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The Safety Control and Injury Prevention of Collegiate SPORT Activities in CHINA

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Abstract

'Myopia', 'obesity', 'decline in physical fitness' and other sub-health phenomena have always been an urgent problem for Chinese college students to improve the quality of their education and all-round development. To comprehensively improve the physical and mental health of college student's education, the Chinese government has issued many policies urging college students to actively participate in sports activities. After the release of a series of policies, a large number of college students left their dorms to spend more time doing sports activities. As a result, their physical fitness improved, and the sub-health phenomenon was alleviated. However, with the frequent occurrence of sports injury accidents, many college students are afraid to participate in sports activities, and many parents are also afraid of sports activities. As managers of college students and organizers of sports activities, Chinese colleges also face multiple pressures from the society, parents and students. Some colleges have prohibited the holding of dangerous sports activities and heavily restrict students' participation in sports activities. The role of improving students' physical and mental health through sports has also been gradually weakened. A new, important topic in China is ensuring the normal development of college sports activities and the continuous improvement of college students' physical and mental health and the effective and reasonable solution to reduce the harm caused by sports injury accidents. Accordingly, this paper identifies the current safety of college students' physical activity in China. It explores the reasons for the safety of their physical activity and puts forward appropriate protective strategies.

This paper found that sports injury accidents occur in colleges and universities in different regions with different degrees of injury. The reasons are student, school and environmental factors. Based on the main reasons for the occurrence of accidents, the following suggestions are put forward: 1. The protection strategy of student safety: College students should pay attention to individual behavior and enhance their awareness of protection when participating in sports activities. 2. The protection strategy of college security: Colleges should conduct duplicate protection before and after the occurrence of injury accidents and regularly publicize sports safety knowledge, so students understand the causes of injury accidents. It should also improve the maintenance and management system of sports venues and facilities to reduce the number of injuries caused by accidents. Also, it should increase the medical investment and introduce an insurance system. 3. The protection strategy of social and environmental safety: it is hoped that the Chinese government will continue to issue policies that lead to the establishment of a security system for college students' sports activities. It is also hoped that the Chinese government and all sectors of society will increase investment in college sports to ensure the maintenance and renewal of college sports venues and facilities.

[Keywords] Sports Activities, Safety Control, Safety Prevention, Prevention Strategy, Risk Management

1. Introduction

Recently, China has entered a new development stage of creating a generally prosperous society and building a harmonious socialist society. The living standards of people have mainly improved, and sports in daily life and national fitness have become increasingly popular. At a critical moment of modernization in China, its general sports administration has made a 'national fitness program' to arouse enthusiasm of the entire society and improve the nation's awareness of sports. National fitness consists of mass sports fitness activities which aim to mobilize the masses to participate in these activities and promote physical and mental health[1]. For contemporary Chinese college students, their state of physical health constitutes an essential part of the existing national fitness program. Consequently, Chinese colleges and universities are actively engaged in sport activities in response to the national call. However, the issue of safety problems caused by sports activities of colleges and universities in China is increasingly becoming more critical because of the rapid development of sports activities in colleges and universities in China. The occurrence of sports safety accidents in colleges and universities hurts not only the physical and mental health of college students, but also adversely affects the Chinese universities. Dong(2016) selected 20 representative cases of college sports injury in China to study. It revealed that there were 4 cases caused death and other students in 16 cases got injured in different levels. There were 3 cases caused hemiplegia and cognitive impairment for severe brain damage and students have lost the ability to care for the injury. Also there were 5 cases of fractures in different parts of the students' bodies and 5 of eye injuries[2]. These injury accidents have an irreversible impact on the normal life of the injured students, leading to live with the care of professional nursing, or even deprive some student lives. Due to judicial disputes, colleges have been criticized by public and the safety system of colleges has been questioned. In order to avoid the recurrence of injury incidents, some involved colleges have reduced or even banned physical education and sports activities, which has seriously affected the development of college teaching and t physical education.

