

The Research on Sports Risk Management and Strategy in Higher Vocational Colleges in China: A Case Study of Guizhou in China

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Abstract

In recent years, China's rapid economic and social development has led to significant expansion in vocational education, including school sports programs in vocational colleges. However, this growth has been accompanied by an increase in school sports injury accidents, raising societal concerns and potentially impeding the development of higher vocational sports. This study aims to investigate the safety risks associated with school sports in Chinese higher vocational colleges, utilizing risk management knowledge systems to analyze and provide recommendations for mitigating these risks. The research employs a theoretical analysis approach, exploring basic concepts of risk management, including risk connotation and risk management content. It analyzes the entire risk management process, with a particular focus on the procedures and methods of risk identification and risk assessment in the context of higher vocational school sports. The study identifies key safety risks in higher vocational school sports and outlines the process of risk management applicable to this context. Based on this analysis, the study offers decision-making recommendations for managing and mitigating safety risks in higher vocational school sports. These findings contribute to the development of more effective risk management strategies in vocational education sports programs, potentially reducing accidents and promoting safer sporting environments in Chinese higher vocational colleges.

Keywords: Vocational colleges; School Sports; Risk Management

Introduction

The Outline of the 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Term Goals for 2035 proposed the long-term goal of 2035, namely, "building a strong country in culture, education, talents, sports and health, reaching a new height in the level of socialist civilization and the quality of the people, and significantly enhancing the soft power of national culture", and pointed out that "building a high-quality education system and a full-cycle health system" is one of the economic and social development goals during the "14th Five-Year Plan" period. In the process of building a strong sports country, talents are a crucial factor, especially the youth group, which represents the hope of the future. Therefore, the Party and the State attach great importance to the development of youth sports in my country.

Several recent studies have highlighted the importance of risk management in school sports. Liu et al. (2022) conducted a comprehensive review of sports injury prevention strategies in Chinese schools, emphasizing the need for systematic risk assessment and management protocols. Their findings suggest that a multifaceted approach, involving both administrative measures and student education, is crucial for reducing sports-related injuries.

Zhang and Wang (2023) investigated the current state of risk management in vocational college sports programs across five provinces in China. Their study revealed significant gaps in risk management practices, particularly in the areas of facility maintenance and emergency response protocols. They argue for the implementation of standardized risk management frameworks tailored to the unique needs of vocational education settings.

In a related study, Chen et al. (2021) examined the legal implications of sports injuries in Chinese higher education institutions. Their analysis of case studies and legal precedents underscores the importance of robust risk management strategies not only for student safety but also for institutional liability protection.

Li and Zhou (2024) focused specifically on the psychological aspects of risk perception among vocational college students engaged in sports activities. Their findings indicate that students' risk awareness and self-protective behaviors can be significantly improved through targeted educational interventions, suggesting an important avenue for risk mitigation strategies.

Lastly, a comparative study by Wang et al. (2023) explored differences in sports risk management practices between regular universities and vocational colleges in China. Their research highlights the unique challenges faced by vocational institutions, including limited resources and diverse student populations, which necessitate tailored risk management approaches.

In the process of school sports, due to the interweaving of various factors such as school management, sports facilities, physical education teachers, students themselves and sports environment, various safety incidents occurred in the process of school sports activities. Therefore, the Guiding Opinions of the General Office of the State Council on Strengthening School Sports to Promote the All-round Development of Students' Physical and Mental Health (Website of the Central People's Government of the People's Republic of China, 2016) emphasized that school sports work should take the following measures: First, it is necessary to establish and improve the risk management mechanism and continuously improve the risk prevention mechanism of school sports to ensure the orderly progress of school sports work. Secondly, strengthen safety education, improve students' safety awareness and self-protection awareness, and enhance emergency response and rescue capabilities. In addition, strengthen the education and training of school leaders, teachers and relevant risk management personnel to enhance their awareness and ability in sports risk management. Schools should also carry out hierarchical management according to the safety risk level of sports equipment and facilities and sports venues, and conduct regular safety inspections and investigations. For key areas with potential safety risks, obvious safety reminders and warning signs should be set up. In addition, it is necessary to improve school liability insurance and actively explore a comprehensive insurance mechanism for students covering sports accidents.

