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ENHANCING THE PHYSICAL FITNESS OF FOOTBALL PLAYERS IN SPORTS AND HEALTH-PROMOTING GROUPS

Hikmatova Nigorakhon Hasanboy qizi
Second-Year Undergraduate Student, Group 08/24
Physical Education Program Faculty of Arts and Sports
Kokand State University

A B S T R A C T

This article examines the issues of improving the physical fitness of 16-year-old football players during the general preparatory stage of the preparation period. The study analyzes the effects of scientifically optimizing the volume and intensity of training loads on players' speed, strength, endurance, and overall physical fitness during the organization of the training process. The findings indicate that planning training loads in accordance with the athletes' individual characteristics and the specific stage of preparation is a key factor in enhancing sports performance.

K E Y W O R D S

Football, physical fitness, training load, speed, strength, endurance, jumping, running, sports training.

INTRODUCTION

Football is currently one of the most popular and rapidly developing sports worldwide. In modern football, achieving high competitive performance depends not only on players' technical and tactical skills but also directly on their level of physical fitness. Therefore, leading football nations have widely incorporated innovative technologies, scientifically based monitoring methods, and advanced training methodologies into the training process. In international football practice, the individualization of training loads, continuous monitoring of players' functional status, and the progressive development of physical qualities are recognized as key priorities. Such an approach contributes to improving athletes' functional capacity, accelerating recovery processes, and maintaining high performance throughout competitive matches.

In Uzbekistan, comprehensive reforms are also being implemented to promote football, develop a sustainable reserve of talented players, and prepare competitive athletes for international competitions. Presidential decrees and government resolutions place particular emphasis on improving football infrastructure, enhancing the youth player development system, and integrating modern pedagogical approaches and innovative technologies into the training process. At the same time, analyses of international competitions indicate that football players often exhibit signs of physical fatigue during the final stages of matches. This condition may lead to a decline in match intensity, reduced effectiveness of technical and tactical performance, and ultimately have a negative impact on competitive outcomes. Consequently, there is an increasing need to improve the physical fitness of football players through scientifically grounded training methods, optimal planning of training loads,

and the application of modern monitoring and assessment techniques. From this perspective, investigating methods for enhancing the physical fitness of 16-year-old football players during the general preparatory stage of the training period through the optimization of training load volume and intensity is of considerable scientific and practical significance [1, 2].

Literature Review and Methodology

Improving the physical fitness of football players participating in sports and health-promoting groups is one of the priority areas of modern sports pedagogy and sports physiology. An analysis of the scientific literature indicates that effective development of football players' physical qualities can be achieved through scientifically based planning of training loads, the application of an individualized approach, and continuous monitoring of functional fitness. Both international and national studies recognize the integrated development of strength, speed, endurance, agility, and flexibility as a key factor in enhancing players' competitive performance.

The methodology of the present study is based on the principle that the training process should not merely consist of repetitive physical exercises but should also promote the conscious regulation of motor activity, the development of functional capabilities, and adaptation to the specific demands of football performance. Therefore, each training exercise was designed to simulate real match situations and was integrated with technical and tactical activities. Running, jumping, and speed exercises were combined with changes of direction, spatial awareness, decision-making, and game-based scenarios to increase their functional relevance.

Training loads were planned according to the principles of progression, individualization, and progressive overload. The volume and intensity of training sessions were determined with consideration of the players' age, functional condition, level of physical fitness, and health status. Particular attention was paid to preventing excessive fatigue, ensuring adequate recovery, and maintaining muscular balance throughout the training process. Motor skills were developed through the integrated application of demonstration, practical execution, performance analysis, and repeated practice. This comprehensive approach facilitated the formation of correct movement patterns, improvement of technical skills, and simultaneous development of essential physical qualities.

Standardized pedagogical tests were employed to evaluate the players' physical fitness. The test results were analyzed not only as quantitative indicators but also as measures of functional preparedness and the overall effectiveness of the training program. Based on the obtained findings, appropriate adjustments were made to the content and intensity of the training loads.

Results

The primary objective of this study was to improve the physical fitness of 16-year-old football academy players and to determine the effectiveness of optimizing training loads during the preparation period.

