

Causes and Prevention of Sports Injury in Physical Fitness Training of College Students

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Abstract: With the progress of society and the development of economy, more and more people have more professional requirements and more scientific methods for physical training. In order to complete every physical activity, physical training is an essential physical exercise activity, it can not only improve your muscle endurance but also improve your cardiopulmonary function, so that you can exercise more. College students in our country also often carry out physical training, but due to various subjective and objective factors, the physical training of college students will often appear sports injury problems. This paper analyzes the causes of sports injury in college students' skill training, and gives the corresponding preventive measures.

1. Introduction

Physical training is a necessary physical education course for college students. Physical fitness includes speed, endurance, strength, coordination, flexibility and agility, through the training of these contents to improve students' sports quality, physical function to better adapt to learning sports, so that students' physical form more suitable and meet the requirements of sports, improve the ability of sports. Physical fitness includes congenital physical fitness and acquired physical fitness, congenital physical fitness is determined by the heredity of birth, and in order to improve acquired physical fitness, must be through physical training to improve [1]. But at present, the physical training of college students has the problem of sports injury in physical training, which is caused by the students' internal and external factors and external factors.(Figure I)

2. Causes Sports Injury in Physical Training of College Students

2.1. Subjective Factors

Physical training is not only the test of physical fitness, but also the practice of learning sports knowledge. In order to improve physical fitness, most students only pay attention to the intensity of physical training, and often ignore the basic knowledge of sports. In training can not be timely analysis of their own physical problems, long-term physical problems, will cause physical training in the exercise damage, to the body brings great harm.

Physical training organizers in the organization of physical training activities, lack of professional, basic sports knowledge, students in physical training problems can not be found in time, and give professional guidance to correct. Students can not take timely and effective treatment when sudden sports injury occurs [2]. After the training, there is no problem analysis and cause analysis of the sports injury, and it is impossible to sum up the timely and effective experience to actively prevent the sports injury problem in the future.

Physiological factors are an important part of participants' physical training effect. Sleep quality is not good or the physical state of injury after recovery is relatively poor, muscle volume and slow response speed, in physical training, can not adapt to training intensity in time, will cause certain damage to the body. The psychological problems of the participants will also affect the physical training, when the participants are depressed and lost and some negative emotions are dominant, it will greatly affect the degree of physical training movement norms, resulting in physical training sports injury [3].



Figure 1 Physical training.

2.2. Objective Factors

During physical training, the muscles must be activated and the circulatory system strengthened by preparation. If there is no adequate preparation schedule, the muscle and body circulatory system can not receive high intensity physical training quickly, then it will cause sports injury [4].

First, the training intensity is too large. Our body joints and muscles have the corresponding tolerance, so when starting training must be within the physical tolerance of training. Especially in the strength training, according to the actual bearing situation to train, but often in order to improve the training performance, accept the strength training with great resistance, resulting in joint and muscle damage.(Figure II)



Figure 2 Strength training

Secondly, the amount of physical training is large. There is no reasonable arrangement of training time and training times when carrying out physical training, the training time is too long and the training times are too frequent, which will cause local burden and pressure on the students' body muscles and joints, and the pressure of many times for a long time will increase the degree of load and increase the risk of sports injury.

Finally, the training method is unreasonable. The unreasonable training method mainly consists of two aspects: the specific training content arrangement is not scientific and the training method is not standard. In the specific training content arrangement, the organizer should be speed, endurance, strength, flexibility, coordination and agility of the six aspects of the uniform distribution. In order to improve the training performance, many organizers will conduct centralized training for a certain project, which violates the movement law of human body training and increases the risk of sports injury [5]. Training mode is not standard refers to the organizers in the organization of training, some professional training action guidance is not standardized, wrong action, repeated exercises will cause sports damage.

Without good training discipline, there is no good training effect. Many organizational vehicles do not emphasize and enforce training discipline when organizing physical training. During the training period, students chase and fight not only cause the uncertainty of the purpose of the training, but also distract the students' training attention and cause sports injury.

Physical training should be carried out with the help of various training instruments and training venues. For example, dumbbells and barbells are used in strength training, but dumbbells and barbells are used frequently, and professional managers are not arranged for quality inspection and

maintenance. In the training will appear the barbell fall off the injury student phenomenon.

3. Prevention of Sports Injury During in Physical Training

3.1. Increased Awareness of Safety Precautions

First of all, students in physical training should make clear that the body is their own rule, in physical training, strengthen self-safety protection. Secondly, the organizers of physical training should pay attention to the safety problems in physical training. Strengthen the guidance and supervision in physical training, improve the safety of physical training to reduce the risk of sports injury. Finally, the school should strengthen the safety maintenance and renewal of physical training instruments and venues, strengthen management, and avoid sports injury caused by instruments or venues.

