UDC 796.332:004.94

INFLUENCE OF EMPLOYMENT BY MOBILE GAMES ON INDICATORS OF PHYSICAL AND TECHNICAL-TACTICAL READINESS OF YOUNG FOOTBALL PLAYERS IN THE PREPARATORY PERIOD

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https://doi.org/10.29038/2220-7481-2018-02-149-154

Abstarcts

Relevance. In conditions of increasing the density of the game of football and its speed, it is important to include in the structure of the training process a set of mobile games that will contribute to the development of physical and technical and tactical preparedness. The task of the research is to determine the influence of specially selected mobile games on the state of physical, special and technical preparedness of young football players of 12 to 13 years. ***Material and methods of investigation.*** The study involved 40 players who were engaged in the group of sports improvement of the first year of training. The investigators belonged to the main medical group, at the time of the survey, they had no complaints about their health and well-being. In the experimental group, on each training session, according to the tasks assigned, mobile games were used. Classes in the control group were conducted according to the standard program. ***Results of the study***. It is established that the average long jump from the place, in young players of the experimental group is 163.8 cm, in young players of the control group - 173.6 cm (P <0.05). The values of the triple jump in length are respectively 526.2 cm and 520.8 cm; jump up – 41.4 and 43.2 cm; Running on the 400 m - 69.34 s and 68.18 s; shuttle race 3x15 m - 8,12 and 8,42 s (P> 0,05). A similar trend is revealed by the special physical preparedness of the players. ***Conclusions.*** The results of the conducted pedagogical experiment confirm the effectiveness of the developed methodology for the use of specially selected mobile games in the training process of young players of the second year of training, probably indicating the improvement of their physical, special and technical preparedness.

Key words: mobile games, physical preparedness, technical preparedness, young football players.

Юрій Цюпак, Тетяна Цюпак, Олександр Швай, Леонід Гнітецький, Андрій Ковальчук, Юрій Цюпак. Вплив занять рухливими іграми на показники фізичної та техніко-тактичної підготовленості юних футболістів у підготовчому періоді. ***Актуальність.*** В умовах збільшення щільності гри в футбол та її швидкості важливим є включення в структуру тренувального процесу комплексу рухливих ігор, які будуть сприяти розвитку фізичної та техніко – тактичної підготовленості. Завдання дослідження – визначити вплив спеціально підібраних рухливих ігор на стан фізичної, спеціальної та технічної підготовленості юних футболістів 12 – 13 років. ***Матеріал і методи дослідження***. У дослідженні взяли участь 40 футболістів, які займалися в групі спортивного вдосконалення першого року навчання. Досліджувані відносились до основної медичної групи, на момент обстеження, вони не мали скарг на стан здоров'я та самопочуття. В експериментальній групі на кожному тренувальному занятті, відповідно поставлених завдань, використовувалися рухливі ігри. Заняття в контрольній групі проводились за загально прийнятою програмою. ***Результати дослідження***. Встановлено, що середні показники стрибка у довжину з місця, у юних футболістів експериментальної групи становлять 163.8 см, у юних футболістів контрольної групи – 173.6 см (P<0,05). Величини потрійного стрибка у довжину відповідно становлять 526.2 см і 520.8 см; стрибка уверх – 41,4 і 43,2 см; бігу на 400 м – 69,34 с і 68,18 с; човникового бігу 3х15 м – 8,12 і 8,42 с (P> 0,05). Подібна тенденція виявлена і за спеціально-фізичною підготовленістю футболістів. ***Висновки.*** Результати проведеного педагогічного експерименту підтверджують ефективність розробленої методики застосування спеціально підібраних рухливих ігор у навчально-тренувальному процесі юних футболістів другого року навчання, що засвідчує вірогідне покращення їхньої фізичної, спеціальної і технічної підготовленості.

Ключові слова: рухливі ігри, фізична підготовленість, технічна підготовленість, юні футболісти.

Юрий Цюпак, Татьяна Цюпак, Александр Швай, Леонид Гнитецкий, Андрей Ковальчук, Юрий Цюпак. Влияние занятий подвижными играми на показатели физической и технико - тактической подготовленности юных футболистов в подготовительном периоде. Актуальность. В условиях увеличения плотности игры в футбол и ее скорости важным является включение в структуру тренировочного процесса комплекса подвижных игр, которые будут способствовать развитию физической и техніко – тактической подготовленности. Задача исследования – определить влияние специально подобранных подвижных игр на