In conclusion, the research background underscores the critical importance of developing effective risk management strategies for school sports in China's higher vocational colleges. The growing emphasis on sports education, coupled with the unique challenges faced by vocational institutions, necessitates a focused examination of current practices and the development of tailored risk management approaches. This study aims to address this gap by exploring the problem of school sports risk management in China's higher vocational colleges and proposing response strategies for various possible risks. The findings are expected to contribute to promoting enthusiasm for school sports risk management and improving risk management practices in China's higher vocational colleges.

Content

Based on the starting point and purpose of this study, the key related concepts are refined, summarized and summarized. The related concepts include higher vocational colleges, risk, sports risk, risk management, sports risk management, school sports risk management, etc. Comprehensive analysis of the risk definitions of various theories: Risk refers to the uncertainty of the final loss caused by an event under specific time, space and other related conditions. The risk mentioned here has three characteristics, namely uncertainty, loss and objectivity.

Uncertainty of risk: The "uncertainty" here includes the uncertainty of whether the risk occurs, the uncertainty of the time of occurrence, the uncertainty of the space of occurrence, and the uncertainty of loss. Objective uncertainty is the deviation between the actual result and the expected result, which can be measured using statistical tools. Subjective uncertainty is an individual's assessment of objective risk, which is related to personal knowledge, experience, psychological state, etc., that is, different people will have different subjective uncertainties when facing the same objective risk.

Risk loss: Not all future uncertainties are risks. Only when losses may occur in the future can they be called risks. Damage is the consequence of a risk accident, and risk is inevitably associated with certain damage. However, it does not mean that the result will definitely be a certain loss, but it means that when all the future results that may be caused by an activity or an event are listed, some losses are included.

Objectivity of risk: Risk is an objective existence that is not subject to human subjective will. No matter how people's ability to recognize, manage and control risks is enhanced, risks cannot be eradicated. Whether people are aware of it or not, and no matter how different everyone's ability or means to recognize risks are, risks always exist objectively. In view of the wide variety of definitions of "risk", it is of extraordinary importance to choose the definition that best suits the actual situation and management goals of the organization for the sake of organizational development. The definition of risk can focus on a certain point or have a certain degree of comprehensiveness, which can be determined according to the organizational development plan. Taking the "sports risk of higher vocational colleges" in this study as an example, if the school's educational goals and curriculum goals, students' psychological development, students' physical and mental health and other aspects are comprehensively considered, the understanding of risk should tend to the uncertainty of the occurrence of accidents, the size of losses, etc. Therefore, this article tends to agree with this definition: risk refers to the uncertainty of the final loss caused by an event under specific time, space and other relevant conditions, and uses this as the theoretical basis for defining "sports management risk of higher vocational colleges".

(1) Risk management

Risk management is an activity based on systematic methods and processes that aims to identify, evaluate, monitor and respond to potential risks to ensure that the organization achieves its goals and minimizes the negative impact of uncertainty. It is an important part of organizational management and can help organizations make wise decisions. In economics, risk management is the process of weighing the benefits and costs of reducing risks and deciding what measures to take. The process of determining the cost-benefit trade-off plan and deciding on the action plan to be taken, including the decision not to take any action, is called risk management. In the book "Risk Management and Insurance", American scholar Wilms et al. proposed that risk management is a management method that minimizes various losses caused by risks at the lowest cost by identifying, measuring and controlling risks.