3.2. Enhanced Learning of Basic Sports Knowledge

Students should strengthen the learning of sports knowledge, master some basic sports knowledge and training skills, and apply the learned knowledge to physical training. In the physical training can be timely according to their own physical problems to correct the movement and sudden movement injury problems of self-processing, reduce the harm to the future. According to their own physical conditions can be developed suitable for their physical training plan, sports injury risk to the minimum. Strengthen self-protection and self-regulation, for example, when they are depressed should actively adjust their emotions to avoid sports injury, can also take leave from the coach to wait for ways to nip hidden dangers in the bud. If you find yourself suffering from sports injury, you should apply for treatment in time.

The organizers of physical training should take part in the training and examination of physical training knowledge in time, firmly grasp the knowledge of sports, and do a good job of supervision and professional guidance to students in physical training.

3.3. Scientific Development of Training Elements

Scientific and reasonable arrangement of training can ensure the smooth progress of training and avoid the emergence of sports injury. It is necessary to avoid excessive training intensity, large training volume and unreasonable training methods. First of all, students should be within the range of muscle physical training, in strength training should be within the limits. Secondly, we should arrange the training times according to the local weather, climate and students' actual situation, give the body muscles and joints enough rest time, and ensure that the body muscles and joints basically return to the best condition during the next training. Finally, the training method must be scientific and reasonable, in line with the movement law of human body training. The organizer of skill training should assign six aspects of physical training, not only to carry out individual training for each aspect, but also to combine several parts of it to carry out combined training, which not only solves the boring training, but also improves the training results.

In the physical training must be prepared for the activities of scientific and reasonable arrangements. Physical fitness training organizers should make a scientific and reasonable plan of preparatory activities in advance and carry out preparatory activities in accordance with strict requirements. This can speed up the body's circulatory system, stimulate muscles, activate muscles, and adapt to the next high-intensity physical training.(Figure III)



Figure 3 Physical fitness preparation

3.4. Timely Physical Nutrition

Because physical training makes the body more active, the need for nutrition will also be higher. Yes. Protein consumption, fat decomposition, water consumption must be timely supplement. If the protein supplement is not timely, it will lead to muscle damage in high-intensity exercise, will appear muscle strain phenomenon. Should replenish water in time, otherwise can increase blood viscosity. Due to the large amount of exercise, sweat and mineral consumption during physical training, it is necessary to supplement mineral energy, otherwise it will affect bone development and recovery and increase the risk of sports injury.

3.5. Enhanced Management of Sports Equipment and Venues and Training Discipline

First of all, we should strengthen the management of sports equipment and venues, and check and repair the training equipment before physical training to prevent sports injury caused by equipment problems. Secondly, students can use suitable sports protective equipment to reduce the damage that occurs in the body during exercise. For common ankle joint, elbow joint, knee joint can use ankle protection, knee protection, elbow protection and so on can also use bandages. Finally, in each training precursor can train the organizer to emphasize the training discipline, to ensure the training effect and training purpose, to prevent physical training, due to the students high random sports injury.

4. Concluding Remarks

Physical training has high requirements in physical training in colleges and universities at present, which is an important aspect of cultivating students' physical quality and sports ability. However, physical training is often accompanied by the problem of sports injury, mainly due to the lack of knowledge of sports, psychological and physical problems of trainers, inappropriate arrangements for preparation activities, unreasonable training content, training discipline is not strict, and training equipment and training site problems completed. Therefore, it is necessary to raise the awareness of safety prevention, strengthen the study of basic knowledge of sports, formulate scientific training contents, supplement body nutrition in time, and strengthen the management of sports equipment and venues and training discipline, which can not only ensure the training effect of physical training and reduce the risk of sports injury in physical training.

References

- [1] Gao, Liqing. Causes and Prevention of Sports Injury in Physical Fitness Training of Higher Vocational Students. *Sports Technology*, vol. 40, no. 05, pp. 22-23, 2019.
- [2] Zheng, Kai. Common Badminton Sports Injury and Targeted Physical Training. *Contemporary*

Sports Technology, vol. 9, no. 27, pp. 40-41, 2019.

[3] Wang, Yongling. Analysis on Physical Fitness Training Methods in Physical Education Teaching. The Way to Success, vol. 20, pp. 97, 2019.

[4] Su, Songpeng. Effect of physical training on preventing basketball injury in colleges and universities. Contemporary Sports Science and Technology, vol. 8, no. 24, pp. 17-19, 2018.

[5] Yang, Zhengsheng. A Theoretical Construction and Empirical Study on Preventive Physical Fitness Training for Basketball Players. Beijing Physical Education University, 2018.