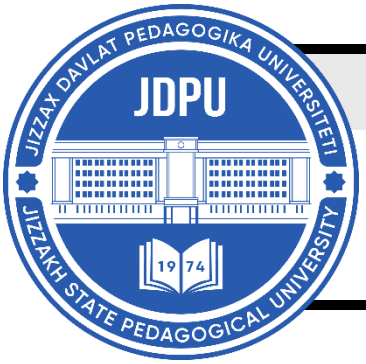
DOI: https://doi.org/10.37547/mesmj-V5-I8-37 Pages: 291-297

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

http://mentaljournal-jspu.uz/index.php/mesmj/index

STUDYING THE IMPORTANCE OF BODY STRUCTURE IN IMPROVING THE PHYSICAL FITNESS OF FOOTBALL PLAYERS AT THE STAGE OF SPORTS PREPARATION

Sirojiddin Pulatov
Doctor of Philosophy in Pedagogical Sciences (PhD)
Uzbekistan State University of Physical Education and Sports
Chirchik, Uzbekistan
E-mail: Sirojiddinpulatov90@gmail.com

Otabek Odiljanov
student
Uzbekistan State University of Physical Education and Sports
Chirchik, Uzbekistan

ABOUT ARTICLE

Key words: Body structure, special endurance, young football players, stages of the annual cycle, training process, weight-height index, modern research methods.

Received: 12.11.24
Accepted: 14.11.24
Published: 16.11.24

Abstract: The article examines the importance of physical training, analysis and control of movement activities of players in the stage of sports development. Body structure and functional fitness of players in the stage of sports improvement have been studied. The obtained data are summarized and conclusions are given.

Relevance. The increasing number of competitions at different levels during the modern football sport requires high-level and different training of the players of different teams. The advantage in the meeting is given to the teams that can achieve high efficiency of movements while increasing fatigue, in addition to having excellent technical and tactical skills. This is possible in conditions of high development of physical qualities, which are the key to the effectiveness of collective, group and individual actions. Many scientific works of sports theory specialists are devoted to the physical, functional and psychological development of football players. Nevertheless, the development trends of modern football require continuous improvement of the physical training methods of athletes. This is relevant for all stages of long-term training, especially at the stage of sports specialization, when the coaching staff faces the task of forming a reserve for qualified football. Education of physical qualities of football players

is one of the important aspects of sports training. According to experts, in training young football players to become mature players, paying attention to the physical fitness of young players, strengthening their health and harmonious development, acquiring various skills and competencies, and mastering football game techniques is a great basis [1,2]. The physical condition of the players is an important factor not only in the success of our clubs, but also in the success of our national teams. Playing football requires a high level of development of special physical qualities. Many times fast runs and accelerations, power struggles, hitting the ball, accurate execution of technical methods during 90 minutes of playing time cannot be effectively performed without the ability of the athlete's body to resist fatigue. According to experts, the level of development of special endurance largely determines the effectiveness of football players' competitive activity. The analysis of the performances of Uzbekistan's youth national teams shows that the level of special endurance in young players is not high enough. Young players cannot maintain a high level of movement activity throughout the game in international level matches. This, in turn, has a negative impact on the effectiveness of playing methods, and in general, on their successful performance in one or another official tournament. One of the reasons for this situation is that the character of competition activities of young players is not sufficiently studied at the stage of sports improvement. It is at this age period that the transition from youth football to adult football takes place, and the efficiency of their further competitive activity depends on the level of special endurance [2,4,6,8,13].

In the literature that we can use, there is little information about the movements of 18-19-year-old football players with different intensity and speed, both recorded in official matches and recorded during practice. There is also little convincing information about the volume of movement movements in the submaximal power zone, which characterizes their specific level of endurance. There is also very little information about the body structure of young football players, although it has a great correlation with the special training indicators of the young football player, his adaptation to the conditions of the external environment, as well as professional activities and sports activities. Along with physical training, technical-tactical training plays an important role in helping players to achieve high results, and its training is considered an important factor. Because football is the number one game in the world today. The sport of football is developing day by day. The playing styles are improving, and the movement of the player is becoming more and more difficult. Many authors have pointed out that the national team of Uzbekistan, youth and youth national teams in clubs do not achieve high results in international arenas in attacking. According to football experts and football coaches, the reason for our defeats is that our players are slow and uncertain in their offensive

