

Original Research Article

Innovative Development of Sports Science of Volleyball

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Abstract: Volleyball has formed an independent scientific mechanism after decades of practical development. However, because of unscientific volleyball training and outdated training methods, China's volleyball encounters many obstacles. This article explores the scientific and innovative development of volleyball from two aspects: formulating reasonable training objectives and scientifically formulating volleyball training methods, aiming to optimize volleyball and solve problems facing by it at present.

Keywords: Volleyball; Sports Science; Innovative Development

1. Introduction

With China entering the 21st century, the level of volleyball training has not kept pace with the times immediately. Only emphasizing large amount of exercise and high-intensity and strict training can no longer meet the actual needs of athletes at this stage. Volleyball sports not only test athletes' skills, but also require them to have excellent psychological quality. Under this background, coaches must understand the concept of reasonable and scientific training, and should also strengthen their professional quality, so as to promote the whole training process to be more scientific and effective. However, Chinese volleyball has not been completely scientific and effective at present, and still has some shortcomings.

2. The development of modern volleyball

2.1 Volleyball competition

After hundreds of years' development, volleyball has developed from the original recreational game to today's antagonistic game. Especially in recent years, the competition technology of volleyball has developed greatly, along with great changes in the competition rules, which are more scientific and standardized. The change of competition rules provides opportunities and space for the innovation of volleyball technology, and also urges people to study the anti-attack system of volleyball competition with innovative thinking. Generally speaking, the development of volleyball puts forward higher technical requirements for athletes' attack and defense, especially after the emergence of post-attack technology and jump serve technology. Diversified attack modes have been widely adopted and diversified technical combinations have developed. This fully reflects people's potential and people's making full use of the venue, improving the offensive strength of both sides in the competition as a whole.

2.2 The professionalization of volleyball

In the past, volleyball was poor in performance, skill and appreciation. After several revisions to the rules, the

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market development prospect of volleyball has been affected to some extent. The rewards and bonuses of athletes and coaches are directly linked to the results of volleyball matches, which changes their passive situation and actively participates in training and competitions, thus improving the overall level of volleyball. Because of the induction of interests, more people join the ranks of volleyball sports, improving the overall level of volleyball competition. Gradually, sports are moving towards the commercial development mode, which makes volleyball a competition item with great development potential in sports. It attracts investment from many consumer groups and investors. With the strong lineup and abundant financial support, the volleyball clubs of various commercial models are operated stably, and the athletes get better returns in the competition, which prompts them to invest more energy in volleyball and greatly improves the level of volleyball.

2.3 The development of recreational volleyball

With the development of volleyball, the recreational function of volleyball is gradually weakened, while the competitive function is enhanced. Although competitive volleyball has become the main trend of volleyball development in the world, there are still a large number of people who love volleyball and experience the fun of volleyball. However, because volleyball has high skills and requirements, many fans can't master its skills. In view of the present situation and problems, sports scientists and sports and cultural departments fully considered the needs of the public, reformed volleyball in terms of equipment, venues and personnel, and created a variety of volleyball sports that were suitable for modern people's life and entertainment needs. Among them, beach volleyball has entered the Olympic Games in a short period of time, which shows that volleyball has a very strong recreational function. Some researchers have studied the possibility of the connection between volleyball teaching and activities, so that these activities can be understood by the broad masses, and these volleyball sports with mass entertainment will develop rapidly.

3. Training status of volleyball

3.1 Outdated training strategies

In the 1960s, the training of Chinese volleyball began to apply the method of winning by quantity, which realized great achievements and can continue to this day. However, with the continuous development of volleyball in China, it is not enough to rely solely on the amount of training to improve the ability of volleyball players. The time of modern volleyball competition is shortened, and the scoring system of each ball means that athletes should score goals within a short time. It is slightly different from the previous competition system of energy and endurance, and pays more attention to the explosive power and sports skills of athletes. Long-term training squeezes athletes' time for rest and relaxation, which is not conducive to athletes' physical and mental health, and is also easy to consume athletes' professional life. Because the training strategy is always the same, under the unscientific training mechanism, athletes are not only easily injured, but also unable to improve their self-ability.

3.2 Unreasonable amount of exercise

Volleyball players need high-intensity training, and an excellent volleyball player also needs tenacious willpower. There is nothing wrong with these requirements, but in practical training, coaches and athletes are too eager for willpower, even if the exercise exceed the athletes' physical load. First, volleyball players exercise too much, which leads to their physical and mental exhaustion, and is not good for the improvement of technology and quality; secondly, when athletes are injured or sick, it is very reasonable to reduce the amount of exercise. Although injury training can really exercise people's willpower, it also causes great harm to athletes. Third, in training, the arrangement of the amount of exercise should be coordinated with the athletes' own abilities and energy, so as to achieve the best results.