состояние физической, специальной и технической подготовленности юных футболистов 12–13 лет. **Материал и методы исследования.** В исследовании приняли участие 40 футболистов, которые занимались в группе спортивного совершенствования первого года обучения. Исследуемые относились к основной медицинской группе, на момент обследования, они не имели жалоб на состояние здоровья и самочувствие. В экспериментальной группе на каждом тренировочном занятии, согласно поставленных задач использовались подвижные игры. Занятия в контрольной группе проводились по общепринятой программе. **Результаты исследования**. Установлено, что средние показатели прыжка в длину с места, у юных футболистов экспериментальной группы составляют 163.8 см, у молодых футболистов контрольной группы - 173.6 см (P <0,05). Величины тройного прыжка в длину соответственно составляют 526.2 см и 520.8 см; скачка вверх – 41,4 и 43,2 см; беге на 400 м - 69,34 с и 68,18 с; челночного бега 3х15 м – 8,12 и 8,42 с (P> 0,05). Подобная тенденция выявлена и по специально-физической подготовленностью футболистов. **Выводы.** Результаты проведенного педагогического эксперимента подтверждают эффективность разработанной методики применения специально подобранных подвижных игр в учебно-тренировочном процессе юных футболистов первого года обучения, свидетельствует вероятно улучшение их физического, специальной и технической подготовленности.

Ключевые слова: подвижные игры, физическая подготовленность, техническая подготовленность, юные футболисты.

Introduction. The analysis of special literature and the synthesis of practical experience shows that the increase in the level of sportsmanship of football players directly depends on the planned and qualified training of children from the early age. Only the wise application of an effective method of teaching and training, taking into account the laws of age-related development of the body's systems, makes it possible to fully solve the task of preparing high-end football players. The main goal of sporting training for football players is to achieve the maximum level of tactical, technical, physical and psychological training, which is conditioned by the specifics of football and the requirements to achieve the highest possible results in competitive activities [1; 5; 8; 10; 17].

The leading sports specialists are critical of the mechanical expansion of the load as a way to improve the effectiveness of training in modern conditions. The constant increase of this indicator every year causes less and less influence on the growth of sports results. Consequently, it is necessary to focus on other ways to increase the efficiency of the training process of qualified athletes [1; 7; 9; 16].

Moreover, many scientists are unanimous in the fact that one of the most promising directions for increasing the efficiency of the training process of athletes is the one, which is based on the accounting of the individual capabilities of the athlete proposed activities and requirements [4; 8; 15]. In conditions of increasing the density of the game, its speed, the increase of martial arts on the field, the number of podcasts and implementation of complex technical elements in modern football is an important issue to include a set of mobile games in the structure of the training process that will promote the development of physical and technical and tactical readiness of players [2; 3; 6; 12; 13; 14].

Separate children's coaches try each time to introduce new games into the training process. Such a desire for constant "innovation" is not justified. This is an extreme, as well as a constant repetition of the same games. The skills, which are fixed in the games, should be complicated gradually by introducing new obstacles, complications and additions to the rules. The dynamic stereotype that underlies the skills becomes stronger in these conditions [17].

Despite the fact that football, as a sport is very emotional and at first glance, does not require additional psychological stimuli, the current practice of football training shows how important it is to make the training sessions of football players fascinating and interesting [1; 7; 9; 17]. Such training works favorably on the increase of athletic skill and gives football players the desire to improve their technical and tactical skills.

The task of the study is to determine the impact of specially selected mobile games on the state of physical, special and technical training of young players of 12 -13 years old.

Material and methods of research. To study the physical training of young players who are engaged in a group of sports improvement in the second year of study, tests were used to determine the most important motive qualities of players – dexterity, speed, strength, endurance. The study was attended by 40 players who were engaged in the sports improvement group of the first year of study. The experiment lasted for 2016-2017 and covered two stages of scientific and pedagogical research.

For the pedagogical experiment, 2 groups of 12-13 year old boys were formed: control – 20 persons; Experimental group – 20 boys. Investigators belonged to the main medical group, at the time of the survey, they had no complaints about their health and well-being. In the experimental group, in each training session

with set tasks, mobile games were used. Classes in the control group were conducted according to the generally accepted program [11].

The studies were conducted in two stages. At the first stage, a confirmatory experiment was conducted, during which the level of general, special physical and technical training of adolescents 12-13 years was determined. At the second stage, the author's technique of implementing mobile games in the training process of young players was substantiated and developed. The effectiveness of the young players was checked, and corrections were made.

Results. In fact, any human physical actions is the result of coordinated activity of the central nervous system and peripheral parts of the locomotor apparatus, in particular, the musculoskeletal system. The person cannot perform any physical actions without the muscle strength manifestation. Being an integral locomotor quality, such strength causes such more or less manifestation dependence of other motor qualities on it. The muscle strength level has been appraised by means of the test called “Standing Long Jump”.