actions. Taking this into account, our players will have to work hard to overcome these shortcomings. The effective attack of the players will lead the team to victory. However, all actions are important for team players to complete the attack with speed, technical and tactical actions effectively. It is especially important for young players to pass the ball to the middle and long distance, to the path of movement of the partner. The main goal of such an attack is to quickly deliver the ball to the opponent's zone from the defensive zone, organize dangerous moves near the goal and score a goal. Therefore, many experts and coaches focused on the topic of attacking and finishing the attack of young players. In addition, how many seconds it takes for such attacks, how many people participate, and other actions to attack the gate are current topics. Determining the actions of players in the organization of attacks is one of the urgent issues [3,4,5,8,10,11,12].

The purpose of the study. The purpose of this study is to investigate whether changes in body composition of 18-19-year-old football players affect the level of specific endurance at different stages of the annual cycle.

Research results and its discussion. One of the constituents of a football player's working ability is the body structure. The analyzes allowed to determine the following: 12% of football players had normal fat mass indicators, 16% of football players corresponded to the average level. In 72% of football players, the size of the fat mass exceeded the standard requirements. The largest percentage of fat mass (16% - 19.5%) was recorded in goalkeepers. The middle line players also have fat mass indicators that exceed the standard requirements, but in fact, it is the players in this role who will have to determine the speed and pace of the team's offensive actions. Real changes are reflected in the dynamics of the level of development of muscle and fat components, which in turn indicate the activity of protein synthesis and energy exchange and are considered an integral marker of adaptive shifts in all body systems.

Any decrease in the muscle component indicates a lack of energy resources in the athlete's body and accumulated or not restored until the end of the current period and suppression of protein synthesis. An increase in the fat component reduces the total amount of energy in the body, and also leads to a decrease in work capacity and deterioration of regeneration. Changes in muscle and fat components under the influence of exercise loads reflect the direction and expression of adaptive shifts at the structural level in the athlete's body under the influence of exercise and the main character of energy supply, that is, labile morphological indicators of a person can serve as markers of adaptation to strenuous muscle activity when there is sufficient information.

Body composition assessment methods of football players are widely used by experts, because body composition is closely related to the athlete's performance. Body composition analysis is useful for short- and long-term assessment of athletic performance, nutritional interventions, injury prevention, abdominal obesity, and general health of athletes. Performance of elite athletes can be adversely affected by very high and very low body fat percentages. Building aerobic training methods when promoted to skilled level players, as well as high blood fat levels can be mechanically and metabolically harmful for athletes.

Figure 1 shows the dynamics of the average group indicators of body mass, as well as muscle and fat tissue mass of 18-19-year-old football players. If you can see from the given picture, the fat mass of football players during the competition is 14.8%, and during the training period it is 15.4%. In the data on muscle mass, we noted 57.2% during the competition, and 55.9% during the training period. There was almost no change in body length data during the competition and training period 168.4-168.2. dynamics of change were also observed in the parameters obtained by body mass. That is, it was 67.6% during the competition, and 68.1% during the preparation period.

