



The system of training and passing control standards for the physical training of football referees

Oleg A. Musin ^{1*}, Yuri S. Zhemchug ¹, Vasiliy V. Sokolov ¹, Igor Y. Gryaznov ¹,
Timofey A. Savchenko ², Yulia V. Shlykova ¹

¹ Kozma Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, RUSSIA

² Privolzhsky Research Medical University, Nizhny Novgorod, RUSSIA

*Corresponding author: mysin332@mail.ru

Abstract

This article reviews the problem of training football referees for the professional activity, since a football referee must constantly be at the distance from game episodes in order to have a possibility to estimate the situation and to make the right decision. The aim of the article is to study the system of the training process of football referees. The principal research approach to the training of football referees is a structural analytical approach. The research methods are analysis and generalization of scientific and methodological literature and informational environment on training football referees, questionnaire, pedagogical observation, experiment and methods of mathematical data processing. In the article there are results of monitoring the motional activity of football referees of various qualifications. Moreover, it was found that during matches the heart rate varied in different pulse zones with variable power of work. The program of physical training of football referees of different qualifications has been developed with the help of athletics in the annual cycle. The relation between the level of competition, the load felt by the referee and the parameters of motional activity was determined. The results that prove the positive effect of the usage of the author's program for training referees are presented and discussed. The article will be useful to football referees: from beginners to experienced ones, in order to correct their training. Also it will be useful for educators and coaches who work with future football referees. The referee should constantly be at the distance from the game episodes in order to have possibility to estimate the situation and make the right decision. The correct choice of location on the football field, the referee's position while assessing game episodes shows not only the qualification of the referee, but also shows the level of physical preparedness. Thereby it is very topical question in modern football to study not only the system of training of football players, but also football referees too.

Keywords: football referee, the system of educational training, motional activity, indicators of physical activity, physical preparedness

Musin OA, Zhemchug YS, Sokolov VV, Gryaznov IY, Savchenko TA, Shlykova YV (2020) The system of training and passing control standards for the physical training of football referees. Eurasia J Biosci 14: 4129-4136.

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INTRODUCTION

The referee is a vital part of sporting event and his aims are to support the values of Fair play and to protect players and the game. In addition, qualified refereeing influences the improvement players' skills. The referee monitors the match with the help of assistant referees and the reserve referee if it is necessary; acts as a timekeeper and records the match.

Today the refereeing of sport events is a complex process of implementation different functions of their organization and carrying out an event by the referee; recording the results, determining the winner, monitoring the implementation of the rules of the competition, etc. Qualified and precise referees' actions are not only a reflection of outside observer position, but also

performance of educational functions in relation to all participants.

The increasing requirements for the referees' work lead to an increase of professionalism among the players as the role of referee is not limited only to the technical control of compliance with the rules but also presents an important part of educational process both for athletes and spectators. The value of the referees' work is very important. Taking into consideration the facts that about twenty players take part in the sport event; there are majority difficult situations during the match; the football field is a large size; the rules are

Received: April 2019

Accepted: March 2020

Printed: October 2020

complex and the attention of the audience is enormous, it is important to notice that the role of football referee is really complicated and tiring (Kiseleva, Valetov & Shlyapnikova, 2019).

Numerous observations indicate that in recent years there has been a trend towards a decrease in the numbers of pauses during the game and an increase in "clear" playing time. In the proportion the increase of playing time which can be characterized as continuous playing time requires a higher preparedness of referees primarily in physical term. E.A. Turbin (2004) noticed that during match referees make mistakes very often at the end of each half, but the distance in order to make the decision increases.

The most important factor that determines the professional capabilities of the referee is knowledge. The evaluation of referee's actions is often based on his professional qualities.

The basis of knowledge is the theoretical training. In his book C. Pierluigi (2004) points out that "Preparation is carried out not only for the purpose of physical development of the body. Preparation means realizing that you are going to do. And if you are a referee, a knowledge of football is a must. Knowing football means knowing rules of football. The role of the referee is to follow the rules by himself and force players to follow them".