Subsequent to the results of testing, it has been found that the level of muscular strength in young football players belonging to the experimental and control groups is medium. Thus, the standing long jump average performance of the young players from the experimental group is 163.8 ± 2.32 cm, whilst it is 173.6 ± 2.58 cm (P <0.05) in football players from the control group (see Table 1).

Table 1

Young Players’ Fitness Level

Criteria	Commencement of the study		Completion of the study		t	P
	X_{avg}	m_x	X_{avg}	m_x		
Experimental Group						
10 meters long run, seconds	2. 34	0.1	2.13	0.07	2.02	<0.05
30 meters long run, seconds	4. 87	0.18	4.54	0.23	1.49	>0.05
50 meters long run, seconds	8. 94	0.18	8.35	0.57	0.97	>0.05
400 meters long run, minutes	6 9.34	0.52	67.27	0.98	2.01	<0.05
Shuttle run, 3x15 m, seconds	8.12	0.96	6.78	0.43	2.56	<0.05
Standing long jump, cm	163.8	2.32	186.4	3.49	3.23	<0.05
Triple jump, cm	526.2	2.21	556.7	2.05	2.16	<0.05
Vertical foot bounce with double beat	41.4	1.48	45.6	1.08	2.14	<0.05
Control Group						
10 meters long run, seconds	2. 24	0.08	2.18	0.23	0.96	>0.05
30 meters long run, seconds	4. 96	0.14	4.82	0.45	1.08	>0.05
50 meters long run, seconds	8. 76	0.34	8.55	0.31	0.66	>0.05
400 meters long run, minutes	6 8.34	0.42	67.37	1.23	1.54	>0.05
Shuttle run, 3x15 m, seconds	8.42	0.55	7.81	0.56	1.63	>0.05
Standing long jump, cm	173.6	2.58	179,2	1.34	2.04	<0.05
Triple jump, cm	520.8	2.49	538.2	4.02	2.17	<0.05
Vertical foot bounce with double beat	43.2	1.04	46.4	0.98	1.22	>0.05

The developmental level of speed and strength qualities has been determined with the help of the triple jump and vertical foot bounce with double beat tests. We have not revealed a significant difference (P> 0.05) in the young male speed and strength training. Thus, the average values of a triple jump in length are 526.2 ± 2.21 cm for young football players from the experimental group and 520.8 ± 2.49 cm for the respondents from the control group. The average values of the vertical foot bounce with double beat are 41.4 ± 1.48 cm for the players belonging to the experimental group and 43.2 ± 1.04 cm for the testees from the control group. Their speed and strength training level is estimated as below average gives evidence to judge about some insufficient level of work in that direction.

The overall endurance has been studied in our research as a human locomotor quality - the ability to perform some moderate intensity muscular work, using the 400 m run test. In general, the young male from

the control group overcame the distance of 400 m for a mean of 69.34 ± 0.52 seconds, but the young football players from the experimental group for 68.18 ± 0.42 seconds.

The analysis of findings relative to the study of the developmental level of the young football players' speed, who belong to groups of the second year of training shows that their speed is medium. The developmental level of speed was apprised by us on the ground of obtained results of running at 10 m, 30 m and at 50 m. Moreover, the adolescents from the experimental group ran on average: 10 m in 2.34 ± 0.1 seconds; 30 m – in 4.87 ± 0.18 seconds, 50 m – in 8.94 ± 0.18 seconds. In comparison, the football players from the control group ran the same distances as follows: 10 m in 2.24 ± 0.08 seconds, 30 m in 4.96 ± 0.14 seconds, and 50 m in 8.76 ± 0.34 seconds. The reliability degree is not significant (P> 0.05) in all cases.

The speed level of football players, who are engaged in groups of the second year of training, is estimated as medium. The same picture is observed as to the results of the dexterity development level study. The average values of the shuttle race 3x15 m is 8.12 ± 0.96 seconds in football players from the experimental group and 8.42 ± 0.55 s (P> 0.05) in the adolescents from the control group.

When analyzing the indices of the special physical readiness of the players, who are engaged in the second year training groups, we have not found any significant difference between these indicators (P> 0.05) in the football players either from the experimental or from control groups (see Table 2).