3.3 Antiquated concept of athletes

In volleyball training in China, not only the training strategy is outdated, but also the athletes' own ideas are antiquated. Most volleyball players mainly think that they become "veteran players" at the age of 30, and there will be no

new development after that. Therefore, when these athletes reach a certain age, their requirements for themselves gradually decrease, and they are prone to lack of confidence in training and competition, often ending their sports career prematurely. First of all, 30-year-old athletes, although their energy and physical quality are not as good as before, are still in their prime, and can make up for their lack of physical fitness through certain training; secondly, volleyball is a skill-based sport, and the skills and experience of athletes are still crucial. Compared with younger volleyball players, “veteran players” have irreplaceable advantages. Finally, there are many examples that show that as long as volleyball players can adjust their own state, their professional life can be prolonged.

4. Innovative development of volleyball sports science

4.1 To develop reasonable training objectives

Reasonable training objectives are the basis of scientific training, and blind training reform will not achieve results. First of all, the training goal can't go beyond the reasonable scope. Progress is a process of accumulating slowly, and it is unrealistic to have a skyrocketing rise. Every athlete needs to make progress gradually according to his own strength to prevent problems due to quick success and instant benefit. Secondly, the goal of volleyball training should be formulated according to the level of athletes, competition system and sports theory. It is unbalanced to consider only one aspect of training, and it is difficult to improve the actual combat ability of athletes in the end, so that their efforts and gains cannot be proportional. Finally, as the saying goes, only when there is a goal can there be motivation, and only when a standard is set can the coach have the direction to work together with the athletes. Otherwise, the whole team is like a mess, and it is difficult to improve the efficiency. The goals of reasonable training mainly include team goals and individual goals, which come from coaches and athletes' understanding of individuality and commonality.

4.2 To scientifically formulate training methods of volleyball

First of all, it is necessary to strengthen the practice of volleyball technical movements and master the variability of technical movements. Every technical action of volleyball has its corresponding specifications, standards and application scope. Whether the technical action is standard or not and whether it conforms to the application scope will have a direct impact on the game results. Therefore, strengthening the practice of movement technique is the foundation of forming the application consciousness, and at the same time, it is also an important guarantee to obtain good technical effect. Volleyball is highly changeable. Therefore, the use of technical movements needs to be effective, practical and reasonable, and it is necessary to constantly adjust technical movements according to different situations on the spot to achieve the purpose of defense or attack. The adaptability of athletes depends directly on their mastery of technical movements.

Secondly, it is necessary to enhance students' learning of volleyball theory and cultivate correct volleyball consciousness. In the process of volleyball training, physical training and technical and tactical training are important, but the study of scientific and cultural knowledge and volleyball theoretical knowledge is also essential. Cultivating the correct volleyball consciousness should be based on imparting the theoretical knowledge of volleyball. Athletes should learn the theoretical knowledge of psychology, physiology, sports biomechanics and other disciplines, so as to promote the formation of volleyball consciousness. Moreover, students should learn to adjust themselves in the process.

Finally, attention should be paid to the cultivation of athletes' self-adaptability and observation ability. Observation ability is particularly important to their judgment and performance in volleyball practice. The cultivation of observation ability should pay attention not only to its breadth, but also to its depth. In addition, whether an athlete's field of vision is wide enough will directly affect their ability to observe. When their field of vision is wide enough, they can receive more stimuli from different levels, and the reflection foundation formed by observation ability will be more solid, thus speeding up the judgment and reaction speed, and vice versa. The training of strain capacity is mainly to train athletes' ability to respond quickly to technical movements under non-confrontational conditions, so that they can fully combine learning with practice, use and change. It can deepen and strengthen their confrontation consciousness in the process of volleyball. Different offensive and defensive tactics will be used accordingly in different confrontations, which will

fully test athletes' adaptability. Only by constantly improving their adaptability can they use technical movements more easily in confrontation.

5. Conclusion

To sum up, volleyball is a worldwide sport, and it is in a stage of rapid development. Although volleyball has a solid foundation in China, it has not kept pace with the times in training, so there is no way to continue to make progress. In order to strengthen the actual combat ability and physical and mental quality of athletes and promote the sustainable development of Chinese volleyball, coaches must start with goals, concepts and the whole training process, accelerate the scientific process of volleyball training activities, and create a scientific training system as soon as possible, so that Chinese volleyball can achieve better results.

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