A.R. Khairulin (2007) highlights referee's skills: constructive, organizational, communicative, gnostic, motional. Constructive and organizational skills are aimed at planning and implementation in professional activity. Didactic skills are associated with the knowledge of the referee to convey information available to all participants of this process. Gnostic skills are associated with referee's knowledge both each athlete and the sports team as a whole and are associated with the analysis of different situations and the results of their activity. Therefore, they are based on perceptual skills, i.e. the referee's ability to observe, notice mistakes during the match. Gnostic skills include the ability to use educational, methodological and scientific literature; the ability to conduct research and analyze the results in order to make adjustments to refereeing and sports activities (Ozerina, Suvorova & Dmitrieva, 2019).

Communication skills are associated with the referee's communication with all participants during competitive process (coaches, colleagues, athletes, mass media). Communication skills are divided into three groups by K.L. Vikhrov (1983). There are communicative skills, didactic skills, oratorical skills.

Refereeing is not about correct decision-making according to the rules of the game and showing cards. It contains something that is called the art of management, but not in general as an abstract concept, but management of players, different situations, members of refereeing team, spectators (Kochneva & Grishina, 2019).

Game control process:

- oral communication (7%);
- gestures (93%).

This process occurs automatically at the subconscious level, but it is based on the basic theoretical training of the referee, learned the rules and the criteria contained in them (Kopylov, 2011).

The referee's decision is the main part of management, especially when it is based on a criteria-based approach. The referee's decisions based on this approach are communicated to the match participants through communication links and must be implemented by them. The referee, assessing how his decision is perceived, receives "feedback", re-engaging in the management process and making subsequent decisions (Tatarinov, 2019).

The general preparedness of a referee consists of: theoretical (knowledge of the Rules of the Game and the method of refereeing), physical (the basis of motional activity), mental (the development of psychodynamic qualities and personality traits), moral-strong-willed (the basis of moral principles in life and sports), game (understanding of the game, the ability to understand its complexities, a sense of intuition developed through practice). These components of the general preparedness of referee are interconnected, but one or another of them prevails at different stages of the long-term training of an arbitrator (Vygotsky, 1978).

Thus, the physical training of referees should face both direct and indirect tasks:

- 1) increasing the level of physical preparedness;
- 2) improving psychological preparation;
- 3) increasing moral and volitional qualities;
- 4) improving tactical training;
- 5) improving the technique of movement.

In order to solve the mentioned tasks, it is necessary to use a variety of methods and methods of preparation. You cannot limit yourself to either purely physical and general developmental exercises, or purely game exercises (playing football, basketball, handball). Their complex application is necessary.

The aim of the work is to study the system of the training process of football referees.

LITERATURE REVIEW

During the match the activity of the referee has its own qualitative characteristics, each of them is due to different psychological properties of the referee's personality. There are:

- objectivity in making decisions;
- confidence in his actions;
- adherence to principles;
- resistance to various influences;
- timeliness of actions performed;

- credibility.

Analyzing these factors, there is a conclusion that the successful activity of the referee in a particular match depends on the state of physical and mental qualities at a particular time of the day. In addition to the large volume of movement on the field, high intensity, redistribution of attention when perceiving various situations, the referee needs not only to move quickly during the game, but also to think quickly and make decisions, as soon as possible ahead of the players' reaction. Therefore, the referee must always be in the usual state during the match from the point of view of the functioning of the body, its organs and systems.

To achieve success, you need to calmly understand your mental physical state, which occurs during preparation for a match or immediately before a match. This is facilitated by conversations with their assistants, observing the actions of their colleagues in previous matches, conversations with highly qualified referees and a match inspector.

The referee must learn to consciously manage the variety of his emotions, organizing them in the right way, remove negative or interfering emotions, and create positive and mobilizing emotions in his mind. He should be charged only with such emotions that, with their positive impact on the mental sphere, and through it, on all other functions of the body, would ensure the achievement and fulfillment of the planned plan of preparation for the match and its holding (Stafeev et al., 2019).

