

**DEVELOPMENT OF KINESTHETIC DIFFERENTIATION OF PARAMETERS OF FOOTBALL PLAYER'S MOVEMENTS USING EXERCISES CLASSIC'S**Georgiy Georgievich Polevoy<sup>1</sup>**ABSTRACT**

The purpose of the study is to study the influence of the exercise «Classic's», during the training process of young players, on the general coordination abilities and their ability to kinesthetic differentiation of movement parameters. 50 children aged 8-9 years attended the pedagogical experiment, which lasted 9 months. 25 young players from the CG were engaged in the standard program, and 25 athletes from the EG additionally performed the exercise «Classic's» at each training session. The study investigated the level of development of coordination abilities (Shuttle run 3x10m) and kinesthetic abilities (Hitting the ball into the target) of children. After the end of the pedagogical experiment, the studied parameters in CG improved, but not significantly. At the same time, the EG indicators of General coordination improved from  $10.5 \pm 0.8$  sec to  $8.5 \pm 0.5$  sec ( $p < 0.05$ ), and the indicators of kinesthetic coordination abilities increased by 73.6%, this indicates the effectiveness of the exercise «Classic's» in the training activities of young players. If on trainings with young football players to use exercise «Classic's», their indicators of the General coordination and kinesthetic abilities will considerably improve. Also increase the emotional background of training, improve motor activity of young players, which is very important for children of primary school age.

**Key words:** Coordination abilities. Kinesthetic differentiation. Futsal. Young players.

**RESUMO**

Desenvolvimento da diferenciação cinestésica de parâmetros dos movimentos de jogadores de futebol usando os exercícios clássicos

O objetivo da pesquisa - estudo do efeito do exercício de "Clássicos", durante o treinamento de jovens jogadores de futebol, em geral, habilidades de coordenação e de sua capacidade de sensíveis diferenciação de parâmetros de movimentos. No experimento pedagógico, que durou 9 meses, participaram de 50 crianças de 8-9 anos de idade. 25 os jovens jogadores do CG envolvidos currículo padrão e, em 25 de atletas de AIGUES, adicionalmente, realizaram um exercício de "Clássicos" em cada treino. Durante a pesquisa foi estudado o nível de desenvolvimento de habilidades de coordenação (serviço de transporte de jogging 3x10m) de sensíveis habilidades (Chutar a bola no alvo) das crianças. Após o término de uma experiência de formação de professores исследуемые indicadores em CG melhorou, mas não muito. Ao mesmo tempo em AIGUES indicadores comuns de coordenação melhorou  $10,5 \pm 0,8$  seg a  $8,5 \pm 0,5$  s ( $p < 0,05$ ), e os índices de sensíveis coordenação habilidades subiu para 73,6%, ele fala sobre a eficiência da aplicação de exercícios Clássicos para o treinamento de operação de jovens jogadores de futebol. Se no treino com jovens jogadores de futebol de usar um exercício de "Clássicos", seus indicadores comuns de coordenação e sensíveis habilidades significativamente melhorada. Also increase the emotional background of training, improve motor activity of young players, which is very important for children of primary school age.

**Palavras-chave:** Habilidades de coordenação. Sensível diferenciação. Futsal. Jovens jogadores.

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**INTRODUCTION**

Russia is a country that gets a lot of rainfall. It is very difficult from a financial point of view to maintain large football fields. Therefore, the last decade is very popular game in Futsal. Technical, theoretical, tactical, physical and psychological training of athletes is a complex that is necessary to achieve maximum sports results in any sport.

The authors of many studies suggest from childhood to pay more attention to the technical training of young athletes. The basis technique are coordination abilities, which play a major role in the game of Futsal. The space in the hall is significantly limited.

The athlete must solve motor problems, especially complex and those that arise unexpectedly, for this; he needs a high level of technology. General coordination abilities are the Foundation for the development of specific coordination abilities, and specific coordination abilities are the main technical training of a football player from early childhood (Lyakh and collaborators, 2011; Issurin and Lyakh, 2017; Čillik and Willwéber, 2018).

