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Method of Improving the Special Endurance of 18-19 Years-Old Football Players

S. N. Pulatov
A Senior Lecturer, Uzbek State University of physical education and sports Chirchik city Uzbekistan Contact the author: Sirojiddinpulatov90@gmail.com

Abstract: The article presents an analysis of the level of special endurance of players in the sports improvement group. Programs have been developed to increase the level of special endurance, improve motor activity indicators and increase the effectiveness of technical and tactical methods. The results of the work can be used by specialists and coaches who train 18-19-year-old players.

Keywords: Special endurance, 18-19-year-old football players, training programs, movement activity, competitive activity.

Relevance. The current level of development of football requires the search for new means and methods for improving special training. It is known that the effectiveness of the performance of football players in competitions is largely due to the level of development of special physical abilities [1,5,6]. The problem of improving the level of special training has been developed sufficiently widely and comprehensively for highly qualified football players. However, as practice has shown, most football players at the age of 18-19, moving to adult teams, stop progressing in their skills. This is due to several reasons, including an insufficiently high level of development of physical abilities, namely special endurance. The intensity of motor movements in the match among adult football players significantly exceeds the similar indicators of juniors. This is especially true for such characteristics of the game as the amount of movement at high speed, the number of sprints and accelerations [3].

To perform large volumes of high-speed movements, a football player must not have only well-developed cardiovascular and respiratory system, but also strength abilities that ensure the performance of a "shuttle" work during the game, when you need to quickly return to the defense or go on the attack. The effectiveness of the competitive activity of football players depends on the level of development of the muscular system and its ability to withstand high physical activity and resist fatigue [6].

Therefore, at present, a contradiction has arisen before specialists working with football players at the stage of sports improvement. On the one hand, it is necessary to increase the volume of training facilities aimed at increasing the level of special physical training, on the other hand, there are no sufficiently developed and scientifically substantiated developmental programs that help to increase this level among football players aged 18-19.

One of the important physical qualities that determine the effectiveness of playing actions of football players aged 18-19 is special endurance. In our opinion, in addition to technical-tactical, psychological training, it is special endurance that is in many ways the limiting factor in the growth of sportsmanship of football players of this age.

Observations of recent years have established that the level of special endurance among football players aged 18-19 in Uzbekistan is not high enough [2,5]. This is due to various factors, including an insufficiently developed training system, namely the lack of specialized training programs for football players of this age.

Target. Study of methodology and development of "Programs" to improve the special endurance of football players aged 18-19.

Research methods. Analysis of scientific and methodological literature, pedagogical observations of the magnitude and direction of the load and motor activity of football players during training sessions and in matches of the championship of Uzbekistan.

The study involved two groups of 25 football players: - the experimental group of football players of the team "AGMK" Tashkent region and the control group of FC "Lokomotiv" of Tashkent. The pedagogical experiment was divided into 3 stages: the first stage - the beginning and end of the preparatory period (duration 2.5 months); the second stage - the beginning and end of the first round of the competitive period (4.5 months); the third stage is the beginning and end of the second round of the competitive period (3 months).

Discussion of the research results. Given that the development and improvement of special endurance has a multifactorial structure and the main related elements of special endurance in football are physical and technical-tactical training, special “Programs” were developed that included the use of power loads and speed-strength orientation as basic training for the development and improving the level of special endurance in football players aged 18-19. The programs provided for the modification of training loads and the variation of means in weekly microcycles for the development and improvement of special endurance, depending on the state and level of preparedness of football players aged 18-19.

