

The Influence of Physical Training on the Physical Confrontation Ability of College Basketball Players

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ABSTRACT

This study uses literature review, expert interview, and logical analysis to investigate the impact of physical training on the physical resistance ability of college basketball players. Through analysis, it is found that physical training can effectively improve the physical resistance ability of college basketball players in three aspects: body shape, physiological function, and sports quality. Based on the analysis results, the following suggestions are proposed: deepen the combination of physical training and technology; Innovate physical training methods and stay at the forefront of training; Arrange physical training tailored to the physical characteristics of athletes; Pay attention to the physical recovery process in physical training.

KEYWORDS

Physical Training; Physical Resistance Ability; Basketball Player.

1. INTRODUCTION

Basketball is widely popular worldwide, and in China, there is a considerable number of basketball enthusiasts. Yao Ming, as the first Asian top scorer, entered the American professional basketball league, and the Chinese men's basketball team reached the pinnacle of Asia, further promoting Chinese sports to the world. Basketball is a sport that requires extremely high physical resistance from athletes, and physical training is particularly important for contemporary college basketball players. Physical training has a crucial impact on the physical resistance of college basketball players.

2. RESEARCH SUBJECTS AND METHODS

2.1. Research Object

The impact of physical training on the physical resistance ability of college basketball players.

2.2. Research Methods

2.2.1. Literature Review Method

By consulting materials from China National Knowledge Infrastructure and libraries, relevant domestic and foreign research literature on the application of physical training in basketball confrontation was obtained, providing theoretical basis for this study.

2.2.2. Expert Interview Method

Conduct a survey through interviews with physical education teachers and coaches at Xi'an Petroleum University to obtain their views and suggestions on basketball physical training.

3. RESEARCH CONTENT

3.1. Overview of Physical Training

Physical fitness training: Physical fitness refers to the ability to exercise directly determined by physical conditions and physiological functions. The level of physical fitness of athletes depends on three aspects: body shape, physiological function, and athletic ability^[1]. Among them, physical form and physiological function are the material basis of physical fitness, and athletic ability is an important manifestation of physical fitness.

3.2. Overview of "Basketball Confrontation"

The term 'confrontation' refers to a state of mutual opposition without any mediation or easing. The essence of a basketball game is for both parties to play under the same conditions: technical, tactical, physical, psychological, and other factors. The main characteristics of today's basketball duels are intense, comprehensive, random, coordinated, and covert. The confrontational nature of basketball games determines that basketball players must engage in high-intensity confrontations and continuously complete confrontational technical movements when executing tactical plans. Therefore, in order to develop unique professional matchmaking skills in China and narrow the technical gap with world-class teams, it is necessary to have a better understanding of the reflection and performance of basketball matchmaking skills and their rules, and further strengthen and improve the awareness of basketball matchmaking in China. skill. And enrich and build basketball. The form, content, methods, and means of practicing adversarial skills.

3.3. Manifestations of "Basketball Adversarial Ability"

The physical confrontation in today's basketball offense and defense has spread to players' physical characteristics such as strength, speed, and endurance, and the focused performance in confrontation is becoming increasingly common and diverse. The combat effectiveness and endurance of a player have become important indicators for measuring their basketball performance and the overall strength of the team. In basketball, most players have a strong sense of active physical confrontation, and defensive players can improve their skills and tactics in intense physical confrontation. Defensive players can engage in intense personal defense at specific times and spaces. Players from the best teams in the world typically utilize their bodies to take advantage of attacking positions in their attacks.

At the moment of receiving the ball, first protect the ball with your body, actively push the nearest defensive player, and forcefully take offensive actions such as passing, dribbling, rushing, and throwing the ball. An open posture and strong arms block the opponent's attacking movements, strictly prohibiting the opponent from entering the habitual attacking area, and preventing attackers from making habitual projections that interfere with the opponent's attacking rhythm^[2].

3.4. The Importance of Physical Training for Basketball Sports

Basketball is a sport that requires extremely high physical fitness: in terms of body shape, basketball is a long person sport, and usually tall and heavy athletes have an advantage in basketball games. In terms of physiological functions, basketball consumes a huge amount of energy, intense physical confrontation, and long-term operation of the body, resulting in a large amount of energy consumption. The entire process is mixed with anaerobic and aerobic energy supply forms, which requires extremely high physiological functions. In terms of athletic quality, basketball, due to its unique specialized skills, requires a high level of athletic ability from athletes. Fast breaks and transitions between offense and defense require a certain level of speed; Striving for rebounds and jump shots requires a certain level of strength and quality; The rhythm of attack and defense is constantly changing, and long-term energy consumption requires a certain level of endurance;

Techniques such as dribbling and dunking require a certain level of agility and flexibility^[3]. It can be seen that physical training is extremely important for basketball players.

Choosing a certain method for physical training of basketball players will inevitably have a comprehensive impact on their physical resistance ability.