The variety and types of coordination abilities are very large (Hirtz, 1985; Lyakh and collaborators, 2002; Dallolio and collaborators, 2016). The basic ones are the General coordination abilities.

However, specific coordination abilities are also important for players, especially, such as kinesthetic differentiation of movement parameters. High accuracy, efficiency of spatial, temporal and power parameters of a player's movements - are kinesthetic abilities (Lyakh and collaborators, 2011, Polevoy, 2018).

Today there are training programs for young players. Their main goal is to develop the potential of children in all aspects (Chiodera and collaborators, 2008; Godic, 2011).

Changing the content of such programs is meaningless, the most rational way out is to supplement them. It is necessary to develop and implement an exercise that can further develop the coordination abilities of children without distracting them from the main program. One of such exercises is exercise – «Classic's». This exercise does not require special training and special equipment.

A favorable period for the development of General coordination abilities, the ability to kinesthetic differentiation of movement parameters is the primary school age. At the age of 8-10 years, special attention should be paid to the development of these abilities.

The purpose of the study is to study the influence of the exercise «Classic's», during the training process of young players, on the general coordination abilities and their ability to kinesthetic differentiation of movement parameters.

The hypothesis of the study is the assumption that if the Futsal classes with children 8-9 years old additionally use the exercise «Classic's», the indicators of coordination and kinesthetic abilities will improve.

**MATERIALS AND METHODS**

The study lasted for nine months from September to May. The pedagogical experiment was attended by children 8-9 years (50 people), who were engaged in Futsal in the sports school of Kirov, 3 times a week for 45 minutes each lesson. All the children were healthy and admitted to practice in the course of the study.

Before the study, a Control group (CG) and an Experimental group (EG) were formed. Children in CG engaged according to the standard program for sports schools (Chiodera and collaborators, 2008; Godic, 2011).

Children from EG also engaged in the standard program, performing additional exercise «Classic's» in each training (table 1).

**Table 1 - Exercise «Classic's».**

5	9	6		9	8	3		3	4	7
8	2	3		4	6	2		2	9	8
1	4	7		6	1	7		5	6	1
Square 1				Square 2				Square 3		

In the gym, on the floor, there are three large squares with sides of 180 cm. Each large square includes 9 small ones. Numbers from 1 to 9 are shown in small squares in random order.

With jumps (one or two legs), the athlete must land in a square with a number from 1 to 2 and up to number 9, then he jumps in the reverse sequence to number 1. If children make a mistake with a square, they start from the previous square.

Each athlete during the lesson must overcome all the squares, while doing the exercise he can at any time. The numbers in the squares change before each training.

Two control tests used to assess the level of development of General coordination abilities and the ability to kinesthetic differentiation of motion parameters:

- 1) Shuttle run 3x10m (general coordination ability) (Polevoy, 2017);
- 2) Hit the ball into the target (ability to kinesthetic differentiation of motion parameters). At a distance of 10m from the player is a gymnastics carpet. There is a Hoop

on the carpet. Medicine ball is in the Hoop. The player must throw the ball, kick it, and hit the target. Only 10 strokes. If the ball hit the gym Mat – its 1 point, Hoop – 2, the distance between the Hoop and the Medicine ball – 3, hit the Medicine ball – 4 points. It is necessary to score the maximum number of points after 10 strokes with any part of the foot (Ljach and Witkowski, 2010; Polevoy, 2018).

Bio-stat 2009 and Microsoft excel 2016 are the main programs for processing mathematical and statistical results of pedagogical research. The parametric criterion t-student was also used, the reliability of the results was calculated at  $p > 0.05$  (Oldham, 1993; Khusainova and collaborators, 2016).

## RESULTS

Before the beginning of the pedagogical experiment, all the players passed two control tests (table 2). Prior to the beginning of the pedagogical experiment the difference between the CG and the EG no authentic. However, after nine months of training, performance in both groups changed.

**Table 2 -** The indicators of general and kinesthetic coordination abilities of football players of 8-9 years ( $M \pm m$ ).