The fundamental differences in the preparation of experimental "Programs" from those recommended by the Uzbekistan Football Association (UFA) to increase the level of special endurance in football players aged 18-19 were in the following provisions:

- in planning the loads of the training process in the annual cycle of training football players aged 18-19, the main emphasis was placed on increasing by 1.5-2.5 times the partial volumes of loads of power, speed-strength orientation and special endurance; due to the use of loads of a power orientation, a muscle composition was created (myofibrils and mitochondria), and then, due to aerobic and anaerobic-glycolytic loads, special endurance developed;
- the increase in the loads of power, speed-strength and special endurance was carried out not due to an increase in the total volume of hours in the annual cycle, but due to the redistribution of partial volumes of loads of different directions (mainly due to a reduction in the volume of mixed loads by almost 10%, for which, according to the recommendation of the UFA, up to 73% of the time was allotted);
- in the preparatory period, the total volume of loads of power and speed-strength orientation of the experimental program was 1200 min, in contrast to the recommended 480 min of UFA (an increase of 2.5 times);
- the total volume of loads aimed at developing special endurance in the experimental program in the preparatory period was 325 minutes, in contrast to the recommended 215 minutes (an increase of 1.5 times);

- the total volume of loads of power and speed-strength orientation in the first round of the competitive period in the experimental program was 1440 min instead of 720 min (2 times increase) and special endurance was 640 min instead of 426 min (1.5 times increase);
- in the break between the first and second rounds of the championship in the competitive period, the volume of loads of power and speed-strength orientation was 250 minutes instead of 120 minutes, and special endurance was 120 minutes instead of 80 minutes;
- in the second round of the championship, the volume of loads of power and speed-strength orientation was 840 minutes compared to the recommended 560 minutes (an increase of 1.5 times); special endurance was 440 min, instead of 366 min (an increase of 1.2 times).

At the end of each stage, the dynamics of functional and physical indicators was studied after the implementation of the experimental "Programs", as well as in the matches of the national championship, the volume of motor movements and the effectiveness of the performance of technical and tactical actions of football players aged 18-19 were studied. Table 1 presents data on the dynamics of the volume of motor movements and TTA of football players in the control and experimental groups.

Table 1.

Indicators

The volume of motor movements of the football players of the control and experimental groups in the matches of the championship of Uzbekistan (n=24)

Indicators	Control group		Experimental group		Difference after experiment in %	D
	before	after	before	after		
Movement of motor (speed m/s) (%):						
V= 4,16 – 5,27	4,2	4,6	4,3	5,2	0,6	≤0,05
V= 5,28 - 6,94	3,2	3,7	3,8	7,8	4,1	≥0,05
V≥ 6,95	0,2	0,3	0,1	4,6	4,3	≥0,05
Acceleration (X mean ± m)	95,2± 6,8	98,6± 2,4	94,1 ± 5,2	126,7±8,1	28,1	≥0,05
Sprint (X mean ± m)	53,4± 8,1	60,6± 5,7	55,1± 3,4	92,4± 3,9	31,8	≥0,05
Σ TTD:						
Amount (X mean ± m)	778,3±26	786,6±48	763,9±38	996,9±57	21,1	≥0,05
% inaccuracy	58,5±12,3	54,8±11,1	57,9±39	34,2±12	20,6	≥0,05

Note: V m/s - speed m/s; Σ TTA - the sum of technical and tactical actions. Accelerations - V=5.28-6.94m/s; sprints V= over 6.95m/s.

Motor movements of football players of the control and experimental groups were studied in the anaerobic speed zone (V m/s=4.16–6.94 m/s and over 6.95 m/s). It was established that the indicators of motor movements in the speed zone V = 4.16–5.27 m/s in the football players of the control and experimental groups did not differ much before the experiment, the difference was 0.1% (D≤0.05). Analysis of the dynamics of data in this speed zone between the players of both groups after the experiment showed that there were changes in the experimental group, but they were not significant - the difference was 0.6% (D≤0.05).

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The study of the dynamics of indicators in the speed zone V = 5.28-6.94 m/s between the players of both groups before the experiment also did not reveal any fundamental differences, the difference was 0.1% (D≤0.05). Comparison of similar data of football players of both groups, obtained after the experiment, made it possible to establish that in the football players of the experimental group, the indicators of high-speed movements improved by 4.1% (D≥0.05), in contrast to the athletes of the control group - 0.5% (D≤0,05).

