

Study on the Intervention of Static Posture Evaluation in Sports Injury of Social Sports Students - Take the Class 14 and 15 Students Majoring in Social Sports in Business School of Yunnan Normal University as an Example

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Abstract: with the continuous prosperity of our country's economy, the continuous improvement of international status, the continuous development of sports, and the intervention and research of sports injuries, are gradually becoming an important topic of people's research, especially in the field of sports students, the intervention of sports injuries directly affects the training and competition of students, and the evaluation of static posture can better prevent sports injuries. Through the investigation and research, it is found that the sports injuries of the students are basically related to their own static posture. The students who have no injuries but have bad static posture also have the potential risk of injury. Through the methods of literature, questionnaire, mathematical statistics and data analysis, this paper makes an investigation and Research on the 14 and 15 students of social sports major in Business School of Yunnan Normal University. The purpose is to find out the law of injury from the perspective of static posture evaluation, to provide scientific basis for coaches, teachers and students, and to reduce the occurrence of sports injury.

1. Introduction

1.1 Survey and Analysis of Basic Situations of Social Sports Majors in Business School of Yunnan Normal University

1.1.1 Gender and Age

There are 200 male students at the 14th and 15th grades of social studies in the Business School of Yunnan Normal University, accounting for 85%, of which 23 are 16-18 years old, accounting for 11.5%, 142 are 18-20 years old, accounting for 71%, 20 There are 35 people over the age of 17.5%. There are 36 female students, accounting for 15%, of which 9 are 16-18 years old, accounting for 25%, 21 are 18-20 years old, accounting for 58%, and 6 are 20 years old, accounting for 17%.

1.1.2 Number of Special Projects

There are 8 sports, 20 people in martial arts, 8%, 9 people in volleyball, 4%, 47 people in basketball, 20%, 41 people in football, 17%, 35 people in track and field, 15% There are 19 people in gymnastics, accounting for 8%, 3 people in shot put, accounting for 1%, 2 people in long jump, accounting for 1%, 3 people in tennis, accounting for 1%, 57 people without specialization, accounting for 24%. The survey results show that there are too many students without special subjects. .

1.1.3 Static Posture Assessment

1.1.3.1 Positive Posture

It can be seen from the front posture photos that there are 135 people with high and low shoulders, accounting for 57%, 55 with cervical deflection, 23%, 39 with long and short legs, accounting for 17%, and 62 with knee varus (O-legs). 26%, 6 with knee valgus (X-shaped legs), 3%, 32 with varus ankle (outer figure), 14%, 15 with ankle valgus (instep) 6%. The survey results show that there are the most people with high and low shoulders (it may also be a small error in the angle problem when taking photos). The main reason for this phenomenon is related to the special project

they are engaged in. Can cause imbalance in muscle and bone development on the non-forced side¹. Some students are caused by long-term bad sitting habits.

1.1.3.2 Back Pose

From the back posture photos, it can be seen that 83 people have a skewed spine, accounting for 35%, and 95 people have a pelvic (left and right) tilt, accounting for 40%.

1.1.3.3 Side Pose

From the side posture photos, it can be seen that there are 68 people with curved spine, accounting for 29%, 117 people with head tilted forward, accounting for 50%, and 42 people with elbow eversion, accounting for 18%. Pelvic (front and back) tilted 21 people, accounting for 8%, and knee overstretched 16 people, accounting for 7%.

1.2 Investigation and Analysis of Injury

1.2.1 Statistics of Recent Injuries

It can be seen that there were a total of 8 recent injuries, of which 18 were shoulder injuries, 8%, 16 were neck injuries, 7%, 12 were elbow injuries, 5%, and wrist injuries were 20 people, accounting for 8%, 32 people with waist injuries, 14%, 10 people with hip injuries, 4%, 39 people with knee injuries, 17%, and 89 people with ankle injuries. , Accounting for 38%. The survey results show that the ankle, knee, and waist injuries account for a large proportion, indicating that these three parts have the most injuries. The ankle and knee are important cushioning parts, and the waist is the core strength part. The number of uses should be noted. Rest and protection in three areas.