One of the main functions of a referee's training is to comprehend and plan their sports activities specifically in each match. This programming part in the body is performed by the brain, which is connected into a single whole with the rest of the body's organs.

During a match, it is difficult for the referee to analyze the control of his own actions, already committed, and especially in matches of high difficulty (Havinghurst & Neugarten, 1955).

Developing the ability to focus on the most important game moments requires regular focused attention training.

To develop attention, Leonardo da Vinci advised that someone carefully examines an object, closes eyes and presents it in all its details. Then, open your eyes, check how much the presentation matches the original. He considered such an exercise to be very useful for developing attention and recommended doing it as often as time permits, ensuring that the presentation completely coincides with this subject. This simple advice can be taken not only from a great artist, but also from a great scientist (Zhemchug et al., 2019).

In the referee's practice, it is very important to be able to do a lot of different things, including to concentrate as much as possible, without straining, given the long duration of concentration in a match (90 minutes or

more). And the optimal concentration time is purely individual for each person. As a result of working with the methodological literature, the authors identified the following psychological qualities of football referees:

The following psychological qualities are professionally important for referees:

- high concentration of attention;
- high speed of thinking;
- high values of the dominant state of activity;
- medium-high values of the dominant state of emotional arousal and anxiety;
- high importance of the value orientation "power and influence" (Vorobyova & Koroeva, 2019).

The following psychological qualities are professionally important for the assistant referees:

- high concentration of attention;
- high stability of attention;
- high values of the dominant state of activity;
- medium-high values of the dominant state of emotional excitement and anxiety;
- high confidence;
- high determination;
- high importance of value orientations "power and influence" and "autonomy", as well as low importance of such values as "contacts with people, communication";
- high motivation for the success of the activity, length of service as a judge (Arkhipova et al., 2019).

Signs of successful refereeing in football are: the absence of effective mistakes, objectivity, confidence, adherence to principles, consistency, authority and timeliness of actions. Many authors in their studies emphasize that the central indicator of the success of the professional activity of arbitrators is infallibility (Markova et al., 2019).

METHODOLOGICAL FRAMEWORK

In order to test the level of physical preparedness, referees are currently using various tests approved by FIFA. The official preparedness test for football referees (head referee) consists of two tests: sprint (6 reps of 40m running) interval test (40 reps of 75m run over 25m recovery). In addition to the official test, the Yo-Yo test (intermittent recovery level).

For assistant referees, the official preparedness test consists of three tests: CODA, which evaluates the assistant referee's ability to change direction of movement), sprint (5 reps of 30m running), interval test (40 reps of 75m run after 25m recovery). In addition, the ARIET test (Assistant Referee Intermittent Endurance Test) is used (Piaget, 1951).

Tests must be performed on running track (or on a natural / artificial soccer field if running tracks are not available). Track spikes are not allowed during the test. Referee must take the fitness test at least 2 times a year. It is recommended that testing be performed by a fitness instructor. The presence of an equipped resuscitation vehicle is mandatory throughout testing.

FIFA approved tests reflect the level of physical fitness associated with the manifestation of speed (sprint, CODA) and special endurance (interval test, Yo-Yo tests). During the match, the referees constantly move around the field depending on the situations and assess the game episodes, which requires, in addition to endurance and speed abilities, the manifestation of psychophysiological qualities (Buhler & Loginova, 1992).

Research methods: theoretical analysis, questionnaire survey, pedagogical observation, testing, registration of load indicators using sports watches, practical experiment.

RESULTS

In the course of the research, a theoretical analysis and generalization of the literature concerning the subject and object of the research was carried out. The aim was to determine modern ideas and trends development on the issue under study, to process official documentation on the topic of research, to familiarize with the accumulated experience on this issue (Dmitriev & Zagrevskaya, 2018).

When analyzing and summarizing the special literature, the following issues were priority: the peculiarities of the professional activity of football referees; physical training of football referees; control standards for football referees; features of the periodization of the physical training of football referees; application of means and methods of athletics in the training process of football referees.