(2) Constituent elements of risk and their interrelationships

In the previous content, we have briefly and generally defined the relevant concepts involved in school sports risk management. Now we will analyze the theoretical basis of this study. The "sports risk management in higher vocational colleges" studied in this paper specifically refers to the sports courses implemented in higher vocational colleges, sports activities organized by schools, sports activities of clubs, and spontaneous sports activities of students. This study mainly reviews and reviews previous relevant literature from three aspects: physical education courses, physical activities, and club sports activities within the scope of higher vocational colleges, in order to understand the current research progress in related fields.

Based on the definition of the concept of risk by scholars, risk elements include risk factors, risk events, and risk consequences. Risk factors are the basic conditions and indirect factors that trigger risks. In combination with specific circumstances, risk factors are the reasons that promote the occurrence of risk accidents, increase the possibility of their occurrence, or expand the degree of consequential losses. If no risk event occurs, there will be no loss. Risk consequences, namely risk losses, are the manifestation of risk results. In the research or application of risk management in production safety, projects, etc., losses usually refer to the subjective, unintentional, unexpected and unwilling economic value reduction and personal injury and casualties of risk managers.

Risk is an organic whole composed of risk factors, risk events and risk consequences. Risk factors increase the probability of risk events, and the occurrence of risk events may cause consequential losses.

(3) Characteristics of risk.

Regarding the characteristics of risk, through literature review, it is found that many scholars have made detailed elaborations and systematic combings on it from the fields of finance, production, investment, safety, engineering, etc., and summarized the characteristics of risk into seven aspects: Objectivity. Risk is an objective existence independent of consciousness, and it is not subject to human will. As long as there are risk factors, risks will inevitably appear sooner or later. In order to avoid and reduce risks, the first thing to do is to discover and eliminate various potential risk factors that may cause losses in advance, so as to prevent them before they happen. However, the composition of risk factors is diverse, both subjective and objective, and some factors are inherently uncertain, so it is impossible to completely avoid risks unless the event itself is abandoned. Suddenness. The occurrence of risks often gives people a sense of suddenness. On the surface, the sudden occurrence of risks seems to be random and accidental, but in fact it implies a certain "inevitability". When the

factors that determine the occurrence of risks reach a certain amount (a certain critical value), once certain inducing factors are generated, a risk accident will inevitably occur. Therefore, it is necessary to establish a risk early warning system, improve the risk prevention mechanism, and strengthen risk prevention. Variability. Under the joint action and influence of various factors, the nature and degree of risk are always variable and difficult to have a stable form. Therefore, when preventing risks, multiple response plans should be formulated so that when risks occur, targeted plans can be selected to deal with different types of risk events. Intangibility. Unlike general material entities, risks cannot be accurately described and portrayed. Although the intangibility of risks increases the difficulty for people to understand and grasp them, as long as the internal and external factors that cause risks are carefully investigated, it is still possible to use appropriate methods and means to identify and measure risks. Uncertainty. Since it is an objective phenomenon, risks are bound to occur, but it is uncertain when and where they will occur and what consequences they will lead to. For example, the risk of death is a phenomenon that will inevitably occur in life, but it is impossible to determine when a person will die when he is healthy. Sociality. The consequences of risks often bring people unexpected losses of varying degrees, which have a greater social impact on social production and life, and people's property and life, showing a certain degree of sociality. Measurability. Although the occurrence of a specific risk is accidental, sudden and uncertain. However, risks are still traceable. Based on the probability of similar risks in the past, the probability of a specific risk and the severity of its consequences can be measured and evaluated.

