

THE DYNAMICS OF TECHNICAL-TACTICAL INDICES OF 16-17 YEARS OLD RUGBY PLAYERS AFTER THE IMPLEMENTATION OF TARGETED DEVELOPMENT PROGRAM OF COORDINATIVE CAPACITIES

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Abstract. *This article reflects the experimental argumentation regarding the development influence of coordinative capacities upon the technical - tactical training level of the junior rugby players in the preparation process. According to assumption regarding the use of development ways of coordinative capacities of junior rugby players within the sports training which will influence on their technical and tactical potential, in this way it was developed the program of training for athletes of 16-17 years old, which includes specific methods and specific means for development of coordinative capacities. This program was suggested to experimental group, while the bystander group has followed the traditional training. The both of the groups were checked at the beginning and the end of pedagogical experiment at 5 technical and tactical indices, those results being arranged in a mathematical and statistical way and showed in a tabular and graphical way. Analyzing the final results, we can conclude that the assumption submitted at the beginning of our researches was confirmed, which improved all the technical and tactical indices through the implementation of coordinative capacities development means in the training process of 16-17 years old junior rugby players.*

Keywords: *coordinative capacities, technical- tactical potential, training program, rugby.*

Introduction: The performance rugby, according to specialists from the field [1, 4], requires to the athletes an intensive work in order to resist in front of hard efforts, of whom realization involves a maximal concentration of all physical, moral, volitional and intellectual capacities. The coordinative capacities, means, methods, ways of appreciation of athletes appear in existing works as some unilateral attempts of analysis, usually having a psycho-physiological approach in various contexts [5, 6, 7, 8].

In rugby game, the specialty literature didn't pay the necessary attention to coordinative capacities and yet have not been conducted any researches regarding the assimilation and improve-

ment of motor qualities and also the indices of technical training, in terms of the development of this such complex capacity.

Starting from ones mentioned above we can conclude, that for the theory and rugby methodology are very topical the researches regarding the efficiency of athletes training through the development of coordinative capacities within the specialized training.

From ones mentioned above, it was formulated **the research assumption**, according to which the use of coordinative capacities of junior rugby players within sport training will influence on their technical-tactical potential.

The methodology and research organization.

The goal of this work consists of the development of technical and tactical potential of rugby players in their training process based on the improvement of coordinative capacities.

The objectives of the research: the analysis and synthesis of specialty literature regarding the training problem of rugby players; the appreciation of technical-tactical potential level of 16-17 years old rugby players; the determination of the sports training content of 16-17 years old junior rugby players by using the means of coordinative capacities development; the experimental argumentation of the development program application efficiency of the coordinative capacities on the technical and tactical level of 16-17 years old rugby players.

In order to accomplish these objectives, it was used a complex of research methods, being

permanently or temporarily in a strong affinity during the research; the analysis of the scientific-methodic literature, the testing of technical and tactical training, pedagogical experiment, mathematical and statistical methods, tabular and graphical method.

The organization of the research. The research was carried out in the next stages:

In the first step was analyzed the literary sources regarding the sports training, especially the juniors, and was assessed the direction of research. It was organized attentively the experiment regarding the technical-tactical parameters research of 16-17 years old juniors. *In the second step* it was conducted the processing of the experiment data and the research program ascertainment for the basic pedagogical experiment. *The third step* consisted in the completion of the experiment by carrying out the samples and control rules. The basic pedagogical experiment was conducted during an annual training cycle according to the drafted plan of research. It followed the data processing and interpretation, reached in the course of research and conclusions formulation.

It was established **the training program** [3], in accordance with the competitive calendar available when developing the basic pedagogical experiment. For elaborating the annual program it was formulated framework – objectives and of the reference, specific to age and level of training: *the optimization of morphological indices, the development of motor, specific abilities, improvement of the basic technical and tactical procedures and the consolidation and improvement of specific and special technical-tactical procedures, the consolidation and improvement of the tactical-individual and collective, offensive and defensive actions, as well as the participation at the competitions and the achievement of the performance objective.*

Within the planning of the annual meso-struc-

ture of training, the instructive objectives were determined according to their function, for example for training meso-cycle were précised the following objective: the amelioration of effort capacity, the development of muscle strength; the amelioration of individual technique with accent on development of coordinative capacities; the amelioration of tactical individual and group actions; the amelioration of mental concentration.

The goal of this research was the increase of technical and tactical potential by the development of coordinative capacities within individualized training, all the planning documents were compiled in order to carry out the stabilized objective.

The applied means for the development of tactical-technical potential in terms of coordinative capacity development within micro-cycle were distributed hereby: within the trainings which were held on the days of Monday and Friday – those concerning the development of coordinative capacities, plus those appropriate for technical-tactical and individual training; during Tuesday and Thursday, each week braced with the development of motor qualities; during Wednesday and Saturday braced with exercises of the force means.

The evaluation results of technical and tactical level of 16-17 years old rugby players of the groups involved in the pedagogical experiment are presented in Table 1.