The questionnaire was carried out among the female referees serving the Championship the Higher League teams and the Cup of Russia. The study involved 15 people.

In the period from April 2018 to November 2019, a study of the motional activity of football referees was carried out using the method of registering load indicators using a sports watch.

The aim of the research is to analyze the load indicators and reveal the peculiarities of the motional activity of football referees.

In the first part of the study, the motional activity of football referees was monitored during the performance of professional activity. The study was carried out during the refereeing of matches of competitions at various levels:

1. The Russian Championship among women's teams of the Higher League of Russia.

2. Russian Cup among women's teams.

During the study, the following indicators of physical activity of assistants and referees were recorded:

1. Ways of movement;
2. The volume of movements (m);
3. The volume of movements (m) with different speeds (m / s);
4. HR (bpm).

We used a sports watch Po1ar M430 to measure heart beating. The watch model is equipped with a heart rate monitor and sensor. The accuracy of the sensor when fixing the indicators is $\pm 2\%$. Heart rate sensor accuracy is $\pm 1\%$ or 1 bpm (whichever is greater). The data was analyzed using the Po1ar Flow computer program.

The second part of the research was testing the physical preparedness of the referees (Yo-Yo test, interval test). The following load indicators were recorded: the distance covered during the test (m) and the heart rate (HR). The obtained heart rate indicators were in different pulse ranges as a percentage of the total work time. For measurements we used a sports watch Po1ar M430. The results were processed using the methods of mathematical statistics and the Polar Flow computer program.

The experiment involved 5 referees and 10 assistant referees. The subjects of the control group carried out the training process according to the program of physical training of football referees using the means of athletics (Piaget, 1951). The plan of the training process was developed based on the use of athletics means and taking into account the peculiarities of motional activity.

The research was conducted in several stages from April 2018 to November 2019:

- Stage I - April 2018 - August 2018;
- Stage II - August 2018 - November 2018;
- Stage III - November 2018 - November 2019;

During the I stage there was the work on special scientific and methodological literature, concretizing the content of the problem, formulating a research hypothesis. The substantiation of the need to develop a program of physical training of football referees using the means of athletics was carried out.

During the II stage it was aimed at identifying the features of motional activity. This stage was subdivided on the following tasks:

1. Questioning;
2. Pedagogical observation;
3. Research of motional activity of football referees: testing of physical preparedness, monitoring of motional activity during the refereeing of matches.

The characteristics of the motional activity of football referees were formed, which became a theoretical basis for the development of a physical training program based on planning loads using athletics means and taking into account the peculiarities of professional activity.

Table 1. The number of matches, referees who were involved in research

№	Competition	Referee (number of gamed)	Assistant referee (number of games)	Total
1	Russian Championship among women's teams of the Higher League of Russia	5	5	8
2	Russian Cup among women's teams	2	2	4

Table 2. The volume of movements with different speeds of the referees

	Referee	Assistant referee
Movement volume (m) x + 5-	7095,0 ± 381,8	2973,0 ± 258,5
Volume movements x + 5- (m) with different speed (m / s)		
0 - 2,22	3347,0 ± 212,1	1411,0 ± 156,1
2,22 - 3	2673,0 ± 326,3	1129,0 ± 130,7
3 - 4,16	840,0 ± 125,8	337,0 ± 55,9
4,16 - 5	135,0 ± 35,3	66,0 ± 14,3
> 5	100,0 ± 40,5	30,0 ± 16,3

Table 3. Indicators of load during the performance of control standards (Yo-Yo test)

Heart rate (bpm) in different pulse intervals % of the total time of work	<110	4,3 ± 1,8
	111-130	6,5 ± 2,1
	131-150	11,6 ± 2,5
	151-170	21,3 ± 5,7
	171-180	42,4 ± 6,2
	>181	13,9 ± 6,9
HR max (bpm)		184,6 ± 5,4

