0.78, P>0.05).

Goals scored game parameters (Table 1 and Figure 4), it is noted that the original games, the two groups are similar, with 0.63 goals scored in the experimental group, the control group or 0.6 goals. In the final game, it appears that forwards experimental group scored on average 0.82 goals per game, and those of the control group on average scored 0.66 goals per game. Comparing the initial values of the parameter of the game with the game end, it is noted that the variable "t" indicates significant improvements over the threshold of the final game in the experimental group (t=4.02, P<0.01), while the control group the differences are not significant (t=1.00, P>0.05).

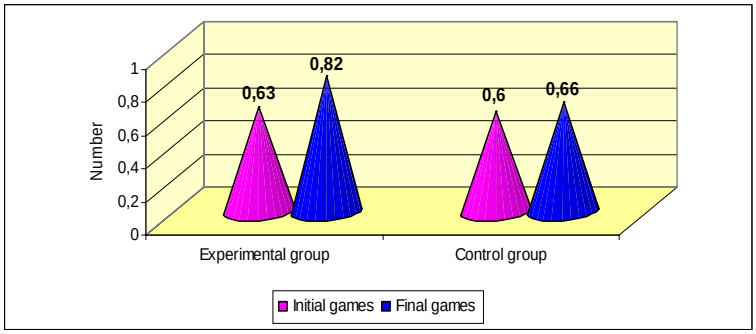

Fig.4. *Dynamics of average values of the parameter game Goals scored registered at forward of the experimental group and the control group*

Comparing the evolution of the arithmetic mean, the game parameter Ball rebounds (Table 1 and Figure 5), it is observed that the experimental group recorded higher values control group. Forwards in the experimental group were able to original games averaged 3.22 rebounds per game, while those in the control group performed on average 3.1 rebounds per game.

The differences between the two groups, the initial game were not significant, the value of "t" is less than that calculated by "t" spreadsheet, the significance level P<0.05. In the final game, however, between the two groups studied, the variable "t" shows significant increases in values, hovering above the materiality threshold (t=2.24, P<0.05).

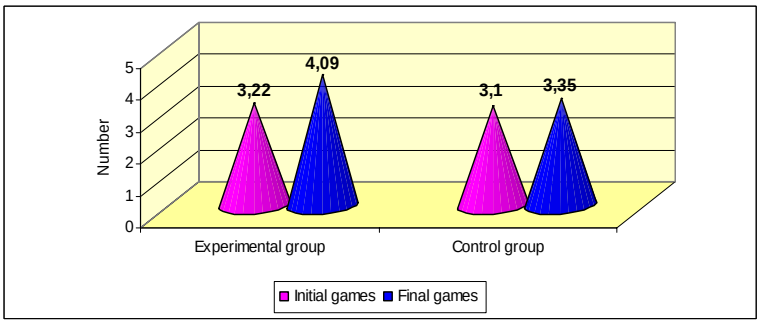

Fig.5. *Dynamics of average values of the parameter game Ball rebounds registered at forward of the experimental group and the control group*

Analyzing the results obtained game parameter Distance covered in match (Table 1 and Figure 6), it is observed that in the initial matches, forwards experimental group ran an average 7248 meters and 7318 meters control subjects. The variable "t" calculated (t=0.24, P>0.05) shows that the original game, this parameter the game, no statistically significant differences between the two groups, which were homogeneous.

Comparing the results achieved in the final games against the initial games, it was found that the experimental group, the differences are statistically significant at the significance level P<0.01, while the forwards in the control group, materiality P is greater than 0.05.

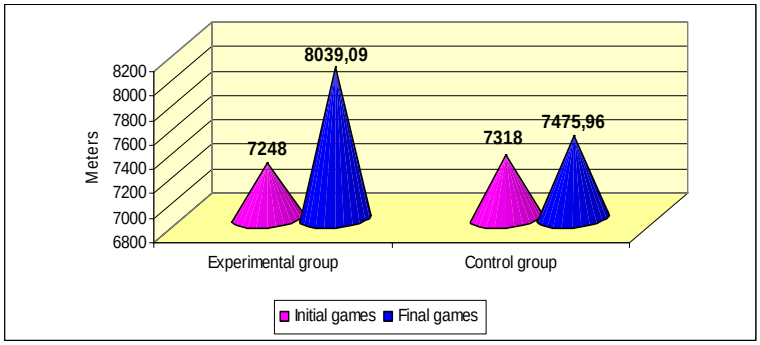

Fig.6. *Dynamics of average values of the parameter game Distance covered registered at forward of the experimental group and the control group*

The significant increase in this parameter playing forwards experimental group versus the control group, highlights the positive effects of the training program developed and applied in the training on specific resistance, raised the amount of running observed during the final games and combined superior indices track record and other parameters.

5. Conclusions

In conclusion, the evaluation yields competitive players evolving positions of forwards in the experimental group, in the final game finds progress against initial games compared to the results achieved by attackers control group, the differences are not statistically significant at the threshold of significance than 0.05.

Progress offensive player of the experimental group demonstrated the effectiveness of the experimental program for the development of specific resistance in the pedagogical experiment.

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