4. RESEARCH RESULTS

4.1. The Impact of Body Shape Training on the Physical Confrontation Ability of Basketball Players

The characteristics of basketball require athletes to have a body shape that is suitable for their specific skills and has advantages. Through body shape training, corresponding athletic fitness can be improved, thereby enhancing competitive strength. Excluding the influence of genetic factors, the postnatal physical fitness training of basketball mainly focuses on the following aspects: firstly, reducing and improving body fat percentage: by increasing the proportion of aerobic exercise in training tasks and adjusting diet to reduce athletes' body fat percentage, it will be beneficial to reduce their own weight, improve their movement speed, jumping height, and extend their exercise time in the game. Conversely, increasing body fat percentage will to some extent enhance their resistance ability; 2) Increasing muscle dimension: In certain specific technical movements, increasing muscle dimension will be beneficial for improving movement stability and increasing the success rate of the technical movement. Increasing ankle joint dimension will effectively help athletes avoid damage to the lateral collateral ligament of the ankle joint; 3) Arrange

Body shape training helps improve athletes' coordination ability and enables them to perform efficient and visually appealing movements during competitions.

4.2. The Impact of Physiological Function Training on the Physical Confrontation Ability of Basketball Players

Basketball is a highly comprehensive sport, and choosing appropriate physiological training methods will help athletes improve their physical resistance at the micro level^[4]. Adopting the continuous training method, long duration and uninterrupted low-intensity training is used to improve athletes' cardiovascular function, develop aerobic endurance, and provide guarantees for athletes to fight until the last moment and reduce errors during the decisive period of the competition; Increasing the proportion of anaerobic training during training and supplementing protein can effectively increase the percentage of fast muscle fibers, thereby improving strength and fitness.

4.3. The Impact of Sports Quality Training on the Physical Confrontation Ability of Basketball Players

The improvement of physical resistance ability will be directly manifested after physical fitness training. The use of transformation training and game training methods can effectively improve athletes' agility, and attention should be paid to avoiding arranging agility training when fatigued. Adopting active training methods such as walking balance beams and swinging on swings can effectively exercise athletes' vestibular function, thereby helping to improve their balance ability. Increasing the proportion of anaerobic training will effectively develop the energy supply capacity of the phosphate system, and using repetitive training methods such as short distance rapid running within 10 seconds can improve athletes' speed quality. The use of electrical stimulation will increase the mobilization ratio of muscle fibers, thereby enhancing the strength and fitness of athletes. By practicing other events such as sprinting in track and field, listening to gunshots and commands to sprint can effectively accelerate athletes' reaction speed and shorten reaction time.

5. CONCLUSION

Through various forms of physical training, basketball players' physical resistance can be effectively improved in three aspects: in terms of body shape, physical training can enhance athletes' physical resistance by controlling body fat percentage, increasing muscle dimensions, and improving their coordination ability; In terms of physiological function, physical training improves athletes' cardiovascular function and increases the percentage of fast muscle fibers to enhance their physical resistance; In terms of physical fitness, physical training can improve athletes' agility and muscle fiber mobilization ratio to enhance their strength, and shorten reaction time to speed up athletes' reaction speed.

6. SUGGESTIONS

6.1. Deepen the Integration of Physical Training and Technology

In the new era, sports training is more and more closely linked with mobile Internet and artificial intelligence. In the process of sports training, the detection of athletes' physical functions and physiological indicators is becoming more and more scientific, and athletes' physical resistance is easier to be reflected through scientific indicators. The impact of physical training on athletes' physical resistance indicators during physiological function training often relies on scientific methods. The scientific use of smart wearable devices can timely and effectively obtain athletes' physiological feedback, thereby improving the safety and efficiency of physical training.

6.2. Innovate Physical Training Methods and Stay at the Forefront of Training

Innovation is the driving force of progress, and there are many examples of Chinese sports winning various events due to innovation. In the physical training of basketball players, innovative physical training methods are an important means to enhance their physical resistance ability. If we make full use of the natural environment in China's special regions and adopt high-altitude training methods to enhance athletes' cardiorespiratory abilities in oxygen deficient environments, it will help to make a leap forward in aerobic resistance. In addition, the innovative combination of physical training methods can provide diverse choices for basketball, which requires extremely high physical confrontation ability.

6.3. Arrange Physical Training based on the Characteristics of Athletes' Physical Resistance Ability

The physical confrontation ability of different basketball players varies, and basketball players in different positions have greater differences in their requirements for physical confrontation. In the process of physical training, it is advisable to combine basic physical training with specialized physical training in a reasonable way. Moreover, targeted physical training prescriptions should be arranged according to each athlete's own physical resistance ability to achieve efficient training. While avoiding useless training, the negative feedback effect of a certain physical training on individual athletes' physical resistance ability should be reduced^[5].

6.4. Emphasize the Physical Recovery Process in Physical Training

Good physical fitness can promote the speed of athletes' physical recovery after the competition. The better the player's own quality, the stronger their ability to resist fatigue and recover. Especially during high-intensity or high-density competition periods, players can quickly recover their physical abilities, which will provide a guarantee for winning the game. Due to the high intensity of basketball games, it is almost impossible for athletes to maintain a normal level and complete a game. At this time,

physical recovery during intermission is particularly important. Some schedules are tightly arranged, and athletes usually play multiple games in a short period of time. The degree of physical recovery directly determines the performance of the game. The various departments of the participating teams should closely coordinate to clear all obstacles for the athletes' physical recovery and ensure that they display their best physical resistance on the field.

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