Table 4. Indicators of load during the implementation of control standards (interval test)

Heart rate (bpm) in different pulse intervals % of total time of work	<110	0,7 ± 0,8
	111-130	1,8 ± 0,6
	131-150	4,3 ± 0,9
	151-170	11,2 ± 2,3
	171-180	72,6 ± 4,7
	>181	9,4 ± 4,6
HR max (bpm)		185,2 ± 3,2

During the III stage a pedagogical experiment was carried out with the aim of experimental substantiation of the proposed program for physical training. In the course of the pedagogical experiment, the proposed control standard was tested. Also, statistical processing of the factual material was carried out, the data obtained were analyzed, conclusions and practical recommendations were formulated.

During the study, the following indicators of physical activity, assistants and referees were recorded:

1. Ways of movement;
2. The volume of movements (m);
3. The volume of movements (m) with different speeds (m / s);
4. HR (bpm).

Referees use the following methods of movement during matches: walking, running at different speeds, running backwards, moving with side steps.

In **Table 1** results of monitoring the referees present. Such competitions are served both by novice referees with low qualifications and their colleagues of higher qualifications. Games are often characterized by low intensity compared to higher level competitions.

The heart rate varies from 111 to 130 beats / min (34.3 ± 3.1%) and 131-150 beats / min (33.2 ± 2.4%) for the referees, while the total volume of movements is 7095.0 ± 381.8 m (**Table 2**)

The assistants cover the distance of 2973.0 ± 258.5 m, and mainly work in the zone from 111-130 bpm (55.8

± 6.5%). For both the referee and assistant referees, most of the volume of movements is movements with a speed of up to 2.22 m / s (3347.0 ± 212.2 m and 1411.0 ± 156.1 m) and from 2.22 to 3 m / s (2673.0 ± 326.3 m and 1129.0 ± 130.7 m).

Analyzing the data obtained from the study, it was found that the body of the referees when passing the control standards has a significant load.

To do the Yo-Yo test standard, the referees serving these competitions need to cover a distance of 1800 m (level 18.2). During the study, not all participants of the research coped with the Yo-Yo test. On average, the referees covered the distance of 1832 ± 70.42 m, and most of the time (42.4 ± 6.2%) the heart rate was in the range of 171-180 bpm (**Table 3**). The maximum heart rate averaged 184.6 ± 5.4 beats / min. and 13.9 ± 6.9% of the time, the heart rate was in the range over 180 beats per minute.

During the interval test, the referees must complete 40 repetitions of 75 meters (17 seconds) after 25 meters of recovery (20 seconds) to successfully pass the standard. At the same time, they cover a distance of 4000 m in 25 minutes (1500 seconds). The main time (72.6 ± 4.7%), the heart rate varied from 171-180 beats / min, and the maximum heart rate reaches a level of 185.2 ± 3.2 beats / min (**Table 4**).

From the results of the study of load indicators during testing of the level of physical preparedness, it follows that in both tests the referees mostly work in the mixed

Table 5. The structure of the weekly microcycle of the base stage of the first preparatory period