1.2.2 Statistics of Actions in Progress At the Time of Injury

It can be seen that 5 of the actions being performed at the time of injury were 128 people who were injured during the jump, accounting for 54%, 35 people who were injured while running, 15%, and 21 people who were injured while swinging elbows, accounting for 9%, 9 people were injured during the flip, accounting for 4%, and 43 were injured when landing, accounting for 18%. The survey results show that there are more injuries in jumping and landing movements, because students participate in more intense sports such as basketball and football, resulting in more injuries.

1.2.3 Statistics of Types of Injuries

There were 6 types of injuries, of which 114 were injuries of tendons and ligaments, accounting for 48%, and 32 were dislocation injuries, accounting for 14%. There were 14 people with fractures, accounting for 6%, 22 with nerve injuries, 9%, 12 with visceral injuries, 5%, and 42 with skin or blood vessel injuries, accounting for 18%. The survey results showed that muscle tendons and ligaments were the most damaged. The main reason for this was insufficient preparation and a small number of secondary injuries.

1.2.4 Statistics on the Causes of Self-Injury

There are 8 reasons that they think they are injured. Among them, 142 have insufficient preparation activities, accounting for 60%, 39 have paralysis during exercise, accounting for 17%, 56 have muscle weakness, accounting for 24%, and physical posture. There are 23 people with defects, accounting for 10%, 63 people with uncontrollable external forces, 27%, 105 people with irregular technical movements, 44%, 87 people with overloaded sports, 37%, sports 76 people were fatigued for too long, accounting for 32%.

1.2.5 Damage Statistics

The injuries were divided into habitual old injuries and acute first injuries. Among them, habitual old injuries accounted for the vast majority, with 157 people, accounting for 67%, and 79 cases with acute first injury, accounting for 33%. The survey results show that the number of habitual old injuries is large, and the proportion is large, because the local blood circulation of old injuries is

often poor, and secondary injuries are prone to occur when sports are incompletely restored.

1.3 Correlation Analysis between Injury Site and Static Posture

1.3.1 Analysis of the Correlation between the Shoulder Injury Student and His Own Static Posture

There are 18 people with shoulder injuries, of which 15 have high and low shoulders, accounting for 83%. The survey results show that people with high and low shoulders are more likely to have shoulder injuries. Except for a small number of congenital causes of high and low shoulders, most of them are caused by bad sports and living habits. The main reason for this phenomenon is related to the special activities they engage in. Causes imbalance in muscle and bone development on the non-forced side. The investigation found that 14 out of 18 people were specialized in shot put, tennis, and volleyball. Twelve of these 14 people suffered injuries. Group C No. 28 and Group E No. 5 had no injuries but there were hidden dangers.

1.3.2 Analysis of the Correlation between the Neck Injury Student and His Own Static Posture

There are 16 people with neck injuries, including 15 people with cervical spine deviation, accounting for 94%. The investigation results show that neck injuries are basically caused by cervical deflection. Group D was at risk of neck injury.

1.3.3 Analysis of the Correlation between the Elbow Injured Student and His Own Static Posture

There are 12 people with elbow injuries, of which 9 people have elbow eversion, accounting for 75%. The remaining three were injured due to excessive force and prolonged elbow fatigue. The results of the investigation showed that elbow injuries were mostly caused by elbow eversion.

1.3.4 Correlation Analysis between Wrist Injury Classmate and His Own Static Posture

2. Twenty People Suffer from Wrist Injuries, of Which 11 Are Injuries Due to Insufficient Preparation Activities.

2.1 Correlation Analysis between Waist Injury Student and His Own Static Posture

There are 32 people with waist injuries, of which 26 people have long and short legs, accounting for 81%. The results of the investigation showed that a large cause of waist injuries was caused by long and short legs. Group C No. 31, Group D No. 15, Group F No. 10, and Group F No. 33 are at risk of waist injury.

