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## Identification of sports injuries among the football players of different age and gender variations

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### Abstract

Football is the second most popular game in India, particularly for being a body contact game. Football Players had to perform different types of natural and unnatural movements. For the nature of competition, unnatural body movements, lack of knowledge about fitness and foul play injuries occur at different levels, gender and age groups of football players. The game is played and organized at low cost and not well prepared grounds with comparison to other sports. At least practical experiences across rural Bengal support this view. Even at International levels players are prone to injury for the games speedy character and aggressive nature. These cause played an important role of choosing the game of football while studying sports injuries. Researchers found that most injury making game was noted to be football (49.2%) followed by basketball (27.9%) and (22.8% volleyball). Lower extremities, particularly knee 28% and ankle (21%) were accounted for most injuries. Sprain (39%) was the prime nature of injury, followed by distortion. In this study it appeared that, senior female were suffered by very higher knee injury female 39.91%, male 22.45%, male athletes were very higher trunk injury male 29.27%, female 5.77%. But in case of ankle and leg injury male and female were nearly identical. Further it was appeared that under nineteen female were suffered by very higher knee injury female 37.81%, male 22.50%, male athlete expressed very higher trunk injury male 22.58%, female 5.26%. But in case of ankle injury male were better safe, male 7.50%, female 13.16% and in leg injury male and female were nearly same 30.00% and 34.21%. After conducted a comparative study it was detected that in case of knee and ankle ligament (sprain) injury female expressed higher injury female 20.00% male 16.67%. But in case of leg injury male expressed higher injury male 36.67% female 35.00%.

**Keywords:** Football, injury, sports, performance

### Introduction

Football is the second most popular game in India, particularly for being a body contact game. Football Players had to perform different types of natural and unnatural movements. For the nature of competition, unnatural body movements, lack of knowledge about fitness and foul play injuries occur at different levels, gender and age groups of football players. The game is played and organized at low cost and not well prepared grounds with comparison to other sports. At least practical experiences across rural Bengal support this view. Even at International levels players are prone to injury for the games speedy character and aggressive nature. These cause played an important role of choosing the game of football while studying sports injuries. Various authors listed several schemes for classification of sports injuries. Athletics injuries may be classified by sports or anatomical location. Some physician and athletic trainer's categories athletic injury according to the particular participant group, such as women, youth, children or older athletes. Still another classification scheme uses the terms "acute" and "chronic". Another system to classify athletics injuries is by the type of tissue involved, such as- soft tissue and hard tissue.

Sports injuries may classified as.

1. **By sports:** Football, Track and Field, Volleyball etc.
2. **By participant group:** Women, Men, Youth and Children etc.
3. **By nature of injury:** Chronic and acute.
4. **By type of tissue involved:** Soft tissue and hard tissue.

5. **By anatomical location:** Shoulder, Knee, Wrist, Ankle etc.
6. **According to nature of game:** Team game, individual game etc. - Morris (1984).

### Causes of Sports Injury

Why the athletes are get injured in professional and amateur sports. Most authors were avoiding this general area of sports injuries. Many injuries in sports can be avoided. By eliminating the contact nature in certain sporting activities, obviously, many of the traumatic injuries would be reduced. Specific reason for sports injuries and these are:

1. Athletes strive for excellence in sports.
2. Physical contact in sports.
3. Improper equipment's and apparatus.
4. Unprepared participants
5. Poor coaching
6. Inadequate safety precaution.
7. Over training.
8. Poor technique etc.

### Types of Sports Injuries

Sports activities can result in injuries - some minor, some serious, and still others resulting in lifelong medical problems.

#### There are two general types

1. Acute Traumatic Injury.
2. Overuse or Chronic Injury.

#### Acute Traumatic Injury

Acute traumatic injuries usually involved a single blow from a single application of force. Following injuries are include under acute traumatic injury:

- **Strain:** A strain is an injury to either a muscle or a tendon, the tissue that connects muscles to bones. An example of strain is calf muscle strain.
- **Sprain:** A sprain is an injury to a ligament, the tough, fibrous tissue that connects bones to other bone. Ligament injuries involve a stretching or a tearing of this tissue. An example of strain is ankle sprain.
- **Bruise or Muscle Contusions:** A bruise, or muscle contusion, can result from a fall or from contact with a hard surface, a piece of equipment, or another player while participating in sports. A bruise results when muscle fiber and connective tissue are crushed; torn blood vessels may cause a bluish appearance.
- **Fractures:** Commonly referred to as a broken bone, fractures are a fairly common sports injury caused by a one-time injury to the bone (an acute fracture).
- **Dislocations:** Are injuries to joints where one bone is displaced from another. Dislocations often cause considerable damage to the surrounding tissue and result from the joint moving past its normal range of movement (ROM).
- **Laceration:** A laceration is also an open wound and is more likely to be caused by a sharp object. Skin and underlying tissue are likely to be damaged. A cut in the skin that is usually deep enough to require stitches is laceration.

#### Overuse or Chronic Injury

- The second type of sports injury is an overuse or chronic injury. Chronic injuries are those that happen over a period of time. Chronic injuries are usually the result of repetitive training, such as running, overhand throwing,

or serving a ball in tennis.