Aerobic running 5 - 6 km, heart rate 130 - 150 bpm.	
Mon	1 st and 2 nd week
	3 rd week
	4 th week
	A complex of strength exercises aimed at developing the abdominal muscles, back muscles.
10 - 12 times 60 - 80 m each (90 - 95% of maximum speed, recovery to heart rate 120 - 130 beats / min.).	
8 - 10 times 40 - 60 m each (90 - 95% of maximum speed, recovery to heart rate 120 - 130 bpm).	
Aerobic running 5 - 6 km, heart rate 130 - 150 bpm	
Tues	1 st and 2 nd week
	3 rd and 4 th week
A set of strength exercises aimed at developing the muscles of the legs (muscles of the front of the thigh, muscles of the back of the thigh, gluteal muscles, calf muscles).	
Complex of special running exercises. A set of special jumping exercises (in the fourth week, jumping exercises were performed in a smaller volume).	
Rest	
Wed	1 st and 4 th week
	2 nd week
	3 rd week
Aerobic running 8 - 12 km, heart rate 130 - 150 beats / min;	
Aerobic running 3 - 4 km, heart rate 130 - 150 beats / min. Pace running 2 - 3 km, heart rate 160 - 170 beats / min (can reach 175 - 180 beats / min at the finish line).	
Aerobic running 3 - 4 km, heart rate 130 - 150 beats / min. 8 - 10 times 200 m each, running in a mixed mode of energy supply, heart rate 165 - 175 beats / min (can reach higher values at the end of the training session), recovery 1 - 1.5 minutes.	
Aerobic running 5 - 6 km, heart rate 130 - 150 bpm.	
Fri	1 st week
	2 nd , 3 rd , 4 th week
A set of strength exercises aimed at developing leg muscles	
Complex of special running exercises. A set of special jumping exercises	
Hitch 1 km.	
Aerobic running 8 - 12 km, heart rate 130 - 150 beats / min;	
Rest	

Table 6. Week microcycle of the special training stage of the first preparatory period

Aerobic running 3 - 4 km, heart rate 130 - 150 beats / min.	
Mon	1 st and 4 th week
	2 nd week
	3 rd week
Pace running 3 - 4 km, heart rate 160 - 170 beats / min (can reach 175 - 180 beats / min at the finish line).	
12 - 15 times 150 m each, running in a mixed mode of energy supply, heart rate 165 - 175 beats / min (can reach higher values at the end of the training session), recovery 30 sec.	
Running in anaerobic mode, 5 - 6 x 300 m, heart rate over 180 bpm, recovery 2 - 3 minutes.	
A set of strength exercises aimed at developing abdominal muscles, back muscles, arm muscles. Hitch 1 km	
Aerobic running 3 - 4 km, heart rate 130 - 150 beats / min. special running exercises.	
Tue	1 st week
	2 nd and 3 rd week
	4 th week
10 - 12 times 60 - 80 m each (90 - 95% of maximum speed, recovery to heart rate 120 - 130 beats / min.).	
Sprint run 40 m with a maximum speed of 6 - 8 times, recovery to a heart rate of 120 - 130 beats / min.	
8 - 10 times 40 - 60 m each (90 - 95% of maximum speed, recovery to heart rate 120 - 130 bpm).	
Special situational exercises. Hitch 1 km.	
Rest	
Weny	1 st and 3 rd week
	2 nd week
	4 th week
Aerobic running 2 - 3 km, heart rate 130 - 150 beats / min. special running exercises.	
6 - 8 times 400 - 500 m, running in a mixed mode of energy supply, heart rate 165 - 175 beats / min (can reach higher values at the end of the training session), recovery 2-3 minutes.	
Running in anaerobic mode, 7-8 x 200 m, heart rate over 180 beats / min., Recovery 1.5-2 minutes.	
10 - 12 times 200 - 300 m each, running in a mixed mode of energy supply, heart rate 165 - 175 beats / min (can reach higher values at the end of a training session), recovery 1.5 - 2 minutes.	
Aerobic running 2 km, heart rate 130 - 150 beats / min. Aerobic alternating running 2 - 3 km (200-400 m pace 4 min / km), heart rate up to 165 beats / min. Special running exercises.	
Fri	1 st , 2 nd , 3 rd and 4 th weeks
Sprint run 40 m with a maximum speed of 6 - 8 times, recovery to a heart rate of 120 - 130 beats / min.	
Special situational exercises. Hitch 1 km.	
Aerobic running 10 - 12 km, heart rate 130 - 150 bpm.	
Rest	

aerobic-anaerobic zone. This requires the predominant manifestation of special endurance, aerobic and anaerobic-glycolytic capabilities of the body. The interval fitness test is longer in duration and the judges must travel twice as long as the Yo-Yo test.