Table 2

Young Players' Special Fitness Level

Criteria	commencement of the study		completion of the study		t	P
	X_{avg}	m_x	X_{avg}	m_x		
Experimental Group						
30 meters run with a dribbling , sec	7.52	0.45	6.27	0.54	2.38	<0.05
5x30 meters run with a dribbling, sec	34.24	1.03	31.0	1.28	3.2	<0.05
Kicks for distance (by the left and right foot together), m	39.6	2.34	49.5	1.0	3.46	<0.05
Ball shying for a distance , m	11.8	2.16	14.5	1.72	1.85	>0.05
Control Group						
30 meters run with a dribbling , sec	6.92	0.55	6.32	0.34	0.83	>0.05
5x30 meters run with a dribbling, sec	32.95	1.26	32.5	0.93	1.29	>0.05
Kicks for distance (by the left and right foot together), m	42.7	1.93	47.7	2.34	2.16	<0.05
Ball shying for a distance , m	14.6	2.0	15.6	2.11	0.46	>0.05

The players of the experimental group ran 30 m with the ball for 7,52 ± 0,45 s, and the players of the control group for 6,92 ± 0,55 s. The average score of the "ball hit on a range" test in experimental group of teenagers – 39.6 ± 2.34 m and 42.7 ± 1.93 m in the young players of the control group; the "running 5x30 with the ball" test – 34,24 ± 1,03 s from young footballers EG and 33,95 ± 1,26 s in football CG.

The average level of technical readiness of players is also average. Thus, the average figures in the experimental group "stroke of struts and impact on the gate" are - 8,75 ± 0,29 s; "Ball hits for accuracy" – 6,48 ± 0,53 times, the players' score of the control group respectively – 8.74 ± 0.22 sec and – 6.45 ± 0.45 times (P> 0.05) .

So, the results of the study show that the level of physical, special and technical preparedness of footballers EG and CG are average and we didn't find a significant difference between these indicators (P> 0,05).

Discussion. Intensification of game activity of football players creates conditions in which the requirements for physical preparedness, timeliness and adequacy of responses and motor actions are dramatically increasing. Numerous studies [10; 17] found that physical fitness influences the quality of tactical and technical actions of football players.

In order to check the effectiveness of the implementation of a complex of mobile games in the training process and in order to identify changes in the indicators of physical and technical preparedness in young men of the investigated groups, re-testing was carried out. The results of the study indicate that the indicators of physical, special and technical preparedness have mainly improved both in the experimental and in the control groups. However, the indicators in the experimental group, are higher than in the control (Table 3).

Table 3

Indicators of technical readiness of young footballers

Indexes	Begin of the study		End of study		t	P
	x avg	m x	x avg	m x		
Experimental group						
Ball hit points for accuracy (number of hits)	3.14	0.87	5.45	0.24	2.17	<0.05
Keeping the ball, stroke and strike at the gate	13.28	0.54	10.48	0.79	3.14	<0.05
Juggling the ball with the foot, number of times	28.45	3.56	36.45	2.15	4.12	<0.05
Control group						
Ball hit points for accuracy (number of hits)	3.98	0.58	5.25	0.23	2.31	<0.05
Keeping the ball, stroke and strike at the gate	12.69	0.75	10.61	0.69	2.64	<0.05
Juggling the ball with the foot, number of times	30.25	2.66	34.25	1.48	1.69	>0.05

In the experimental group of young players, the results of the following standards improved the most: triple jump; jump in length from place; running 3x15 m. Thus, the young football players of the experimental group at the end of the experiment, when the norm was triple jump, jumped to 29.5 cm, jumped in length from a space of 21.05 cm, ran a distance of 3x15 m to 1.87 seconds faster than at the beginning of the study. At the end of the experiment, the young players respectively improved their results: in a triple jump only 17.4 cm, jump from 5.60 cm and ran a distance of 3x15m to 0.61 seconds faster.

A similar picture was found in the analysis of indicators of special-physical and technical preparedness. So in the boys of the experimental group, the most improved indicators - a blow to the accuracy (it increased by 1.16 hits), ball driving, stroke and strike on the goal (results improved by 1.33 seconds), running 5x30 m with driving the ball (the boys began to perform this exercise at 2.27 seconds faster). At the same time, the corresponding indicators in the young players of the control group remained almost unchanged.

Conclusions and perspectives of further research. The results of the conducted pedagogical experiment confirm the effectiveness of the developed method of using specially selected mobile games in the training process of young players in the second year of study, which confirms the probable improvement of their physical, special and technical preparedness. In our opinion, this is due to the fact that with the inclusion in the training sessions of mobile games, allowed to raise the motor density of classes and their emotions.

We recognize further research in the study of the creative approach to the use of mobile games in the training process of football players in the competitive period.

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Received: 11.05.2018