2.2 Correlation Analysis between Hip Injury Student and His Static Position

There are 10 people with hip injuries, of which 7 people have elbow eversion, accounting for 70%. The findings show that hip injuries are mostly caused by pelvic tilt. There is a risk of hip injury in group 23.

2.3 Correlation Analysis of Knee Injury Classmates with His Static Position

There were 39 people with knee injuries, including 32 with knee varus, accounting for 82%. Among them, 3 had knee valgus, accounting for 8%. Findings show that most people with knee injuries suffer from varus knees and a few have valgus knees. There was a risk of knee injury in Group B No. 15 and Group C No. 18.

2.4 Correlation Analysis between Ankle Injury and His Self-Position

There were 89 people with ankle injuries, including 58 with ankle varus, accounting for 65%. Among them, 13 suffer from ankle valgus, accounting for 15%. Findings show that most people with ankle injuries suffer from ankle varus. Group 21, Group A 24, Group C 32, and Group F 48 are at risk for ankle injuries.

3. Conclusions and Recommendations

3.1 Conclusion

3.1.1 Injury of the Upper Limb is Highly Related to Its Own Poor Static Posture

The injuries of the upper limbs are mainly concentrated in the shoulders, neck, elbows and wrists. Most of the injuries are related to their static posture. There are 18 students with shoulder injuries, of whom 15 have high and low shoulders, accounting for 83%. There were 16 students with neck injuries. Among them, 15 had a cervical spine posture, accounting for 94%. Elbow injuries are mostly “tennis elbow” injuries due to excessive force and long-term fatigue. 75% of the students with elbow eversion will suffer elbow injuries.

3.1.2 Torso Injuries Are Highly Correlated with Poor Pelvic Posture

Torso injuries are mainly concentrated in the waist and hips. Among the students with waist injuries, 26 have long and short legs, accounting for 81% of the total number, because when running and jumping, the impact is relatively large, and the legs are not stressed. Uniform, resulting in uneven force on both sides of the waist, in the long run, injuries often occur in the waist. Hip injury students have 7 people with pelvic tilt, accounting for 70% of the total number, and most of the students with hip injuries are martial arts, doing somersaults, side flips, etc. without adequate warm-up Hip-requiring movements often cause lateral movement of the pelvis, which can lead to hip injury².

3.1.3 Lower Limb Injuries Are Highly Related to Their Poor Static Posture

Lower limb injuries were concentrated in the knee and ankle joints. Of the 39 students with knee injuries, 32 had knee varus, accounting for 82% of the total. Only 3 of the students surveyed had knee valgus, but There is also a hidden danger of knee injury. Ankle injuries are more common among students in the physical education department, but students with ankle varus and ankle valgus are more likely to suffer injuries. 71 of 89 ankle injuries have varus ankle, accounting for 80% of the total number. It is easy to uneven force on both sides of the ankle when running and jumping, the soft tissue injury is mild, and fractures may occur in severe cases. Most of the injuries that students suffered were habitual old injuries, and a few were acute first injuries, indicating that the sites prone to injury were basically fixed, and the cases of acute first injuries were relatively rare.

3.2 Recommendations

3.2.1 Constantly Adjust Your Body Posture

Injury comes from daily life, and prevention comes from daily life. In daily life, pay attention to constantly correcting your own bad posture, reduce the probability of injury, and eliminate the hidden dangers of injury.

3.2.2 Scientific Arrangements and Reasonable Training

Coaches and teachers of professional courses should also pay attention to the development of muscle training on the non-forced side during the training process to maintain the body's normal static posture.

3.2.3 Develop Good Exercise Habits

Before strenuous physical exercise, preparations should be done adequately to reduce the viscosity of the muscles in order to prevent muscle or joint damage caused by sudden exertion during exercise. Relaxation training should be carried out in time to prevent sports

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