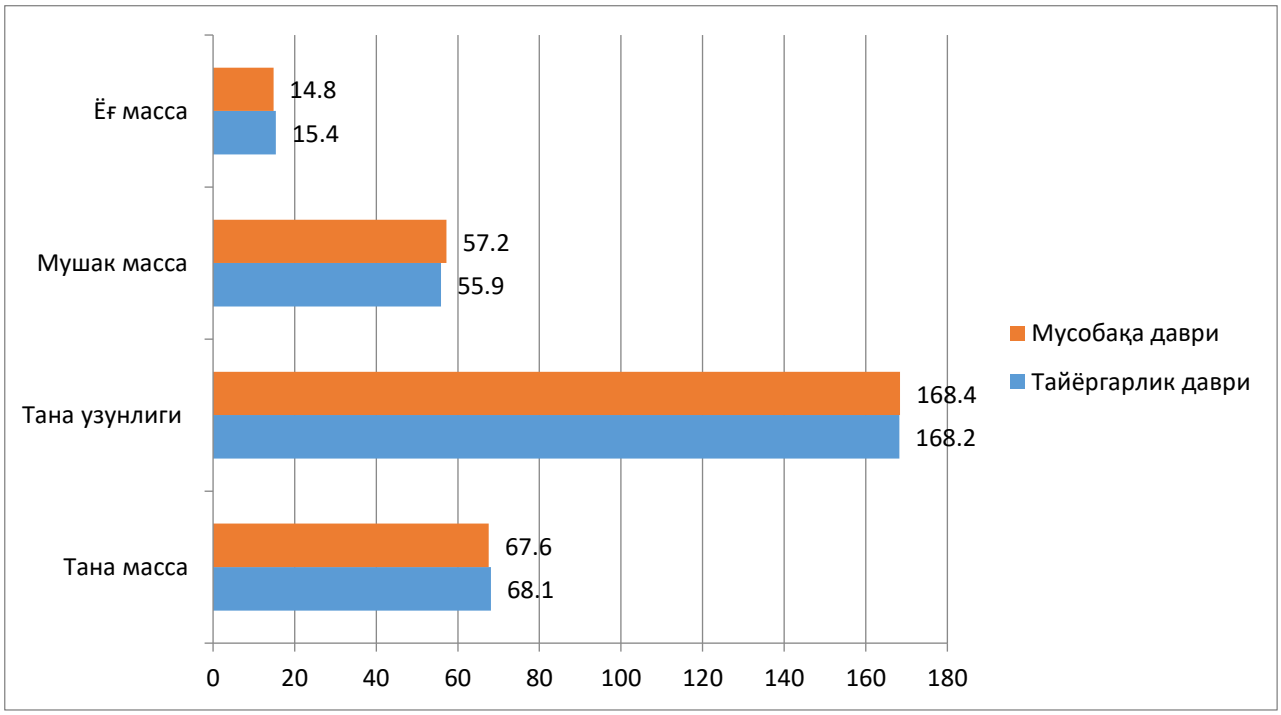


Figure 1. Dynamics of average group indicators of body composition of 18-19-year-old young football players in the annual cycle.

The data of dynamic observations of the ratio of the mass of muscle and fat components in the total weight of the body allows to determine some general laws of the ratio of these parameters in separate periods of training of 18-19-year-old football players.

A general trend is the relative stability of the body mass of athletes during the preparation and competition periods. Relative stability of muscle and adipose tissue masses is a

characteristic feature during the training period, while minor changes are noted during the competition period. For example, fairly stable average group parameters of muscle tissue mass at moderate values of the fat component during training and competition periods allow us to think about the fact that the morphological structures of athletes are not properly adapted to the training and competition loads of this period. By the time of the competition, there is an increase in body mass due to a small increase in muscle mass and a small decrease in fat mass. This may indicate an unbalanced diet and an inappropriate magnitude and direction of exercise loads. One of the constituents of a football player's working ability is the body structure. The analyzes allowed to determine the following: 12% of football players had normal fat mass indicators, 16% of football players corresponded to the average level. In 72% of football players, the size of the fat mass exceeded the standard requirements. The largest percentage of fat mass (16% - 19.5%) was recorded in goalkeepers. The middle line players also have fat mass indicators that exceed the standard requirements, but in fact, it is the players in this role who will have to determine the speed and pace of the team's offensive actions.

An excess layer of fat inside the muscles worsens their contraction properties, disrupts intermuscular coordination, which negatively affects the accuracy of performing technical methods. The presence of excess fat mass reduces the reaction speed, speed and explosiveness of football players, which leads to injuries, primarily injuries to the joint-ligament apparatus, and a decrease in the athlete's work capacity, which ultimately affects the effectiveness of performing game methods and the result of the game in general.

These data indicate that the size of training loads does not correspond to the caloric intake of football players.

Summary. Analysis and summarization of literary sources showed that body composition is directly related to the performance and health of football players. 12% of football players had normal fat mass indicators and 16% of the players had an average level, and 72% of the players had a fat mass much higher than the standard requirements, and during the competition, a small increase in muscle mass and a small decrease in fat mass were noted. 12% of football players had normal fat mass, 16% of football players had an average level, and 72% of football players had a fat mass much higher than standard requirements. A small increase in muscle mass and a small decrease in fat mass were noted during the competition period. Excessive consumption of foods high in proteins and animal fat and low in carbohydrates reduces the specific endurance level of football players. Exercise loads that are smaller in size and intensity, as well as the relatively low intensity of competitive games, testify to unbalanced nutrition and inappropriate magnitude and direction of exercise loads.