(4) Classification of risks

Classifying risks can provide different ideas and interfaces for risk identification and risk response. Many Chinese and foreign scholars have classified risks in various forms according to different standards based on the consideration of facilitating research in theory and taking targeted response strategies in practice. Xu Jinliang (2011) systematically sorted them out. Based on the standard of "whether the risk can bring economic losses", it can be divided into economic risks and non-economic risks. Based on the standard of "risk occurrence environment", it can be divided into static risks and dynamic risks. Static risks refer to the risks of losses or damages caused by irregular changes in natural forces or people's negligent behavior under normal social and economic conditions. For example, losses or damages caused by lightning, earthquakes, etc.; losses or damages caused by fire, explosion, accidental injuries, etc. Static risks have certain regularity and are predictable. Dynamic risks refer to the risks of losses or damages caused by changes in economy, politics, technology and organization. Such as political unrest, population decline, technological progress, changes in consumer preferences, etc. Based on the "cause and consequence of risk loss", it can be divided into major risks and specific risks. The former's losses are non-personal and individual in terms of causes and consequences, and are mostly caused by natural disasters, economic, social and political reasons, with a wide impact on the entire society, such as unemployment, war, earthquakes, floods, etc. The latter's losses are personal or organizational in terms of causes and consequences, such as residential fires, bank thefts, etc. Based on the "whether the risk has the possibility of profit", it can be divided into pure risks and speculative risks. The former is a risk with only the opportunity of loss. The latter is a risk with both the possibility of loss and the possibility of profit. Pure risks can also be divided into four types of risks: personal, property, liability and breach of contract. Personal risk refers to the risk of the possibility of income loss due to death, disability or loss of ability to work, and its causes include death, injury, disease,

unemployment, etc. Property risk may lead to two completely different types of losses: direct loss of property and indirect loss. Direct loss is the loss of property itself; indirect loss is the loss of income and additional expenses caused by the inability to use property. Liability risk refers to the possibility that the current or future income of the tortfeasor will be lost due to the legal liability arising from the tort. According to the law, when a person causes personal or property loss to others due to negligence or fault, the person at fault shall be liable for damages. Breach of contract risk refers to the economic loss of the other party caused by one party's failure to perform the obligations stipulated in the contract, which is more common in project risk management. Based on the "cause of occurrence" as the standard, it can be divided into subjective risk and objective risk. The former is mostly caused by mental and psychological state, which is generally difficult to measure correctly, while the latter can be more accurately calculated by probability. Based on the "cause of loss" as the standard, it can be divided into natural risk and man-made risk. Among them, man-made risk can be divided into behavioral risk, economic risk, political risk and technical risk. The theoretical research on the causes of casualties has a history of more than 100 years. With the development of productivity, changes in production methods, and differences in safety concepts reflected in production relations.

There are various theories on the cause of accidents. Among them, the accident model with management errors as the main cause believes that the direct cause of the accident is the unsafe behavior of people and the unsafe state of things. However, the direct cause of "human error" and "material failure" is often caused by management defects. The latter is an indirect cause, but it is a background factor and often the essential cause of the accident. The unsafe behavior of people can promote the unsafe state of things; and the unsafe state of things will objectively create the environmental conditions for people to have unsafe behavior. Hidden dangers come from the unsafe state of things, and are formed together with management defects or management errors. If the management is proper, timely control, and the unsafe state is resolved, the hidden dangers will naturally be eliminated; once hidden dangers appear objectively, and people have unsafe behavior subjectively, they will appear as safety accidents.

(6) Research status of sports risk management in higher vocational colleges in China

Regarding the current status of sports risk management in higher vocational colleges in China, the physical factors that affect school sports safety mainly include two categories: one is the factors related to sports venues (halls), and the other is the factors related to equipment.

Venue factors.

Zhou Xiaoxia (2018) believes that the sports venues of higher vocational colleges are the primary condition for carrying out training activities. Schools should increase investment in school venue construction. Many sports activities need to be carried out on venues and facilities. The reasonable use of venue equipment can make the expansion training more realistic in the scenario, and can enable students to train in a safe and reliable environment to achieve good teaching results.

Liu Jing (2018) pointed out that higher vocational colleges do not pay enough attention to the construction of sports courses, have not effectively developed sports venues, and are insufficiently equipped with various sports equipment.