In order to reduce and control the security issues caused by school sports activities , the Ministry of Education issued "interim measures for risk prevention and control of school sports" by the Chinese government in 2015[3]. It rules that the management responsibility of sports risk prevention and control in college, general requirements and accident treatment method. Taking sports risk prevention and control as the key point of education management and supervision is mainly emphasized by Education administrative department, combining with sound sports risk prevention and control mechanism and implement the responsibility and measures of prevention and control. It manifests that education administrative departments and colleges should purchase sports equipment and facilities in strict accordance with the relevant national standards for products and quality. In the absence of national and industrial standards, the suppliers are required to provide safety testing and evaluation reports of third-party professional institutions and record the service life, regular inspection and maintenance of the equipment; In addition, teachers should carefully check the sports equipment and venues before the teaching and training of physical education classes. In the teaching and training, teachers should break down technically difficult movements in detail and take proper protection and assistance. When organizing large-scale sports activities or sports competitions, the education administrative departments or colleges shall establish safety management agencies, formulate safety emergency plans, and arrange medical personnel and supervise them; To organize students to participate in cross-regional sports activities and sports competitions, students and their parents should be provided with safety notices in accordance with the requirements of the activities or competitions, so as to obtain written feedback from parents; The education administrative departments and colleges need improve the insurance mechanism for students accidental injuries in sports improve the risk management and transfer mechanism through purchasing school liability insurance and encouraging parents or guardians to voluntarily purchase accidental injuries insurance for students. The regulations set out guidelines for education department, colleges and physical education teachers, but some of the rules cannot

be fully implemented because of the actual situation. In addition, as the participants of sports activities, college students' own behaviors have a crucial impact on the safety of sports activities. Therefore, for comprehensively breaking through this problem, this study analyzed the control and prevention issues, combining the existing Chinese situation from the sports activities in colleges and universities, from the perspectives of college students, schools and society, to seek and suggest reasonable strategies for the sports environments and remove the risk related problems.

2. The Current Situation of Safety in College Sport Activities in China

The safety of the college sports activities includes the sports activities of the whole process of physical, mental and property safety. College sports injury accident refers to the incidents which can harm these three aspects[4]. The injury usually happens in the sports venues. College students almost get injury in physical education teaching, extracurricular sports activities, extracurricular sports training, and sports competition, which follow the administrative department of education and school organization or organizations[5].

According to the data of China's colleges sports injury accident in partial cities and provinces, it found that all the colleges and universities happened injury accidents of different levels in investigation. Li(2104) investigated the safety accident types and causes of colleges in Zhejiang province in China for recent three years. The ratio of students who hurt in sports activities was 33.2%. The incidence rate of students in junior colleges was 41.5%[6]. Yu(2017) had carried out statistical analysis of some of the sports injuries in China's Sichuan colleges in past five years, basing on different sports activities. The results showed that the most sporting events that caused accidents were gymnastics, football and basketball. The rate respectively were 21.95%, 19.51% and 17.07%[7]. Wei, Zhang, and Lin(2016) in the survey of sports injuries of college students in China's Guangxi province showed that the rate of incidents of sports injuries was 34.8%[8]. Shang(2015) found that college sports

safety accident frequency is higher, at 41.9% in Cangzhou by investigating the current situation of colleges sports activities accidents in Cangzhou, Hebei province[9]. The author has studied the risk of extracurricular sport activities in colleges and universities in Shenyang, Liaoning province. It found that the rate of sports accidents of the students in investigation is 73%[10].

As a result of the excessive number of cities and provinces in China, this paper only selects some provinces and cities for sports injuries data. According to the data of the collation, the high frequency of sports safety accidents in Chinese colleges should be taken seriously.