Comparison of the results in the speed zone V ≥ 6.95 m/s between the players of both groups before the experiment also did not reveal any fundamental differences, the difference was 0.2% (D≤0.05). After the implementation of the experimental "Program", the indicators of motor movements in the football players of the experimental group differed by 4.3% from the data of the control group, and this difference was significant (D≥0.05).

Even more significant differences were revealed when analyzing the number of accelerations performed by the players of both groups in the matches of the national championship. So, if before the experiment the total number of accelerations in both groups practically did not differ, and the difference was only 1.15% (D≤0.05), after the experiment this indicator changed significantly among the football players of the experimental group, and the difference compared to the control group was 28.1% (D≥0.05).

Similar dynamics were observed when comparing data on the number of sprints. So, before the experiment, the difference in this indicator between the players of both groups did not differ significantly and amounted to 0.5% (D≤0.05). As a result of the implementation of special "Programs", the number of segments performed at a speed of over 6.9 m/s increased significantly among the experimental group football players. The difference between the control and experimental groups was 31% (D≥0.05).

It is also interesting to analyze the indicators of the technical and tactical actions of both football players in the matches for the national championship. Observations established that before the experiment, the volumes of TTA in the football players of both groups practically did not differ, the difference was 1.8% (D≤0.05). After the implementation of special "Programs", the football players of the experimental group showed an increase in the number of TTA compared with the football players of the control group by 21.1% (D≥0.05). The effectiveness of performing game techniques in the football players of the experimental group also changed compared to the control group by 20.6% (D≥0.05).

Figure 1 shows the dynamics of TTA volumes in the control and experimental groups for 15-minute segments of the game.

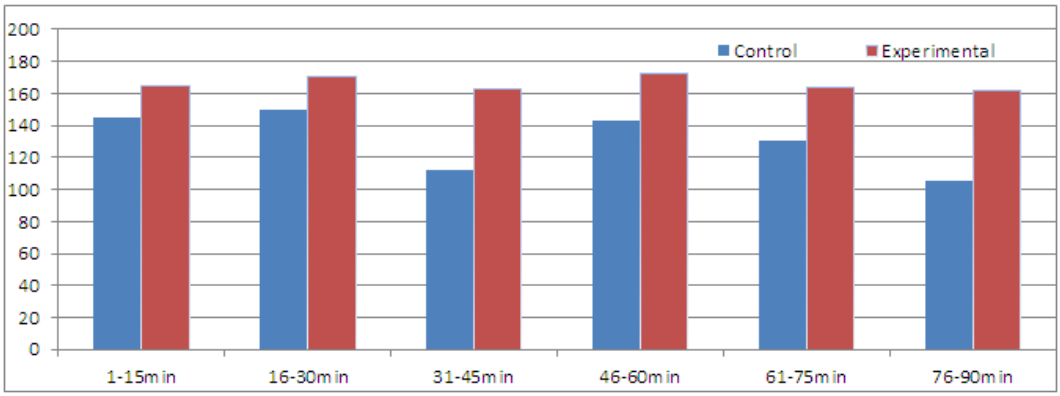

Fig.1. Dynamics of TTA volumes in the control and experimental groups for 15-minute segments of the game.

It can be seen that in the control group football players from 1 to 30 minutes and from 46 to 60 minutes of the game, the volume of TTA remains stable, and from 31 to 45 minutes and from 61 to 90 minutes of the match there is a noticeable decrease in their volume and efficiency, which indicates increasing fatigue. For the players of the experimental group, the volume of TTA remains stable throughout the match.

It is known that the peculiarities of the structure of special endurance in football are due to the motor activity of a football player, which is characterized by the implementation of an extensive arsenal of techniques in the conditions of an operational analysis of the game situation.