Zhang Yu (2019) believes that although the canteens and dormitories of higher vocational colleges meet the existing basic needs, many problems cannot be ignored. The canteen and dormitory buildings have been built for many years. The appearance is old and outdated, and the internal facilities are in poor condition. It is estimated that the total number

of students in the next few years, the number and scale of canteens and dormitories will not be able to meet the demand. In addition, the professional sports team members in competitive training are shared with ordinary vocational students at this stage. Safety issues also need to be taken into consideration. The conditions are objective and specific and need to be improved urgently. Li Mingming (2019) found that when students in vocational colleges participate in sports activities, there is a safety hazard of accidental injury due to the long service life of sports equipment or excessive damage caused by excessive number of people. A considerable proportion of accidental injuries are caused by problems with the facilities of the sports venues. Some venues and facilities have been in disrepair for a long time. For example, the school sports venues are overly worn and slippery, or the horizontal bars are not firmly fixed, causing students to fall. In addition, there is also a situation where the number of school sports venues and facilities is insufficient, and students are crowded and disorderly when participating in sports activities, which may become the cause of accidental injuries. Wu Juan (2019) believes that the opening of sports venues to the public in colleges and universities must keep pace with the times. First, a fixed venue inspection system should be established. Second, the venue equipment should be regularly inspected and repaired. Third, for large-scale events or large-scale competitions, prior inspections and advance debugging should be carried out.

Yu Zhengzheng (2020) pointed out in a study of higher vocational colleges in Zhengzhou that the current shortage of sports venues and equipment is quite serious. The total number of sports venues and the per capita area of indoor venues in most higher vocational colleges do not meet the requirements of the "Catalogue of Facilities and Equipment for Sports Venues in Ordinary Higher Education Institutions" of the Ministry of Education, and cannot fully meet the needs of students for sports.

Yue Penghui (2021) believes that damaged sports equipment and facilities bring hidden dangers of accidental injuries when students are engaged in sports activities. A large part of the accidental injuries are caused by problems with sports venues and facilities. Some school sports venues have excessive wear and tear, or the equipment is not firmly fixed, causing student injuries. In addition, there is also a situation where the school sports venue facilities are insufficient per student and the spatial layout is unreasonable, and the order is chaotic when students are engaged in sports activities.

Equipment factors.

Duan Kaizhou (2019) investigated the sports equipment in higher vocational colleges and concluded that the lack of sports equipment means that sports teaching activities cannot be guaranteed by hardware, which limits the content arrangement of sports teaching activities and has an adverse impact on the effectiveness of sports teaching activities. Many equipment are placed outdoors and exposed to wind and rain for many years. The school neglects the management of these equipment and does not carry out repairs and maintenance. In addition, many equipment have been used for a long time, so the safety of sports equipment cannot be guaranteed.

Zhang Qi and Xia Zhiqin (2019) believe that the venues for sports in colleges and universities are often major ball games and gymnastics venues. From the perspective of college logistics management, whenever there is a sports risk, there will be different degrees of damage to sports equipment. When sports risks occur, sometimes it is not necessarily people who suffer the risk, but there is also the possibility that the equipment will be damaged. Therefore, colleges and universities need to improve the management mechanism in terms of logistics support to ensure the safety of equipment.

Liang Lin and Liang Dong (2022) pointed out that with the rapid growth of my country's economy, the country's investment in school sports venues and facilities has continued to increase, and school-related sports venues and facilities will inevitably become more and more complete and rich. With the establishment and improvement of the school sports event system, the types of venues and facilities involved are numerous, and the sports venues and facilities involved are newly built and expanded, and the sports equipment involved is more complicated. The author believes that at present, vocational colleges in Guizhou Province have encountered the problem of new construction and expansion, so the quality of venues and facilities is also a key factor affecting the risk.

Wu Jinjin (2023) pointed out that the application of sports equipment in vocational colleges should be scientific and targeted. In the use of sports equipment and sports venues, daily maintenance should be done well, and sports plans should be made. At the same time, it is necessary to scientifically arrange school equipment and venues, and build training venues with relatively complete functions to ensure the safety of sports competitions, sports activities and physical education.

