

## A study of selected sports injuries and their preventive and rehabilitative measures among women soccer players of west Bengal soccer clubs

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### Abstract

Soccer is characterized by a high intensity, intermittent, ball and contact sport. It causes players to be injury-prone. Treatment of injuries is important not only to regain performance, but also for the welfare of the players. The purpose of the study was to study of selected sports injuries and their preventive measures among women soccer players of West Bengal soccer clubs. The subjects for this study were one hundred sixty eight women soccer players, coaches, assistant coaches and doctors of eight West Bengal soccer clubs. The variables selected for this study were sprain, strain, contusion, abrasion, dislocation and fracture. A set of thirty five questions for soccer players and fifteen questions for coaches and doctors was constructed for collection of data. Percentage analysis was employed for analysis of data. The result shows that Women soccer players of West Bengal mostly suffered from bone injury followed by muscle injury and joint injury. This might have the reason for aggressive tackling by players or foul play. Treatments and its managements in selected soccer clubs revealed the facts that good percentage of injured players were referred to specialist but players faced economic strain for their treatment. In most of the injury cases physiotherapy was the commonest mode of treatment. To prevent occurrence of soccer injuries good measures were taken by the players themselves, the coaches, the doctors and management itself. However, the study revealed that 100% effort and supervision to avoid players' injuries were not provided. As a result a gross percentage of more than 40% of players were left without adequate prevention so far as knowledge and practice are concerned. This might be due to the lack of emphasis on precautionary measures and continuous supervision by the concerned personal as well as the education of the players themselves. So far as awareness and education of women soccer players about injuries are concerned, it was revealed that inspite of being the member of soccer clubs of West Bengal 100% of their players were not aware of sports injuries.

**Keywords:** Sports injuries, prevention, and rehabilitation.

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### Introduction

Soccer is characterized as high intensity, intermittent, ball and contact sport. Modern soccer is a vigorous and fast game which requires accelerating sprint, rough tacking, power in kicking and endurance to sustain skill-full play for ninety minutes. The skills involved in the game are simple, natural and highly stimulating and satisfying to anyone who participates in the games. Physical qualities such as speed, strength, agility, muscular power and endurance etc. are very important for a successful soccer player. The goal in managing or controlling the risks associated with soccer is to identify and quantity these risks and then to employ methods and techniques to minimize them. By studying the occurrence of injuries in soccer, trends can be identified that may help in developing strategies to reduce the number of future injuries. The injuries which occur in soccer, as in any other body contact game, result from direct blows or from indirect mechanisms. The rules of soccer do not permit outfield players to touch or to control the ball with their arms or hands and therefore, much of the trauma seen occurs to the lower limbs. The goalkeeper in a separate category and his injuries tend to be more general, as he is allowed to use his hand and in addition, his role often call for him to drive at the feet of players thereby exposing more of his body to potential injury. Medical treatment of injuries is of prime importance in this era. Not only to optimism regaining performance of soccer, should adequate care of injury players be insured to avoid

future fatal conditions for the welfare of player. Keeping in view the increased popularity of soccer in India and its prevailing status in our country, it was deemed responsible to investigate on soccer injuries and their preventive measures among women soccer players of West Bengal soccer clubs.

### Methodology

The purpose of the study was to study of selected sports injuries and their preventive measures among women soccer players of West Bengal soccer clubs. The subjects for this study were one hundred sixty eight women soccer players, coaches, assistant coaches and doctors of eight West Bengal soccer clubs. The variables selected for this study were sprain, strain, contusion, abrasion, dislocation and fracture. A set of thirty five questions for soccer players and fifteen questions for coaches and doctors was constructed for collection of data. The data was first classified in terms of frequencies of the type of injuries, their related areas, preventive measures taken to a particular injury. Further the percentage analysis was employed for analysis of data.

### Findings

The questionnaire on study of soccer injury comprised of 50 questions was employed on women soccer players, coaches and doctors of West Bengal soccer clubs and categorized into 4 dimensions:

- (i) Occurrence of Injury and Anatomical Area.
- (ii) Management of Injury and Treatment
- (iii) Preventive Measures
- (iv) Awareness and Education

