

A Study on the Correlation between Psychological Predictors of Fitness Exercise and Sports Injury of Students Majoring in Fitness in Higher Vocational Education

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Keywords: Psychological predictors of fitness exercise, Sports injury, Fitness in higher vocational education

Abstract: This paper makes an investigation and analysis on the sports injury of college students in higher vocational colleges. The results showed that there were professional, grade and gender differences in the incidence of sports injury; the majority of injuries were ankle and wrist; gymnastics and ball, followed by track and field; the degree of injury was mainly mild injury and moderate injury; the cause of injury was supplemented by other causes. According to the characteristics, laws and causes of sports injury, the corresponding preventive measures are put forward. Among the Psychological Predictive factors of Fitness exercise for students majoring in Fitness in higher vocational education, there is a negative correlation between risk cognition and the incidence of injury. However, there was no significant positive or negative correlation between motor ability judgment and the incidence of injury. Overestimation of exercise ability and underestimation of exercise ability may increase the incidence of injury in fitness exercise.

1. Introduction

With the extensive development of the national fitness movement, the number of participants in fitness activities for urban residents has begun to increase year by year. Corresponding to this, the problem of sports injury in residents' fitness has also aroused widespread concern in the field of sports research. In the process of participating in fitness sports, if there is a sports injury problem, such as: local joint strain caused by long jogging, ligament strain in yoga practice, etc., it will not only affect the realization of personal fitness goals [1]. It is easy to dispel the enthusiasm and enthusiasm of residents to continue to participate in fitness sports. Seriously, it can even damage the health of the residents, which can affect the daily work and life of residents. In view of this, this paper starts from the point of view of sports psychology. In addition, this paper analyzes the relationship between the psychological predictors of fitness exercise and the incidence of sports injury in urban residents. It is hoped that it can provide a useful reference for the prevention of fitness injury of urban residents.

The frequent accidental injuries in fitness exercise have aroused widespread concern and attention in the field of sports at home and abroad, such as local joint strain caused by long time aerobic jogging or riding power bicycles; muscle strain, sprain and contusion caused by the use of free weight instruments in bodybuilding strength training; and tendon and ligament injuries in yoga practice. This kind of sports injury will not only damage the health of the body and affect the daily work and life, but also may lose the enthusiasm to continue to participate in fitness exercise, which is not conducive to the realization of individual fitness goals, and hinders the pace of the implementation of the national fitness plan [2].

Sports injury is an ancient and mysterious topic, and its causes are also complex. Traditionally, it is considered that the direct causes of sports injury are insufficient training level, poor psychological state of fitness practitioners, bad weather and venue during exercise, etc., but the analysis of psychological factors of athletes' sports injury has not attracted enough attention. Recent practical studies have shown that psychological factors are one of the important causes of sports injury. People began to increase the research on the psychological factors of sports injury and

psychological rehabilitation therapy, but most of them are aimed at the psychological factors of sports injury of athletes or sports students and the research of psychological rehabilitation therapy [3]. 2008 Beijing Olympic Games led China into the era of national fitness, the post-Olympic era of national fitness is in full swing, people are more and more aware of the importance of fitness, more and more people join the ranks of fitness exercise. With the increase, there are more and more sports injuries. Therefore, it is urgent to study the related psychological factors and psychological rehabilitation therapy of exercise injury in fitness practitioners, as shown in figure 1.