Liang Meifu (2023) pointed out: In the sports activities of vocational colleges, safe and reliable sports equipment

can effectively ensure the safety of sports activities, improve the performance of athletes, and provide the material basis necessary for scientific training. At the same time, the continuous evolution, popularization and promotion of various sports events have enabled the types and materials of sports equipment to develop rapidly.

According to the fact that college physical education is moving towards high-quality development. This includes improving students' physical fitness and sports skills, as well as strengthening the prevention and control of sports risks. The article also emphasizes the importance of digital technology in college sports education, especially in promoting the joint development of online and offline public services and online classes. Another study from Zhejiang Sports Science focuses on the emergency management mechanism of sports injury accidents in higher vocational colleges. This study conducted a survey of higher vocational colleges in Zhejiang Province, analyzed the problems and constraints of current emergency management, and proposed specific ideas including four aspects: prevention and control mechanism, disposal mechanism, recovery mechanism and learning mechanism.

Overall, China's higher vocational colleges are gradually strengthening sports risk management, especially in improving the quality of physical education, developing competitive sports and strengthening the emergency management of sports injury accidents. However, the specific implementation details and effects may vary from school to school, and further empirical research is needed to gain a deeper understanding.

The author believes that the environmental factors of school sports safety can refer to the relevant theories of organizational environment: Generally speaking, the environment can be divided into internal environment and external environment based on organizational boundaries (system boundaries). First, the internal environment of the organization includes: physical environment, psychological environment, cultural environment, etc. Physical environmental factors include the air, light and lighting, sound (noise and noise), color, etc. at the workplace; organizational cultural environment has at least two levels of content, namely the institutional culture of the organization and the spiritual culture of the organization.

Second, the external environment of the organization is the social environment in which the organization is located.

Internal environmental factors.

Category A: physical environmental factors (including factors such as the location of the school, vegetation, temperature, weather conditions, etc.)

Zhang Zheng (2009) believes that it is caused by the school's lack of attention to safety education and the neglect of extracurricular activities and school competitions; during the sports activities organized by the school, due to natural disasters such as lightning, fire, floods and other accidental causes, the liability risk caused.

Zhang Hongyun (2014) believes that the natural environment of higher vocational colleges is also the main factor causing sports risks, such as heat stroke caused by too hot weather, colds caused by heavy rain, and injuries caused by sudden changes in weather.

Li Mingming (2019) found that most of the students in higher vocational colleges participated in sports outdoors, and the weather factors had a greater impact. For example, if the weather is too hot, students may suffer from dehydration and heatstroke; if the weather is too cold, the probability of students catching a cold or straining their muscles after exercise will increase significantly; if the ground is slippery after rain or snow, students may fall, etc.

Yue Penghui (2021) believes that when the outdoor temperature is high in summer, students may suffer from heatstroke during sports activities; the windy weather in the north in autumn can easily damage equipment; when the temperature is low in winter, students may catch a cold or get frostbite; the ground is slippery in rainy and snowy weather, and students may fall and have accidents; and haze weather may cause respiratory diseases in students.

Category B: Organizational culture and institutional environment factors

Yan Dangyan and Han Liming (2015) analyzed the current problems of college students in my country's colleges and universities in carrying out sports from the perspective of college students, and proposed that a college student sports safety prevention system should be established from three aspects: strengthening safety awareness education, standardizing organizational supervision and management, and strengthening professional knowledge and skills learning.

Zhang Qi and Xia Zhiqin (2019) believe that when colleges and universities carry out various types of sports activities or competitive competitions, management and decision makers need to formulate a complete sports risk avoidance and protection measures to provide adequate protection and management for sports activities to avoid the risk of injury. All parties should work together to manage the sports level of colleges and universities, ensure the safety of students' sports, and create a healthy and safe sports atmosphere in colleges and universities.