Test	CG				EG			
	Before	After	%	p	Before	After	%	p
Kick the ball into the target (number of points)	5.0 $\pm$ 1.5	6.3 $\pm$ 1.1	26.0	$p < 0.05$	5.3 $\pm$ 1.2	9.2 $\pm$ 1.5	73.6	$p < 0.05$
Shuttle run 3x10m (seconds)	10.1 $\pm$ 0.9	9.7 $\pm$ 0.5	3.9	$p < 0.05$	10.5 $\pm$ 0.8	8.5 $\pm$ 0.5	19.1	$p < 0.05$

Table 2 shows that in the CG, in which the players were engaged in the standard program and did not perform additional exercises, the indicators improved in both tests. In the test "Kick the ball into the target" performance improved by 26%, and in the test "Shuttle run 3x10m" performance became better from 10.1 $\pm$ 0.9 seconds to 9.7 $\pm$ 0.5 seconds ( $p < 0.05$ ). These results show the effectiveness of the standard training program for young players, as well as the fact that the natural increase in General and kinesthetic coordination abilities falls on the younger school age.

There have also been positive changes in EG. In the test "Kick the ball into the target" children improved their performance by 73.6%, at the same time in the test "Shuttle run 3x10m" performance also improved significantly from 10.5 $\pm$ 0.8 sec to 8.5 $\pm$ 0.5 sec ( $p < 0.05$ ). These results show the effectiveness

of the use of the exercise «Classic's» in the training activities of young players.

## DISCUSSION

The last decades have been actively engaged in the development of coordination abilities in football (Jaakkola and collaborators, 2017; Issurin and Lyakh, 2017; Čillik and Willwéber, 2018).

Types of abilities, their classification (Hirtz, 1985; Lyakh and collaborators, 2002; Dallolio and collaborators, 2016) are allocated, there are some effective techniques (Erceg and collaborators, 2010; Oskolkov and Kshinin, 2011; Nikitin, 2011). However, the issues of development of specific coordination abilities in Futsal require additional study, improvement, and addition of modern techniques.

Today there is a problem of effective implementation of football and Futsal programs. In working with children, it is

necessary to not only implement a standard program, but also to maximize their motor activity, improve their technical skills. It turns out, as a rule, not at every training session.

There are several problems in this, not enough space in the gym, the duration of the study of new material, the queue when performing the exercise, the lack of a differentiated approach and many other problems.

The solution to such problems can be the addition of working programs on football. For example, exercise «Classic's». The results of the study showed the effectiveness of the exercise «Classic's», as the players from the EG significantly improved their performance in comparison with the players from the CG.

All the football players in the CG and in the EG improved their performance in the control tests. Such results confirm the information that the primary school age is a favorable period for the development of general coordination and kinesthetic abilities. Also at this age, there is a natural increase in these abilities (Starosta and Hirtz, 2002; Larisa 2006).

The exercise «Classic's» does not require special equipment and considerable funds. Do not need to have special skills when performing the exercise, just draw the squares on the floor and start jumping at any convenient time.

It is also important that the exercise «Classic's» use a differentiated approach, which must be used in work with children, especially primary school age (Burke and collaborators, 2005; Whipp and collaborators, 2014; Milić and collaborators, 2017). The player chooses the time, duration and speed of the exercise. Performs it according to health and desire.

Young players with great interest perform new physical exercises, including the exercise «Classic's». An important aspect is the competitive aspect when performing the exercise, when one player tries to get ahead of the speed in the jumps of another player. Playing and competitive methods are very important in training activities when working with children; it certainly increases the motor activity of young players (Wood and Hall, 2015).

Thus, the hypothesis put forward at the beginning of the study completely solved, and the goal achieved.

## CONCLUSION

Exercise «Classic's» is a good addition to the standard football program and is suitable for any workout. If on trainings with young football players to use exercise «Classic's», their indicators of the general coordination and kinesthetic abilities will considerably improve.

Also increase the emotional background of training, improve motor activity of young players, which is very important for children of primary school age. The study is relevant and promising for the study and Supplement of modern techniques and programs for football and Futsal.

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