The research objectives were as follows:

to analyze the scientific and methodological literature on the development of football players' physical fitness;

to assess the physical fitness level of 16-year-old football players using modern pedagogical testing methods;

to implement training methods aimed at developing physical qualities and to evaluate their effectiveness in practice [3, 4].

Analysis of the Results

The study was conducted with the participation of 16-year-old football players enrolled at the Tashkent Football Academy. The players' physical fitness was assessed using the following standardized performance tests: a 30-m sprint, a 50-m sprint, a standing long jump, a standing triple jump, a 400-m run, a 7 × 50-m shuttle run, a Yo-Yo Intermittent Recovery Test, a maximal strength assessment, a flexibility test, a 30-m dribble sprint, a long-distance kicking test, a two-handed overhead throw, and a repeated 30-m ball-dribbling test performed five consecutive times.

The analysis of the baseline test results showed that the players achieved a mean time of 4.6 s in the 30-m sprint, 221 cm in the standing long jump, and 11.3 m in the standing triple jump. The average performance was 72 s in the 400-m run, 67 s in the 7 × 50-m shuttle run, 960 m in the Yo-Yo test, 88 kg in the maximal strength test, and 8 cm in the flexibility test. In football-specific performance tests, the players recorded an average kicking distance of 72 m, a two-handed overhead throw distance of 17 m, and 20 s in the repeated five-times 30-m ball-dribbling test. These baseline findings provided valuable empirical evidence for evaluating the players' overall physical fitness, identifying existing deficiencies, and scientifically planning subsequent training loads.

The initial assessment further revealed that the physical fitness indicators of the participating 16-year-old football players did not fully meet internationally accepted performance standards in several key parameters. These findings highlighted the need to reorganize the training process on a scientific basis, optimize the volume and intensity of training loads, and implement modern pedagogical technologies together with innovative training methods.

To address these issues, a specialized training program aimed at improving the players' physical qualities was developed and implemented during the general preparatory stage of the training period. Within this program, the proportion of total training time allocated to physical conditioning was increased, and the training process was structured into four microcycles. The first microcycle lasted 10 days, whereas each of the subsequent three microcycles lasted 14 days.

During the training process, a combination of continuous, Fartlek, and interval training methods was applied. These training approaches primarily focused on developing speed, endurance, and strength. According to research in sports physiology, the age of 16 represents a sensitive period for the development of these physical qualities in football players. Therefore, directing training loads toward enhancing these specific physical capacities is recognized as one of the key factors contributing to improved athletic performance [5, 6].

Conventional training programs generally emphasize long-distance running, resistance exercises, and standardized running tests to improve physical fitness. In the present study, however, modern approaches to sports training were adopted by incorporating cycle ergometer exercises and water-based training to enhance players' endurance. These training modalities contributed to improving muscular strength, neuromuscular coordination, and the efficiency of recovery processes. A total of 20 sixteen-year-old football players participated in the pedagogical experiment. The post-intervention assessment demonstrated significant improvements compared with the baseline results. Specifically, the average 30-m sprint time improved from 4.6 s to 4.5 s, while the 50-m sprint time decreased from 8.3 s to 8.1 s. The standing long jump performance increased from 221 cm to 227 cm, the 400-m run

time improved from 72 s to 68 s, and the Yo-Yo test performance increased from 960 m to 1,000 m. Improvements were also observed in the repeated 30-m ball-dribbling test performed five consecutive times. In contrast, flexibility scores remained almost unchanged throughout the experimental period. These findings confirm that the implemented training methodology was particularly effective in improving speed, endurance, and football-specific physical fitness.

Conclusion

The findings of this study demonstrate that organizing training sessions for 16-year-old football players requires careful consideration of their age-related functional and physiological characteristics, particularly the sensitive periods of physical development. Special emphasis on developing speed, endurance, and strength, together with increasing the proportion of training time devoted to these physical qualities and continuously optimizing training loads in terms of sets, repetitions, and intensity, contributes substantially to improved performance. Furthermore, the gradual introduction of high-intensity training and the application of modern training methods expand players' functional capacities and enhance their physical preparedness. Considering that 16-year-old players are at a transitional stage toward elite-level performance, the results suggest that their training process should be progressively aligned with the methodologies used in professional football. Such an approach can significantly improve players' physical fitness, competitive performance, and overall effectiveness in future competitions.

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