3. The Causes of the Safety of Sports Activities in Chinese Colleges

There are various causes of sports injury accidents in college students, which need to be identified with scientific theories and reasonable methods. It is the basis of college students' sports activity safety protection. The primary process includes identifying the risk factors that may cause college students' sports injury accidents and classifying the identified risk factors. At present, many scholars select the possible causes of college students' sports injury accidents based on risk identification methods, including Delphi method, SWOT analysis method and risk checklist. Risk classification methods mainly include the Delphi method and mathematical statistics method[11]. The diversity of identification and classification methods makes the classification of risk factors not reach a harmonious unity, but some classifications have been affirmed and continue to be used. Wang(2011) considers that there are three factors of the risk of school sports injury accident: the risk of material factor, human factor, management factor[12]. Yu(2017) considers that the main factors of sports safety risk in colleges are physical factors, human factors, environmental factors, and other factors[13]. Cao, Zhu, and Zhang(2017) believe that the influence factors of sports safety in schools is management factors, personnel factors, material factors and environmental factors[14].

Different risk categories also contain multiple factors that lead to the occurrence of sports injury accidents. The factors are so many that they are not singled out in this paper. Through consulting a significant amount of research literature, this paper selects and summarizes the risk factors with the highest frequency and the most comprehensive range. On this basis, according to the characteristics of uncertainty, prevention and predictability of risk factors, and combined with the research views of other scholars, the selected risk factors that can cause college students' sports injury accidents are classified into student factors, college factors and environmental factors. Among them, students' factors are mainly inappropriate behaviors of other students, a vague awareness of injuries caused by sports activities, and lack of knowledge of emergency medical treatment when participating in sports activities. School factors are mainly less publicity of sports safety prevention knowledge, damage to some venues and equipment and maintenance not done in time. Medical treatment and the insurance system need to be improved. Environmental factors mainly include the natural environment and the social environment. Natural factors include weather, geography and, sudden, non-human factors. Social environmental factors are mainly political and economic.

4. The Measures of the Prevention and Control of Sports Activities in Colleges

Reasonable safety prevention strategies can reduce or prevent injuries in physical activities. Effective control measures can reduce the degree of damage caused by sports activities[15]. Some suggestions for prevention are put forward according to the reasons for sports accidents.

4.1. The prevention and control measures for college students

Students are the main participants in the sports activities in colleges; their behavior, knowledge of sports safety and the ability to deal with accidents are especially important[16].

First, the student's behavior plays a leading role in the safety of sports activities, and reasonable physical behavior can significantly reduce the occurrence of safety accidents. For example: do warm-ups before the activities and then relax after the activities; do not do dangerous actions beyond your ability. Second, self-protection awareness should be improved. Such as watch more cases of sports injury accidents to understand the causes and types of sports injury accidents, to reduce risk when encountering similar situations and concentrate on physical activity and carry emergency pain or hemostatic medications. Also, students should be able to improve their ability to cope with accidents, so that they can provide simple and effective treatment after the accident, thereby reducing the risk of accidents, for example, participating in sports safety and protection lectures or self-study injury emergency medical treatment knowledge and storing the emergency contact information of the local hospital on a mobile device.

4.2. The prevention and control measures for colleges

'The sports emergency mechanism should be kept in case of priority and taken as a precaution, through strict management, system construction, contingency planning and publicity'[17]. Accordingly, this paper concludes that there should be prevention and control measures before and after an accident.

Prevention and control strategies before the occurrence of sports injury accidents mainly focus on prevention, such as taking reasonable measures to reduce the probability of sports injury accidents[18]. The existing safety prevention at the colleges does not only require the support of the concept and the policy but the action. First of all, it is necessary to share sports safety knowledge regularly for students to understand the cause of injury accidents. Regular lectures on sports activity safety awareness and popularization activities in colleges assist college students in recognizing potential risks in activities, so they can avoid the risks in advance. Students should master correct medical treatment knowledge. Second, colleges should set up health records for students and update them regularly. Although 'interim measures for risk

prevention and control of school sports' issued by Chinese government has asked the colleges establish health files of primary and middle school students, but in terms of the situation, the long-term situation of stay up late, insomnia, obesity, stress and bad habits such as drinking alcohol and smoking have contributed to physical deterioration of college students. The health records should be established and update through the regular physical examination. Through the detailed physical examination, colleges can accurately understand the physical conditions of college students to carry out physical education more reasonable sports activities and avoid excessive intensity causing sports injury accidents. By regularly updating the physical examination data, colleges can know the changes of college students' physical conditions in different periods, and decide whether or not college students can participate in sports activities or which event they can participate according to their physical conditions, so as to reduce the probability of sports injury accidents. In addition, the health records of college students also help to record the medical history of college students and whether it is a special constitution. If there are special circumstances, colleges can also communicate with students or parents in time to reduce or prohibit college students from participating in sports activities and avoid sports injury accidents caused by special circumstances in advance.