Liang Hao (2020) Most higher vocational colleges focus on the construction of excellent disciplines in their colleges and universities, while neglecting the construction of physical education courses, which greatly hinders the development of higher vocational physical education. Leaders do not pay attention to it, and grassroots front-line teachers have an improper attitude towards physical education classes, which is also an important inducement for students to have problematic behaviors in physical education classes. Yu Zhengzheng (2020) also believes that at present, higher vocational colleges generally do not pay attention to physical education and invest little money.

Yue Penghui (2021) believes that the first thing that should be mentioned is that some universities have not provided medical treatment training for teachers and students in emergency situations. Teachers and students lack the ability to judge and deal with emergency

events. Rash treatment may cause secondary injuries to the injured. The medical conditions in the school clinics of some universities are poor, medical resources are lacking, and they do not have the conditions and capabilities for emergency treatment. According to the principle of emergency treatment for accidental injuries nearby, the imperfect school medical system and low-level medical security will delay the best treatment period and increase the difficulty of handling later accidents. Liang Lin and Liang Dong (2022) believe that from a micro perspective, my country is a unified multi-ethnic country. Some students come from different regions, have different cultural expressions, very different religious beliefs and very different living and eating traditions. In the whole process of school sports, a little carelessness may cause such moral disputes. External environmental factors. Zhang Hongyun (2014) believes that the current social dietary structure is unreasonable, and students absorb a lot of fat and other high-calorie foods, leading to obesity, etc. These are all inducements to safety accidents. Wang Xiaoguang (2018) believes that the development of university sports is closely related to the national sports education policy. The education administration department is an important part of the national power system. It implements the laws and decisions made by the sports public affairs legislative body and manages the national affairs of the state organs. Since education administration is the most important part of the country, its function is the embodiment of the state's functions. Generally speaking, the education management function refers to the education administration department in a certain historical period according to the needs and corresponding responsibilities and functions of the university sports operation, which reflects the nature of the national sports policy and the content and direction of the activities. In the process of the education administration department, the university sports development policy guidance function, such as the supervision and implementation of university sports education and physical exercise standards and policies, as well as the prevention and control of physical training accident risks, will directly affect the university sports project risk prevention and control strategy.

Zhou Xiaoxia (2018) believes that for many sports activities with certain risks, the construction of training venues, facilities, equipment purchase, teacher training and publicity work require a lot of funding support, which requires strong support from the government and relevant departments. At present, the funds for most school club activities are completed through student union fees and sponsorship, but these funds are not enough to support the development of clubs.

Jiang Shan (2023) pointed out in the study of physical education courses in higher vocational colleges under the background of vocational education reform: In recent years, my country's vocational education has developed rapidly, but the conditions for running vocational education are relatively backward,

especially in sports, the quality needs to be improved.

Other factors

Zhang Hongyun (2014) believes that emergencies in sports activities, such as broken branches hitting students, uneven ground causing sprains, ground collapse causing students to fall, etc., cause injuries. The inevitable risks of sports themselves, students' sudden illness without obvious symptoms, force majeure, sports-related sudden death, and unpredictable incidents.

Zhang Qi and Xia Zhiqin (2019) believe that the most common sports risks in colleges and universities are personal safety risks. For example, a university in Hubei Province had

many people tripping and falling, leg cramps during running, and other physiological conditions during long-distance running in winter, such as stomach cramps, hypoglycemia and dizziness, and sudden acute sprains and open tissue injuries during professional competitions. Sports risks are often sudden, and you should fully consider your personal safety before exercising. You should be responsible for yourself and the sports project.

Yue Penghui (2021) believes that most physical education teachers will remind students of the risks in the classroom during the routine part of the class, and can always pay attention to the completion of students' technical movements during teaching, but it does not rule out that teachers will organize students to participate in sports activities. There will be improper organization. When there is a conflict in the use of shifts or venues, this may cause students to have accidents in a chaotic situation. Due to the randomness of risks, most teachers lack experience in handling emergencies, which makes it impossible to recover losses in the earliest time.