### **Occurrence of Injury and Anatomical Area**

- 43.3% women soccer players were injured during competition while 56.7% during training period.
- Injury of soccer players mostly took place out of collision (47.8%) and partly for the lack of physical fitness (32.8%). Out of 144 women soccer players 44.4% suffered from bone injury and 37.8% from muscle injury while joint injury was reported comparatively less i.e. of 17.8%.
- Out of selected injuries, strain affected the lower back of soccer players at the highest rate (45.6%) followed by calf injury of 33.9%. Strain in neck and high region were considerably low.
- Highest rate of sprain was observed in knees of soccer players (51.1%), the ankle had moderate rate sprain (31.1%), while the hip and wrist found least prone towards sprain.
- 46.1% women soccer players injured their knees by abrasion followed by 37.2% soccer players injured their thigh by abrasion, whereas elbow and shoulder were found least prone towards abrasion.
- Among the selected soccer players the maximum of 52.8% women players injured their head by contusion followed by 31.1% players injured their legs whereas minimum of 16.1% injured their face by contusion.
- Maximum of 55% women soccer players dislocated their knees while playing football, 29.4% players dislocated their ankle, whereas only 15.6% players suffer shoulder dislocation while playing football.
- Among the selected injuries fracture affected the ankle of soccer players at the highest rate (55.6%) followed by fracture of shin bone 25% players.

### **Management of Injury and Treatment**

- 65% of players found unable to manage general injuries of their own.
- 100% of the selected coaches and doctors provide first aid to their players after any type of injury. Assessing nature of injury 43.30% of players were advised to consult physiotherapists, by club doctors while 36.70% advised their players to consult orthopedics and 13.30% were advised to meet medical expert and only 6.70% were advised to consult general physicians.
- 62.2% women players had to face economic problem to access to treating injuries as referred case.
- Half of selected coaches and doctors (50%) showed their satisfaction with the facilities available in their club for the treatment of soccer injury.

### **Preventive Measures**

- 54.4% women players had awareness of mechanical principles that helped them in prevention of injuries during training session and competition however 45.6% players did not have such awareness.
- 100% women players were aware of proper warming up and limbering down exercises, use of proper kits to prevent injuries.

- While playing 64.4% players always followed the rules of the game to avoid injuries, whereas 39.4% players did not use common sense while playing to prevent injuries.
- 62.2% players agreed that their fellow players used to follow proper safety measures in the training session and in the friendly matches to prevent injuries.
- For the prevention of injury 63.30% doctors were satisfied that their clubs coach gave specific warm up exercises in training and 53.30% doctors used to advised their coaches about various preventive exercises/measures and rest 46.70% doctors did not interfere in the coaches training.
- To avoid injury among the players 53.30% coaches and doctors emphasized on conditioning and strengthening of muscles, 30% put stress on preventive gadgets and rest 16.70% on proper warming up.

### **Awareness and Education**

- A relatively high percentage of 66.7% women soccer players of West Bengal soccer clubs had injury awareness so far as reasons for injury were concerned.
- 67.2% of players had knowledge to understand the effect of injury to end their playing carrier.
- It was observed that 72.8% players tested their injured part before reentering the training or competition.

### **Discussion**

Women soccer players of West Bengal mostly suffered from bone injury followed by muscle injury and joint injury. This might have the reason for aggressive tackling by players or foul play. The ground surface could also be responsible for that.

Treatments and its managements in selected soccer clubs revealed the facts that good percentage of injured players were referred to specialist but players faced economic strain for their treatment. In most of the injury cases physiotherapy was the commonest mode of treatment.

To prevent occurrence of soccer injuries good measures were taken by the players themselves, the coaches, the doctors and management itself. However, the study revealed that 100% effort and supervision to avoid players' injuries were not provided. As a result a gross percentage of more than 40% of players were left without adequate prevention so far as knowledge and practice are concerned. This might be due to the lack of emphasis on precautionary measures and continuous supervision by the concerned personal as well as the education of the players themselves. So far as awareness and education of women soccer players about injuries are concerned, it was revealed that inspite of being the member of soccer clubs of West Bengal 100% of their players were not aware of sports injuries.

### **Conclusions**

Within the limitations of the study the conclusions may be drawn that:

1. Out of selected injuries the highest rate of injuries of women soccer players was fracture in ankle followed by dislocation of knees, contusion of heads and sprain in knees.
2. Management of injuries by the players themselves was in poor rate.
3. A high percentage of players of women players with

complicated injury were treated by the physician of the club. However, the players were referred to specialist doctors as and when necessary.

4. A certain percentage of women players had awareness of mechanical principles that helped in prevention of injuries while relatively a high percentage of players had lack of such knowledge.
5. 100% selected women players had knowledge of proper warming up limbering down exercises and use of proper kit to prevent injuries.
6. Half of the selected team coaches and doctors demanded more facilities in their respective clubs for treating their injured soccer players.
7. A high percentage of doctors and coaches aspired for more physiotherapy facilities in their clubs for the better treatment of their players.

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