

Improvement and implementation of the physical development plan for young volleyball players

UDC 796.325



PhD student **Yin Yingying**
Moscow State University of Sport and Tourism, Moscow, Russia

Corresponding author: 1660577601@qq.com

Received by the editorial office on 07.04. 2025

Abstract

Objective of the study. The subject of the analysis in this paper is the study of the prospects for improving the physical fitness of young volleyball players, taking into account the specifics of their training process.

Methods and structure of the study. Methods used in the research: study and generalization of theoretical data; application of a methodological approach to analysis. Theoretical materials, as well as current training programs for young volleyball players used in specialized sports schools, were considered as an empirical base. Based on the results obtained, it can be concluded that the purposeful development of physical qualities in young volleyball players is essential.

Results and conclusions. The introduction of such approaches can have a positive impact both on the individual achievements of athletes and on the overall level of development of volleyball in the country, region and in the international arena.

Keywords: *physical fitness improvement, young players, volleyball, training process, training programs, physical qualities, individual achievements, international arena.*

Introduction. In the process of development of competitive activity it is necessary to be constantly engaged in optimization of physical training of athletes. Young volleyball players are in the period of active formation of physical qualities. At this age, a person has a special degree of plasticity, so can more likely form the physical qualities necessary for playing volleyball, provided proper physical training. For this reason, the development of physical qualities of young volleyball players represents a high degree of relevance and deserves detailed consideration in the context of the study.

Objective of the study. To analyze the opportunities for the development of physical fitness of young volleyball players in the context of their training strategy.

Methods and structure of the study. Research methods: analysis of theoretical sources; methodological analysis. Theoretical sources as well as specific training programs for young volleyball players in sports schools were used as the research material.

Results and conclusions. Physical training of an athlete is an organic part of the athlete's training with a predominant focus on strengthening his organs and systems, increasing their functional capabilities, on the development of motor qualities (strength, speed, endurance, flexibility, agility), on improving the ability to coordinate movements and display volitional qualities. The result of physical training is called "physical fitness".

Volleyball is a strenuous sport that requires athletes to develop complex physical qualities. In a volleyball game, players need to perform such actions as defense, ball handling and jumping; in addition, athletes must also have endurance, because the game of volleyball requires athletes to maintain their own physical competence for a long time: on average, one volleyball match lasts from one and a half to two hours. Only on the basis of constant exercise, it is possible to promote a balanced development of athletes' physical fitness. In addition, a properly developed strategy is important, on the basis of which



it is possible to perform specific actions on volleyball training of representatives of the younger generation [6, p. 134].

The article deals with the methods of practical improvement of physical training strategy for young volleyball players. It is important to note that, according to the existing definition, a young athlete (in any sport, including volleyball) is a person under 18 years of age who is systematically engaged in sports and performs in sports competitions. There are different age categories of young athletes, whose representatives are characterized by specific qualities and characteristics. Nevertheless, in this article these categories are not differentiated; the author of the study is limited to describing general problems and presenting recommendations for their solution.

Optimizing the strategy of physical training of young volleyball players will not only help in developing all these qualities at a high level, but will also contribute to increasing the overall sports literacy of young volleyball players. In addition, the correct strategy will greatly reduce the risk of injury during training and performances, as well as reduce the severity of injuries and help reduce recovery time [4, p. 31].

Table 1 presents the characteristic of the main types of physical training and physical fitness of young volleyball players. These are speed, muscular strength, endurance and flexibility.

As can be seen from Table 1, there are many types of athletic abilities, the development of which is important to consider when optimizing the physical training strategy of young volleyball players. Nevertheless, there are still some difficulties in this process nowadays. The list of the main ones is given below in the context of this article.

First, it is important to note the lack of attention to preparatory activities, such as warm-up before training, etc. Many coaches subjectively believe that young volleyball players have excellent physical fitness. In addition, not all coaches want to spend a lot of time, while avoiding or shortening the warm-up gives them the illusion of saving time during the session. Nevertheless, it is worth noting the importance of warming up, because otherwise excessive loads are likely to have a negative impact on the effect of sports training and even reduce the physical fitness of a young athlete [5, p. 170].

Secondly, it is important to note that a scientifically sound and reasonable exercise plan is an important component for young volleyball players to achieve good performance. Only purposeful, long-term goal-oriented, and systematic physical exercises can ensure the improvement of young volleyball players' physical fitness. However, some coaches do not pay proper attention to making plans, as well as their subsequent implementation. Their plans are made chaotically and inconsistently; moreover, when conducting training activities, the plans are often not implemented or partially implemented [2, p. 74].

Finally, some methods chosen for training young volleyball players are not effective or adequate to the specific situation. Many methods used in volleyball training of children and youth are relatively simple and have limited applicability and low adaptability in the context of specific situations.

Nevertheless, the situation is not hopeless. This means that the existing problems can be solved relatively easily and effectively. The following are practical recommendations that aim to achieve positive results in this process.