Conclusion

According to previous research findings on sports risks in higher vocational colleges in China, the main findings include the following three aspects: (1) Physical health of students: Studies have shown that there are some problems with the physical health of students in higher vocational colleges. For example, the proportion of overweight and obese students is high, and students are not strong enough in implementing the national unified testing standards, which leads to the phenomenon of "formalism". In addition, with the development of the economy and society and the advancement of network technology, unreasonable work and rest time, Internet addiction, unreasonable diet structure and nutritional status have posed severe challenges to the physical health and development of students in higher vocational colleges. (2) Emergency management of sports injury accidents: A study of 10 higher vocational colleges in Zhejiang Province found that there are some problems and constraints in the emergency management of sports injury accidents in higher vocational colleges. This includes deficiencies in prevention and control mechanisms, disposal mechanisms, recovery mechanisms and learning mechanisms. (3) Identification and prevention of sports activity risks: The cognition, identification and response of students in higher vocational colleges on sports activity risks were analyzed to fully understand the influencing factors and existing problems of students in higher vocational colleges on sports activity risks, and to propose corresponding prevention measures. These research results show that higher vocational colleges face many challenges in sports risk management and need to make comprehensive improvements in terms of improving students' physical health, emergency management of sports injury accidents, and identification and prevention of sports risks.

According to relevant documents issued by the Guizhou Provincial People's Government, Guizhou Province is committed to promoting the reform and development of school sports, which includes improving students' physical fitness and sports skills, and strengthening the prevention and control of sports risks. The policy mentioned that by 2020, the overall conditions for running schools such as sports venues, equipment and facilities, and sports teachers in all types of schools in the province will meet national standards, ensure physical education class hours and exercise time, and basically complete the teaching, training and competition systems, and significantly improve the quality of physical education. With the development of big data technology, higher vocational colleges in Guizhou Province have begun to apply big data to sports management to improve the level of sports management and

services. This includes comprehensive collection and integration of students' identity information, physical exercise content, and class learning, as well as the use of big data technology to analyze classroom teaching content and teaching methods in real time to adapt to students and strengthen teacher-student interaction. This application helps to improve the objectivity and efficiency of physical education evaluation and the effectiveness of feedback value. The application examples of big data in sports management can be described in detail from the following aspects: Student information management: With the support of big data technology, schools can comprehensively collect and integrate students' identity information, physical exercise content, class learning status and other data.

Through big data analysis, schools can more accurately understand students' sports needs and formulate more effective sports teaching plans. (1) Classroom teaching analysis: Using big data technology, teachers can analyze classroom teaching content, teaching methods, and student participation and feedback in real time. This helps teachers adjust teaching strategies according to students' actual conditions and improve teaching effectiveness. (2) Physical exercise effect evaluation: Big data can be used to evaluate students' physical exercise effects. By analyzing students' sports data, schools can understand which sports are more popular and which exercise methods are more effective, thereby optimizing the physical education curriculum. (3) Sports injury prevention: By collecting and analyzing students' sports data, schools can predict and identify potential sports injury risks. This helps schools take preventive measures to reduce the occurrence of sports injuries. (4) Sports facility optimization: Big data analysis can help schools understand the use of sports facilities, including which facilities are most popular and which facilities are less frequently used. This information helps schools to rationally allocate sports resources and improve the efficiency of facility use. (5) Competitive sports training: In the field of competitive sports, big data can be used to analyze athletes' training data and game performance. Coaching teams can adjust training plans based on these data to improve athletes' competitive level. (6) Sports event management: Big data technology can be used in the organization and management of sports events, including ticket sales, audience analysis, and event marketing. Through big data analysis, event organizers can better understand audience needs and improve the attractiveness and profitability of events.

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