The fact that football players at the age of 18-19, moving to adult teams, cannot maintain high motor activity throughout the match is also explained by the structure of the loads of the training process [4]. In the training process of juniors, the loads are not aimed at developing the strength component and increasing muscle mass, but at increasing the aerobic threshold. They mainly train only the cardiac and respiratory systems. This technique allows you to bring the athlete's body to a certain level and then growth stops. Therefore, in order for football players aged 18-19 to continue to progress in the level of skill, it is necessary to change the direction of the training process, by redistributing training means towards increasing the strength component [6].

Thus, the data obtained allow us to conclude that after the implementation of special "Programs" in the football players of the experimental group, due to the increase in the level of special endurance, a significant improvement in the indicators of motor activity and the effectiveness of technical and tactical actions was revealed.

Conclusions.

1. An analysis of the performance of football players aged 18-19 in international tournaments and the championship of Uzbekistan showed that the level of development of special endurance in the vast majority of football players is not equal to the requirements of modern football.
2. It was revealed that in the training process of juniors, the loads are aimed at developing the aerobic threshold, i.e., they train, basically, only the cardiac and respiratory systems. The developed experimental "Program" consisted in changing the methodology for improving the level of special endurance due to the redistribution of particular volumes of training means in the direction of increasing the strength and speed-strength components by 1.5-2 times (first the muscle composition was formed, and then the function developed).
3. The study of motor movements of football players aged 18-19 in an international tournament showed the following patterns. If in the range of slow speeds the players of the national team of Uzbekistan did not have significant differences with foreign teams, then in the range of high speeds (V over 19.0 km/h) the differences were significant. Also an important indicator in football is the number of accelerations at a speed of V = 5.51m/s – 6.99m/s and sprints at a speed of V>7m/s. The number of movements in this speed zone for the football players of the Uzbekistan national team was 3.02%, which indicates a low level of special endurance.
4. It was established that the implementation of the developed "Programs" by the football players of the experimental group led to a change in the level of their special endurance, which manifested itself in an increase in the volume of motor movements in the speed zone V = 5.28-6.94 m/s by 4.1% (D≥ 0.05) and in the velocity zone V ≥ 6.95 m/s by 4.3% (D≥0.05). The number of accelerations after the experiment increased by 28.1% (D≥0.05) as compared with the data of the control group and the number of sprints increased by 31% (D≥0.05).

5. The use of experimental "Programs" that provide for an increase in the level of special endurance by increasing loads of strength and speed-strength orientation allows juniors to quickly adapt to the requirements of adult football.

REFERENCES

1. Ибриев А. И. Скоростно-силовая подготовка юных футболистов в возрасте 15-17 лет: автореф. дис. ... канд. пед. наук: "Российский государственный педагогический университет". Санкт-Петербург, 2009.- 142 с.
2. Исеев Ш.Т. Анализ эффективности соревновательной деятельности футболистов в зависимости от уровня их физической подготовленности//Респуб. научно-практическая конференция «Тенденции развития современного футбола: проблемы и пути их решения». Ташкент. 2020. С. 6-11.
3. Калинин Е.М., Кузьмичёв В.А., Джилкибаева Н.Ж, Хомякова А.А., Лексаков А.В. Анализ соревновательной двигательной деятельности высококвалифицированных футболистов разного возраста. Теория и практика физической культуры. № 8, 2022. С. 12-15.
4. Клепиков В.Ю. Определение эффективности различных вариантов тренировочных нагрузок футболистов 16-18 лет на этапе спортивного совершенствования: дис. ... канд. пед. наук: 13.00.04 / В.Ю. Клепиков. - Омск, 2006. - 153 с.
5. Кошбахтиев И.А., Нуримов Р.И. Программирование подготовки футболистов высокой квалификации. Ташкент. 2005. –120 с.
6. Селуянов В.Н., Сарсания С.К., Сарсания К.С. Физическая подготовка футболистов. — М.: ТВТ Дивизион, 2006. — 192 с.