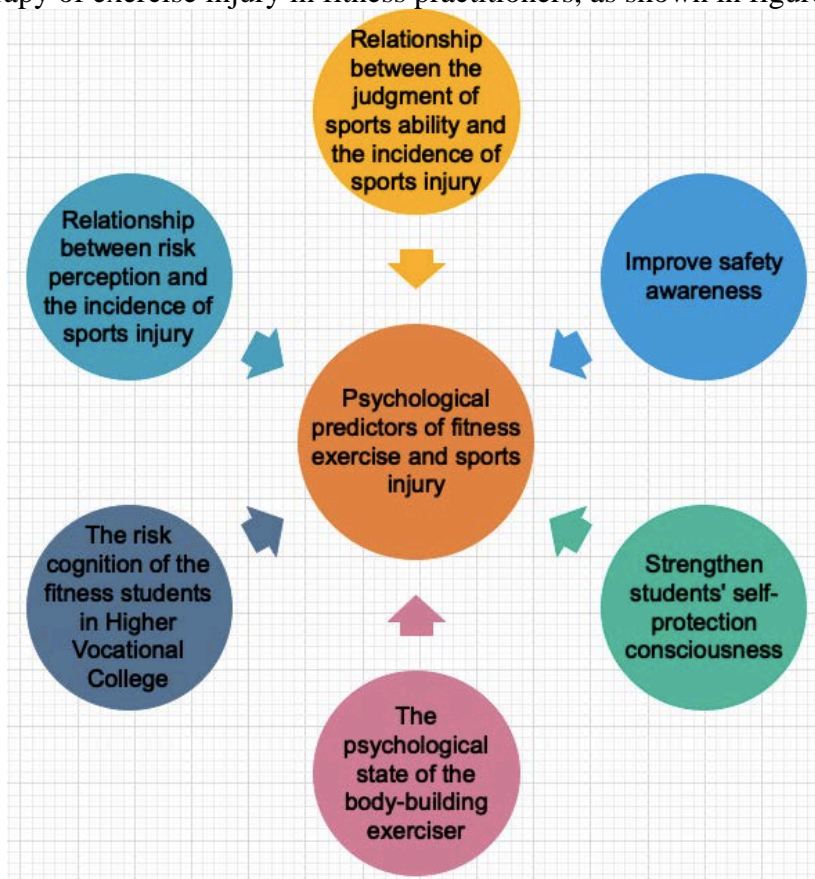


Fig.1 Block Diagram of the Correlation between Psychological Predictive Factors of Fitness Exercise and Sports Injury of Students Majoring in Fitness in Higher Vocational Education

2. A Study on the Correlation between Psychological Predictors of Fitness Exercise and Sports Injury

2.1 The Relationship between Risk Cognition and the Incidence of Sports Injury

According to the relevant research of sports psychology, we can see that the psychological predictors of sports injury mainly include risk cognition and sports ability judgment. Risk awareness is the most critical, and it refers to the intuitionistic judgment and subjective feeling of the various potential objective risks and the degree of harm caused by the consequences of the individuals participating in the fitness exercise [4]. A study on the cognition of urban residents to the risks in fitness exercise to understand the relationship between the cognition of fitness risk and the incidence of sports injury in urban residents. It is of great practical significance to reduce the incidence of sports injury in fitness exercise of urban residents. The study investigated the cognition of urban residents on the risk of fitness injury and the number of sports injuries in the last year. Among them, when investigating and studying the residents' cognition of the risks in fitness exercise, it mainly involves the possibility and controllability of the risk in fitness exercise and the judgment of the severity of the result, and so on. We adopt Likert-Type Scale Five-level scoring method for assignment [5]. The likelihood of risk occurs from low to high. The specific results of the survey are shown in the table 1.

Table 1 the Score Of Risk Cognition and the Statistical Table of Sports Injury of Students Majoring in Fitness in Higher Vocational Education(n=232)

ID	Stand-alone environment	Spark cluster environment
1	0	5
2	0	10
4	5	30
8	15	60
16	20	140
32	30	250

Observation table1, you can find out that the higher the score of fitness risk cognition of urban residents, the higher the score of risk cognition of fitness exercise of urban residents is. The fewer injuries to fitness have occurred in the last year, and between the probability of risk and the number of injuries in the last year [6]. From this, we can see that there is a negative correlation between the risk cognition score and the incidence of injury in urban residents' fitness exercise. If the residents' assessment of the likelihood, controllability and severity of the various potential risks in fitness is on the low side, sports injury accidents are often more likely to occur in fitness.

2.2 The Relationship between the Judgment of Sports Ability and the Incidence of Sports Injury

From the above analysis, we can see that in the process of participating in fitness whether you have a scientific judgment on your own sports ability is also an important cause of sports injury. Therefore, this paper also makes an investigation and statistics on the judgment of sports ability of urban residents and the number of sports injuries in the last year [7]. Among them, the judgment of exercise ability is also used Likert-Type Scale Five-level scoring method for assignment. It is divided into “very low, relatively low, general, relatively high and very high”. The corresponding scores are 1~5Points. The specific results are shown in the table 2. There is no correlation between the score of sports ability judgment of urban residents and the number of injuries in the last year. However, the study of sports psychology has confirmed that the scientific judgment of sports participants on their own sports ability is an important factor affecting sports injury.