Table 1: Characteristics of the main types of physical training and physical fitness of young volleyball players

| Physical ability | Characterization of physical ability in the context of volleyball training |
|-------------------|---|
| Speed | Volleyball has high demands on the athlete's speed, so speed training is a necessary element of training young volleyball players. The speed of movement of an athlete depends on the speed of his reaction, so it is necessary to deal not only with the improvement of motor speed, but also with the development of reaction speed of a young athlete. |
| Muscular strength | Muscular strength is the ability of the neuromuscular system to resist resistance during training. Volleyball players should definitely pay enough attention to training their muscle strength. |
| Endurance | Stamina is the main quality of a volleyball player. A volleyball player's endurance should be enough for the whole game. There are three aspects of endurance training: training the cardiovascular system, training current endurance, and laying the foundation for improving endurance in the long term. |
| Flexibility | Body flexibility directly affects the physical attributes of volleyball players such as passing, hitting and blocking. Flexibility training is a gradual process, so it is important to approach it step-by-step with a long-term perspective rather than quick results. |



First of all, basic strength training is designed to improve the foundation of volleyball players' physical fitness. Every young volleyball player undergoes thorough training and has certain requirements for tactical performance in hitting. In terms of speed, volleyball is a team competition and different players perform different tasks. Nevertheless, each player must constantly monitor the dynamics of changes on the sports court, and react in accordance with them. To accomplish this, attention should be paid to developing the athletes' reaction speed to unexpected external impulses.

Volleyball players should also possess tactical competencies in order to have a better chance of winning a volleyball game. All this means that there is a direct relationship between the intellectual skills of the athlete and their physical fitness [3, p. 132].

In addition, volleyball competitions make high demands on the reaction speed of young athletes, speed of movement, speed of arm swing and speed of transferring the center of gravity. Therefore, it is of great importance to increase the level of speed training of young athletes. Usually coaches offer young volleyball players jogging or long-distance running, which cannot improve the training motivation of athletes. To significantly increase the training enthusiasm of young volleyball players, methods such as hill running and obstacle running are recommended. In addition, the effectiveness of training can also be significantly improved by conducting real-life drills and speed confrontation competitions. All this will increase the involvement of young volleyball players, as a result of which their interest and motivation will grow, and, consequently, the results they demonstrate [1, p. 133].

Finally, improving endurance training methods has a critical impact in volleyball, as volleyball players must be able to maintain physical performance throughout a match, which typically lasts an hour and a half or two hours. Coaches should gradually build up the endurance of trainees throughout their childhood and ado-

lescence by increasing the amount of intense practice time. However, breaks should still remain for the sake of preserving the physical qualities of young volleyball players.

Muscle fatigue occurs in athletes when the load range is exceeded. Human muscles have a certain degree of endurance and the ability to self-repair after training, which allows athletes to maintain good form for a long time if regularly organized rest. As the level of physical fitness increases, especially in the context of endurance, the time that an athlete can train intensively will increase, however, the organization of quality rest is still necessary.

As part of the study, an experiment was conducted in School No. 9 of Ningbo City, Zhejiang Province. The participants were 40 young volleyball players (12 - 16 years old). They were divided into 2 groups of 20 people each. The experimental group practiced according to the practice guidelines presented in the article, and the control group did not change anything. The training sessions lasted for 3 months; participants in both groups practiced at the same time and with the same regularity and duration of sessions so that unimportant variables had minimal effect on the process and results of the experiment. Table 2 summarizes the results obtained.

Based on the results of the work, it can be concluded that it is important to develop quality physical training of young volleyball players. The implementation of such strategies will greatly affect not only the results of specific trainees, but also the overall level of volleyball on a national, regional and international scale.

Conclusion. The practical value of the study lies in the fact that its results can be successfully used in the process of developing a methodology for the physical training of young basketball players, as well as in the implementation of the developed methodology in practice. The materials of the article will be of interest to basketball coaches, managers and methodologists of sports schools, as well as young volleyball players

Table 2. Indicators of physical training of young volleyball players. Control and experimental groups, enhancement %

| Physical ability | Control group | Experimental group |
|-------------------|---------------|--------------------|
| Speed | 5% | 12% |
| Muscular strength | 3% | 10% |
| Endurance | 4% | 15% |
| Flexibility | 2% | 8% |



and their parents. The work is also of interest to a wide range of people interested in volleyball and the technology of improving the physical training of novice volleyball players.

References

1. Ermokhin A. V., Kuznetsova Zh. V. Physical training of young volleyball players on the basis of game tasks. Bulletin of N. F. Katanov Khakass State University. Abakan, 2020. No. 1 (31). P. 131-134.
2. Li Ning, Luo Jun, Li Limin. Study on the evaluation of physical fitness characteristics of outstanding young volleyball players of the Peoples Republic of China. Journal of the Guangzhou Institute of Physical Education. Guangzhou, 2020. No. 40 (6). P. 73-77.
3. Potapov A. A., Zakharova E. A., Naumova Y. V., Pavlov S. V. Improvement of physical and physical education of young athletes. V. Improvement of physical and technical-tactical training of young volleyball players. Problems of theory and practice of development of physical culture and sport at the present stage. Makhachkala, 2022. P. 130-133.
4. Xue Duanping. Optimization of methods of physical training of young volleyball players // Stationery, sporting goods and technologies. Wenzhou, 2020. No. 24. P. 31-32.
5. Cao Baoke. Theoretical research and methodological practice in the optimization of physical training methods for young volleyball players. Stationery, sporting goods and technology. Wenzhou, 2023. No. 1. P. 169-171.
6. Chernikova A. D. Justification of the technology of individual physical training of young volleyball players. Science for the benefit of mankind. 2024. Moscow, 2024. P. 132-136.