DISCUSSIONS

In order to plan the training process in order to achieve the highest level of physical preparedness of an athlete, it is necessary to know the schedule of the competition. Therefore, according to Yu.F. Kuznetsov (2000), it is necessary to develop training plans in such a way as to ensure:

- 1) The required level of physical preparedness, corresponding to the requirements of each match;
- 2) Adequate amount of time for adaptation processes after matches and training with heavy loads.

Based on the analysis of the calendar plans of competitions at various levels, the features of the

periodization of the annual cycle of training a football referee were revealed. In the structure of the annual cycle of physical training, the following periods can be distinguished: preparatory, competitive and transitional.

The training sessions at the stage of special preparation were planned using an individual approach. The exercises were carried out with a load in accordance with the individual level of preparedness. If the referee did not have time to recover, then the value of the load at the next training session did not increase.

According to the results of the pedagogical experiment, the effectiveness of the application of the program of physical training of football referees with the use of athletics means in the annual cycle of training football referees was proved.

CONCLUSION

The authors identified the following conclusions:

Table 7. The structure of the weekly microcycle of the competitive period (one game per week)

Mon		Rest
		Aerobic running 3 - 4 km, heart rate 130 - 150 beats / min.
Tue	Variant 1	6 - 8 times 150 - 200 m each, running in a mixed mode of energy supply, heart rate 165 - 175 beats / min (can reach higher values at the end of the training session), recovery 1 - 2 minutes.
	Variant 2	Tempo run 1.5 - 2 km, heart rate 160 - 170 bpm (can reach 175 - 180 bpm at the finish line).
		Hitch 1 km.
Wen		Aerobic running 5 - 6 km, heart rate 130 - 150 bpm. special running exercises.
Thur		Rest
Fri		Aerobic running 5 - 6 km, heart rate 130 - 150 bpm.
Sat	Variant 1	Aerobic running 5 - 6 km, heart rate 130 - 150 bpm.
	Variant 2	Rest
Sun		Game

1. As a result of theoretical analysis and generalization of special and scientific-methodical literature, it was established:

Many mistakes that referees make during the refereeing of matches are associated with insufficient physical fitness;

The physical training of football referees in the annual cycle is not systematized, the methods and means used by the referees do not have sufficient scientific justification.

2. As a result of monitoring the motional activity of football referees of various qualifications, it was found that during matches the heart rate varies in different heart rate zones with variable power of work. The relation was determined between the level of competition, the load experienced by the referee's organism and the parameters of motional activity. With an increase in the level of competition, the referees need to cover a greater distance, the intensity of work increases, therefore, the requirements for the level of physical fitness increase. The main referees serving matches of professional football clubs work most of the match in the aerobic development zone and in the mixed aerobic-anaerobic zone. Assistants perform their duties with stress in the aerobic recovery and aerobic development zones.

3. A program of physical training of football referees of various qualifications using the means of athletics in the annual cycle has been developed. The volume, intensity and structure of the training loads performed were planned in each training period, taking into account the peculiarities of the motor activity of football. The technique is mainly aimed at developing special

endurance, aerobic and anaerobic-glycolytic capabilities of the body.

RECOMMENDATIONS

1. The program of physical training of football referees using athletics means is recommended for use in the training process of referees of initial training and referees serving competitions of professional football clubs.

The necessary conditions for the effective application of the technique in the annual cycle are:

Drawing up a training plan for a long period, taking into account individual characteristics and the level of physical preparedness at the initial stage;

Load planning is carried out taking into account the peculiarities of motional activity;

Fulfillment of the requirements for the organization of the training process in accordance with the individual training plan for this method.

2. It is recommended to use the control standard as a control exercise that determines the level of physical readiness for refereeing competitions and passing tests.

3. To assess the motional activity of referees of various qualifications during the refereeing of matches of the competition, you can use the methodology, which was used to study the peculiarities of the motional activity of referees during refereeing matches. The use of a sports watch with a heart rate monitor OP8 sensor while refereeing matches allows you to objectively assess the received load during matches. It becomes possible to more accurately analyze the work during the games and adjust the training process to improve physical fitness.

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