Table 2 Statistical Table Of Sports Ability Judgment Score and Sports Injury of Students Majoring in Fitness in Higher Vocational Education (n=232)

Times of injury	Sports ability judgment score
0	3.32±0.615
1~2	3.01±0.703
3~4	3.74±0.953
5~6	3.45±0.989
7~8	2.95±0.989
>8	2.35±0.989

According to the analysis, the main reason is that from the point of view of sports psychology, the analysis of the time of analysis is carried out from the perspective of sports psychology. In the process of participating in fitness activities [8], if you judge your motor ability too much, and participate in sports events that are not suitable for their own actual situation when the sports ability is overestimated, it is easy to cause sports damage because the sports load you participate in exceeds the level you can afford. So, there is a positive correlation between the overestimation of motor ability and the incidence of sports injury in urban residents. The greater the deviation between the overestimation of one's own motor ability and its own actual exercise ability, the more prone to sports damage as shown in table 3.

Table 3 Statistics of Limb Injury Position in Exercise

Body parts	Male	Female
Limb joint strain	6	3
Muscle sprain of limbs	9	5
Main muscle group strain of trunk	4	2
Laceration of tendon and ligament	2	0
Spinal injury	1	0
Contusion of soft tissue	5	8

On the other hand, underestimation of one's own sports ability can also lead to sports injury. Because in the process of participating in fitness, residents who underestimate their ability to exercise may show a higher level of actual exercise. But because they lack confidence in the technical skills they have, they create an atmosphere of trying difficult and dangerous technologies. Not only is there no belief in success, and it is often due to psychological tension, stress and other reasons, which can increase the incidence of sports injury. So, overestimation of exercise ability and underestimation of exercise ability have the possibility of increasing sports injury. There is no obvious positive correlation or negative correlation between the score of exercise ability judgment and the incidence of injury.

3. Preventive Measures

3.1 Raise Safety Awareness

The occurrence of sports injury is often related to the lack of understanding of the harm of sports, the concept of meta-prevention and the lack of basic understanding of the prevention of sports injury [9]. Neglecting the principle of gradual and orderly progress, blindly carrying out physical exercise, opposing the scientific attitude of preventive sports with brave, tenacious and hardworking sports spirit, so that sports participants, organizers and mentors can not actively take all kinds of preventive measures, and can not be treated in time and effectively after injury. It is necessary to fully understand the harm caused by school injury accidents to the participants in physical exercise, educate them in organizational discipline and safety, overcome the idea of paralysis, and establish the idea of safety first and prevention first.

3.2 Strengthening Students' Consciousness of Self-Protection

Excessive psychological tension can make the muscle tense, and the tense muscle makes the coordination imbalance between the active muscle and the passive muscle, thus affecting the technical action and increasing the occurrence of injury accident. Lack of attention reduces the responsiveness of sports participants and is also a factor causing injury accidents. Therefore, every person who participates in physical exercise should strengthen the consciousness of self-protection and master the method of self-protection, such as when the body loses balance, should immediately take a big step forward to maintain the balance of the body [10]; when a person is about to fall, he should immediately bow his head, bend his elbow, bend his body, roll over with his shoulder and back, and do not roll over with his shoulder and back.

4. Conclusion

Due to the restriction of economic level, the research on fitness practitioners and mass fitness has not been deeply studied in our country, and the influence of psychological factors on sports injury has not been paid enough attention. I hope to be paid attention to in the future research. And the eyes from the professional athletes slowly scattered to the public fitness, for the development of social sports and sports injury psychology research services. The research on the psychological causes of exercise injury and its rehabilitation treatment is not particularly mature in our country. The state is constantly training experts and scholars in this field, studying the psychological factors of exercise injury of fitness practitioners, and carrying on scientific guidance. It is believed that in the near future, the psychological research on sports injury will be more and more mature, the

research results of this topic will continue to enrich, there will be more and more data to help fitness practitioners to carry out scientific exercise, and lead a new fitness frenzy in the post-Olympic era.

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