The prevention and control strategies after the occurrence of sports injury accidents mainly focus on control: the reduction of the degree of harm and injury caused by accidents through proper treatment and effective medical treatment[19]. Accordingly, the prevention and control strategies after the occurrence of sports injury accidents are mainly divided into two aspects: 1)establishing a sound medical system. Colleges primarily conduct medical treatment after the student's sports accident. They establish a special department for dealing with students' safety accidents. The medical department at the college contacts an external hospital to provide an effective contingency plan. In this way, the college can deal with the injuries of sports safety accidents after sports safety accident. 2)Jointly establishing a compensation sys-

tem for college sports injuries. For college students, the safety of sports activities is not only premised on reasonable protection, but it also needs adequate finance support. Sports injury accidents not only affect the physical and mental health of students but also place economic pressure on their families due to the treatment and recovery costs, as well as the public pressure on the colleges. A sound compensation system for college sports injuries can effectively solve economic problems and reduce social problems caused by the costs related to accidents. A compensation system set up by a single college may not be sufficient. However compensation amount established by plenty colleges jointly is sufficient and can also serve more college students. In view of the fact that China has a large geographical area and a large number of universities, it is suggested that different provinces should jointly establish the compensation system for college sports injury accidents. Compensation can come from state aid, social and corporate donations, university finances, and each student.

4.3. The prevention and control measures for the environment

This paper holds that the environmental factors that may cause college student sports injury accidents mostly include natural environmental factors and social environmental factors. The former refers to weather, geography and sudden and non-human risk factors. In the process of prevention and control of college students' sports injury accidents, the control ability and predictability of natural environment factors are extreme, and the prevention and control of weather, geography and other factors are relatively straightforward[20]. These factors do not easily cause sports injury accidents. However, sudden and non-human risk factors cannot be prevented and controlled because they are unpredictable and almost uncontrollable. Therefore, sports injury accidents caused by natural environmental factors are not considered in this paper.

Social environmental factors refer to the background and current societal situation[21]. Given the research topic of this paper, the following suggestions are made according to the

political and economic environment. The Chinese government has made great efforts to support the development of college students' physical education, but it should continue to issue policies to guide colleges and society to jointly establish a reasonable and comprehensive security system for college students' sports activities. From an economic aspect, it is suggested that all sectors of society should increase investment in college sports to ensure the maintenance and renewal of college sports venues and facilities.

5. Conclusions

The fundamental goal of educational development is to produce more highly talented people. The historical mission of colleges and universities and an essential means of conveying new strength for China's social progress and economic development is to train high-quality students; good physical and mental quality is the premise of realizing this goal[22]. Therefore, any problems that hinder the development of college students' physical and mental health and conscience should be emphasized. A reasonable protection strategy to prevent sports injury accidents does not only effectively avoid the likelihood of sports injury accidents, but can also minimize the harm they cause. It is highly important to study the safety protection and management of college students' sports when responding to the call of the State to make a small contribution to improve the sub-health of college students, or to promote the sustainable development of college physical and quality education to provide guidance, or to ensure the physical and mental health of college students, and to reduce the incidence of physical injury and harm degree. Currently, Chinese scholars have conducted relevant research on this issue and made some progress. However, due to China's vast size and the apparent differences in the natural environment in different regions, some of the results cannot be applied to the whole country. It is hoped that in the future, more extensive research results can be obtained and various factors leading to injury accidents can be considered that consider local conditions. It is also hoped that this paper

can provide the basis for further research in this field.

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