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## Causes and prevention of sports injuries among the university students in soccer games

Chen Changxiang<sup>1</sup>, Yan Yang<sup>2\*</sup>

<sup>1</sup>Sports school of Yangtze University, 434000, Jingzhou, Hubei Province, (CHINA)

<sup>2</sup>Pharmaceutical preparation section of No. 1 Hospital Affiliated to Yangtze University, 434000, Jingzhou, Hubei Province, (CHINA)

#Chen Changxiang and Yan Yang contributed equally to the work  
E-mail : chencybb@163.com

### ABSTRACT

To survey 358 students who elect football courses, survey mainly including sports injury type, location, time of occurrence and causes. The results showed that sports injuries occurred mainly in the lower extremities, with sprains and strains based; the main reasons of sports injuries were the non-teacher organizations and site conditions so poor. Methods and suggestions of treatments and preventions were proposed.

### KEYWORDS

Causes; Prevention; Sports injury; Soccer games.



## INTRODUCTION

Football is one of the favorite sports by the college, and is be the most choice for public physical education<sup>[1,2]</sup>. However, due to the characteristics of the project as the motion, it makes a higher incidence of sports injuries<sup>[3-5]</sup>, to a certain extent, affected the students' normal learning and life. Through the course of the student movement dedicated college football injury investigation and analysis aimed at finding preventive measures to minimize the damage occurred.

## MATERIALS AND METHODS

### Object

In 2012 year for 358 students who take soccer specific course from class 2010, class 2011 of Yangtze University, both boys, aged 18 to 21 years old, no professional training history, voluntarily participated in the survey.

### Questionnaire

The questionnaire involving common types of injury, location, time and reason for four categories of 24 problems. 358 questionnaires were distributed, net of outstanding and valid questionnaires 13 copies, the actual 345 valid questionnaires, accounting for 96% of the questionnaires sent.

### To observe

(1) Common types of injury, site of injury and damage time during football games. (2) the causes of sport injury.

### Data were compared with ANOVA and post-box t-test

Significant difference was assigned at the  $p < 0.05$  level.

## RESULTS

### Common type of injury

Traumatic happened in football mostly closed soft tissue injury. This damage in physical contact and more confrontational strong, mainly in the lower extremities was more common in football. There were 208 sports injury cases among 345 students, as follows and the same as reported<sup>[6]</sup> (TABLE 1).

**TABLE 1 : Common types of injury**

Injury types	cases	%
Sprain	56	26.92
Strain	45	21.63
Contusion	42	20.19
Bruise	31	14.90
Shovel kicked	23	11.06
Fracture	7	3.38
Dislocation	4	1.92

### Sports injury site

It is well known in the sports of football, running, jumping, kicking, shovels and other lower limb movements accounted for 80% to 90%, which is both the characteristics of football, but also led to a corresponding movement of the lower limb trauma-based features. Judging from the survey, the site of

injury was mainly happened in the lower extremities up to a total of 144 cases, accounting for 69.23% of all traumas. (TABLE 2).

**TABLE 2 : The site of injury distribution**

Injury site	cases	%
Ankle	60	28.85
Thigh	35	16.83
Knee joints	28	13.46
Calf	21	10.10
Head and face	28	13.46
Torso	21	10.10
Upper limb	15	7.2

### Sports Injury time

College football trauma occurs mainly in extra-curricular activities 95 cases, accounting for 45.67%; 78 cases of the game, accounting for 37.5%; football lesson in only 35 cases, accounting for 16.83%.

### The reason for sports injuries

Football injuries occur for many reasons, mainly in the following areas<sup>[7]</sup>: no teacher organizations, the proportion of sports injuries venues reasons, lack of preparation activities, too, such as fatigue and foul play were caused 31.52%, 22.74%, 23.65%, 12.38% and 9.71%. The main causes of damage include the following: (1) organization mismanagement: The survey showed that when sports injuries occur without the presence of teachers accounted for 31.52%, ranked first. (2) Adverse site conditions: With college enrollment in recent years, site resources become tighter, many students are in the concrete basketball court to play, is the survey, many injuries occur when playing on the basketball court are. In addition, to rugged, tough and debris, etc. are the main cause of a variety of more damage. (3) Physical difference: the students' strength, physical and other conditions also produced one of the main bad injuries. Muscle strength is not enough, supporting foot instability, a slight collision opponents will hurt. In addition, due to exhaustion, while playing a long time and, in the case of football fatigue is also the main cause of damage, the survey showed that the proportion of playing time over 1.5 h when injured is much higher than the exercise time in 1.5 h within those. Therefore, each lasting an average student playing time should not be too long, preferably not more than 80 min.

## DISCUSS

Sports injuries to students not only bring pain and loss of physical time, seriously affected the normal life of learning, but also to enable students to produce the fear mentally affect their interest in participating in sports, thus affecting the development of its constitution. Therefore, strengthening the prevention of sports injuries is very necessary<sup>[8,9]</sup>. Preventive measures and means to start from the following aspects: (1) strengthen safety education and sports ethics education: teachers want students to define the purpose and mission of sport, to fully consider the characteristics of football, scientifically arranged teaching content, and according to the students' physical condition treated differently. Education students abide by the principles of practice, step by step. Both advocate a style of game play levels and fine style, non-emergence of wild style.(2) emphasis on teaching health knowledge of sports: football education and training, health care knowledge through the guide, to equip students with the necessary knowledge of health care and medical supervision methods to improve the science of football practice, enhance self-protection.(3) emphasis on developing students' physical fitness, especially lower limb joints, muscle strength and flexibility, and the use of some special fitness football practice methods to strengthen parts of the exercises easily hurt. (4) improve soccer venues and facilities, to strengthen the

management and maintenance of the site. (5) strengthen students' physical education and health education knowledge; improve their self-protection awareness and the ability to develop good health habits sport.

After sports injuries, the initial emergency treatment is also very important<sup>[10-12]</sup>. To handle it properly can reduce complications after injury, accelerate the rehabilitation of injury, thus reducing their learning brings life to the adverse effects and promoting the smooth progress of teaching work. In the course of treatment, after the exclusion of fractures, fractures and other diseases, soft tissue injury to impose massage therapy. General principles are: taking cold, bracing, bandaged and other measures for acute injury within 48 h; after 48 h the power to impose a moderate point and surface friction, kneading, rubbing, pressing, rolling, tapping, strumming, etc. manual therapy to reduce swelling stasis, medicinal, sedative and pain, restore function. For chronic strain injury, impose moderate or severe pain point as the center of power, the large area of friction, push, wipe, press, roll, stretch, shake and other manual therapy.

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