Side step and jumped step. The experimental group went from an average value of 4,85 sec, and in the end reached an average of 4,64, with an increased rate of 0,21 sec. The bystander group registered an average value of 4,79 (initially) reaching 4,71 sec (final), testing, the rate of growth being 0,08 sec, the growth being significantly at the experimental group of $P < 0,001$ and the bystander group of $P < 0,05$. The differences between the final results still are not significantly.

Table 1. The results of technical-tactical training of the 16-17 years rugby players (experimental group: n=20; bystander group: n=18)

Nr. crt.	Control rules	Gr.	Initial testing		Final testing		t	P
1	Side step and jumped step (sec)	E	4,85±0,06		4,64±0,06		4,31	<0,001
		M	4,79±0,18		4,71±0,14		2,16	<0,05
			$t_1=0,71$ P>0,05		$t_2=0,97$ P>0,05			
2	The step from ground (sec)	E	8,47±0,18		7,69±0,14		5,75	<0,001
		M	8,39±0,18		8,17±0,16		1,69	>0,05
			$t_1=0,31$ P>0,05		$t_2=2,06$ P<0,05			
3	Change of direction (sec)	E	6,3 ± 0,21		5,73 ± 0,09		3,58	<0,01
		M	6,34 ± 0,11		6,11 ± 0,10		2,78	<0,05
			$t_1=0,17$ P>0,05		$t_2=2,52$ P>0,05			
4	Technical-tactical direction (sec)	E	22,99±0,21		22,14±0,18		5,42	<0,001
		M	23,14±0,25		22,78±0,15		2,13	<0,05
			$t_1=0,47$ P>0,05		$t_2=2,72$ P<0,01			
5	Change of direction, a grazing kick and collection (sec)	E	5,51 ± 0,13		4,97 ± 0,13		5,28	<0,001
		M	5,56 ± 0,19		5,31 ± 0,14		2,68	<0,05
			$t_1=0,31$ P>0,05		$t_2=1,82$ P>0,05			

n-22, f - 21, P - 0.05; 0.01; 0.001.

t - 2,080; 2,831; 3,819

n- 40, f - 38, t - 0,025; 2,713; 3,571

n-18, f - 17, P - 0.05; 0.01; 0.001.

t - 2,110; 2,898; 3,965

The step from ground. The average values achieved by the experimental group are 8,47 sec, at the initial testing and 7,69 at final testing, while the bystander group has 8,39 sec (initial) and 8,17 sec (final), the growth being significantly only in the case of the experimental group ($t=5,75, P<0,001$).

The small value of " t_1 " (0,31) shows that the difference between the initial tests of those two groups is not significant, compared with final ones, where " t_2 " (2,06) certifies values over "P".

Change of direction. The experimental group went from an average value of 6,3 sec and reached an average value of 5,73 sec, the rate of growth being of 0,57 sec, while the bystander group went from an average value of 6,34 sec and reached an

average value of 6,11 sec with a growth of 0,23 sec. The growth being significantly both in the case of the experimental group, as well as in the bystander group, but significantly 1 % and, respectively, 5 %. The differences between the final tests in those two groups (experimental and bystander) are also significantly about 5 % ($P<0,05$).

The technical-tactical direction.

The average values achieved by the experimental group at the initial testing were 22,99 sec, but at the final one of 22,14 sec, the growth rate of 0.85 sec, while the bystander group reached initial values of 23,14 sec and final - of 22.78 sec, the growth rate being 0,36 sec, the growth being significantly at the experimental group ($P<0.001$).

For this index is attested significant differ-

ence between the final two tests in favor of the experimental group ($P < 0.05$). The average values achieved by the experimental group are 5.51 sec, at initial testing and 4.97 sec – at the final, while the control group have average values of 5.56 sec, at the initial testing and 5.36 sec – at the final testing reveal a significant growth for both research groups, with a higher rate for the experimental.

The differences are also significantly between the end results obtained from the two groups ($P < 0.05$).

Conclusions:

Analysing the results reached after the formative experiment, where the experimental program was applied for increasing the technical-tactical potential, through the implementation of the development resources of coordinative capacities, we can ascertain the following:

- The planning documents of instructive process of junior rugby-players are based on the same principles characteristic to all sports games. To emphasize the development of coordinative capacities of junior rugby-players, their resources of development will be selected for every training lesson, in addition of proposed goals.
- Analysing the level of technical-tactical training

of the teams involved in pedagogical experiment, it can be noted on final testing a clear accession of tendency on obtained results. All five registered indices on final testing, for both examined groups, the value of “t” is bigger than the significance limit ($P < 0.05$) at all samples, sample exception “step from ground” at bystander group, which sits under “P” values; the differences between two groups at final testing are significantly at three of five technical-tactical samples (the step from ground, change of direction, the technical-tactical direction) and insignificantly at two of them (side step and jumped step and change of direction, grazing kick and collection), because these ones are more difficult from the execution point of view.

- All these results lead on establishing that the submitted assumption was certified at the beginning of researches, which actually allowed the improvement of technical-tactical potential of experimental group through the implementation of the coordinative capacities development means during the training process of 16-17 years old junior rugby-players.

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