Used literature

Resolution PQ-115 of April 7, 2023 of the President of the Republic of Uzbekistan Sh.M. Mirziyoev "On additional measures for comprehensive development of popular and professional football". http://Lex.uz.

1. Achilov A.M. "Football Theory and Methodology". Study guide. T., - 2021. 200 p.

2. Guba V.P. Theory and methodology of football: uchebnik / V.P. Guba, A.V. Leksakov, A.V. Antipov. - Moscow: Sovetsky sport, 2013. - 208 p.

3. Iordanskaya F.A. Monitoring of physical and functional training of football players and conditions of training and training: Risola. - M. : Sovetsky sport, 2013. – 180 pages.

4. Iseev Sh.T. Ispolzovanie innovatsionnykh metodov controllya fizicheskoy podgotovlennosti futbolistov "Olimpiyskoy" sbornoy. Proceedings of the international scientific-practical conference "Actual problems of the development of high-achieving sports". Tashkent, 2019.

5. History, theory and methodology of physical culture and individual sports: practice for students of Vuzov / S.G. Alexandrov, D.V. Belinsky. - Krasnodar, 2018. - 116 p.

6. Miroshnikov A.B., Sidorov E.P., Laptev A.I. Aerobnaya rabota v silovykh vidakh sporta, kak prevention of hypertonic disease. V sbornike: Lechebnaya physicheskaya kultura: dostizheniya i perspektiv razvitiya materialy VI Vserossiyskoy nauchno-prakticheskoy konferentsii s mejdunarodnym uchastiem. 2017. S. 142-147.

7. Miroshnikov A.B., Smolensky A.V. Fizicheskaya activity pri korektsii vesa tela: focus na myshtsy i jirovuyu tkan (obzor literatury). Therapist. 2017. No. 8. S. 4-9.Футбол для начинающих. Основы и правила / А. Заваров. – Москва: Лит. Рес, 2015. – 250 с. 10.

8. Yakimova L.A. Jismoniy tarbiya va sport nazariyasi va metodikasi: o'qitish va metodika / L.A.Yakimova. – Krasnodar: KGUFKST, 2017. – 72 p. 12.

9. Boileau RA, Horswill CA. Body composition in sports: Measurement and applications for weight gain and loss. In: Exercise and Sports Science. W.E. Garrett Jr. and D.T. Kirkendall, eds. Philadelphia: Lippincott Williams & Wilkins, 2000. pp. 319-338.

10. Gabbett T, Ryan, P. Tackling technique, injury risk, and playing performance in high-performance collision sport athletes. Int J Sports Sci Coach 4: 2009, 521-533.

11. Sh.U. Abidov. Football theory and methodology. Textbook. Tashkent-2023, 428 p.

12. O. A. Isaqovich, M. M. Olimovich, T. B. Uralovich, T. S. Xolmuradovna, C. Ananth and T. A. Kumar, "Fitfuturo: Empowering Tomorrow's Athletes - A Mobile Application for Future Physical Education Preparation," *2024 Ninth International Conference on Science Technology Engineering and Mathematics (ICONSTEM)*, Chennai, India, 2024, pp. 1-6, doi:

10.1109/ICONSTEM60960.2024.10568641. keywords: {Training;Technological innovation;Education;Production;Mobile applications; Sustainable development; Standards;Mobile App;specialists in Physical Culture, physical education, mobile applications, Science, Information Technology, Physical Culture}.

13. F. A. Kuldoshivech, A. OlimovIsakovich, O. B. Tursunovich, Z. N. Abdurakhimovich, S. H. Furkatovich and N. K. Azimovich, "MIYF - Analyzing Motivation's Impact on Youth Football Success Through Computational Analysis Mobile Application," *2024 Ninth International Conference on Science Technology Engineering and Mathematics (ICONSTEM)*, Chennai, India, 2024, pp. 1-6, doi: 10.1109/ICONSTEM60960.2024.10568630. keywords: {Training;Data analysis; Psychology; Software; Real-time systems; Mathematics; Mobile applications; MIYF; Football app;young players;physical and mental harmony}.