- **Achilles tendon:** The Achilles tendon is the most commonly injured tendon. Rupture can occur while performing actions requiring explosive acceleration, such as pushing off or jumping. The Achilles tendon is most commonly injured by sudden plant arflexion or dorsiflexion of the ankle, or by forced dorsiflexion of the ankle outside its normal range of motion.
- **Shin Splints:** A shin splint is when pain along the shin bone (tibia) occurs. This pain is usually at the front outside part of the lower leg, but can also occur in the foot and ankle (anterior shin splints) or where the bone meets the calf muscles at the inner edge of the bone (medial shin splints).
- **Tennis Elbow:** Tennis elbow is an overuse injury. It's caused by repeated contraction of the forearm muscles that you use to straighten and raise your hand and wrist. The repeated motions and stress to the tissue may result in inflammation or a series of tiny tears in the tendons that attach the forearm muscles to the bone at the outside of your elbow.
- **Stress Fracture:** When one of your bones is stressed by overuse, tiny breaks in the bone can occur. The injury is termed a stress fracture. Early symptoms may be pain and swelling in the region of the stress fracture. The bones of the lower leg and foot are particularly prone to stress fractures. The fracture may not be seen on initial routine X-rays, requiring a bone scan to obtain the diagnosis. Repeated stress on a bone over time (a stress fracture) can also occur.
- **Tendonitis:** It is usually accompanied by swelling, heat, redness, and pain. An inflammation in a tendon or in the covering of the tendon is called tendonitis.
- **Bursitis:** A bursa is a sac filled with fluid that is located between a bone and a tendon or muscle. A bursa allows the tendon to slide smoothly over the bone.

#### Common injuries of football players

Though there are some common injuries in all games and sports activities which are in sites and in nature.

In football very common injuries were:

1. **Sprain and Strain:** Sprain and Strain are most common injuries in football.
2. **Fractures:** Fractures account for one quarter of all serious football injuries
3. **Turf Toe:** Turf Toe is an injury to the base of the big toe. This condition is often caused by running or jumping on hard surface such as artificial turf.
4. **Achilles Tendonitis:** Achilles tendon it is a painful condition of the tendon in the back of the ankle. Left untreated, Achilles tendon can lead to an increase risk of Achilles tendon rupture.
5. **Ankle Sprain:** Ankle Sprains are common injury that football players experience.
6. **ACL Tear:** The anterior cruciate ligament is the most commonly injured ligament in the knee, often in football players, this injuries can side line an athlete for month or longer.
7. **Torne cartilage:** A cartilage tear in the knee when the meniscus is injured. The meniscuses in the knee are two circular pieces of cartilage that both cushion and support the knee joint.
8. **Hip Pointer:** The diagnosis of a hip pointer means that there is a bone bruise, or possibly a fracture, of the pelvic.

**9. Concussion:** Concussions are caused by a blow to the head; this injury causes some level impairment of brain functions. Symptoms of a concussion may include confusion, short term memory loss, and loss of consciousness.

**10. Spine Injuries:** Spine injuries rare but highly publicized,

Injury seen in all level of football. These injuries are almost always seen when defensive players are in the act of tackling.

**11. Groin pulled:** Inner thigh, strain.

**12. Calf muscle Pulled:** Gastrocnomius or soleus injury.

**13. Muscle cramp.**



**Picture 1:** Collection of data from under fourteen international selection trial



**Picture 2:** Collection of data from an injured football player



**Picture 3:** Fracture in finger of an Under Fourteen football player.

**Significance of the Study**

- Players, coaches, physical educators and all concerned with games and sports will get highly benefited from the project.
- They will have a clear picture of the nature of sports injuries.
- They will come to know that whether young athletes are prone to injury more than elder athlete or vice-versa.
- They will have a clear picture that whether girls are more prone to injury than boys or vice-versa.
- They will get information regarding types of injuries with reference to different games and sports, such as football, track and field, Kabaddi and volleyball.
- The players those who are engaged in sport, will come to

known in a better way what type of injury they may suffer from in a particular age group.

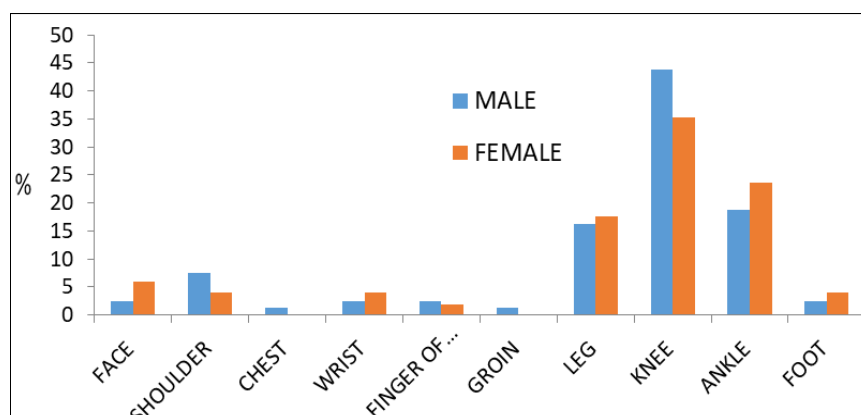
**Subjects**

Groups	Football			Male	Female
	Male	Female			
Senior	65	42	Under seventeen	38	25
Under nineteen	45	30	Under fourteen	28	12
			Total	176	109

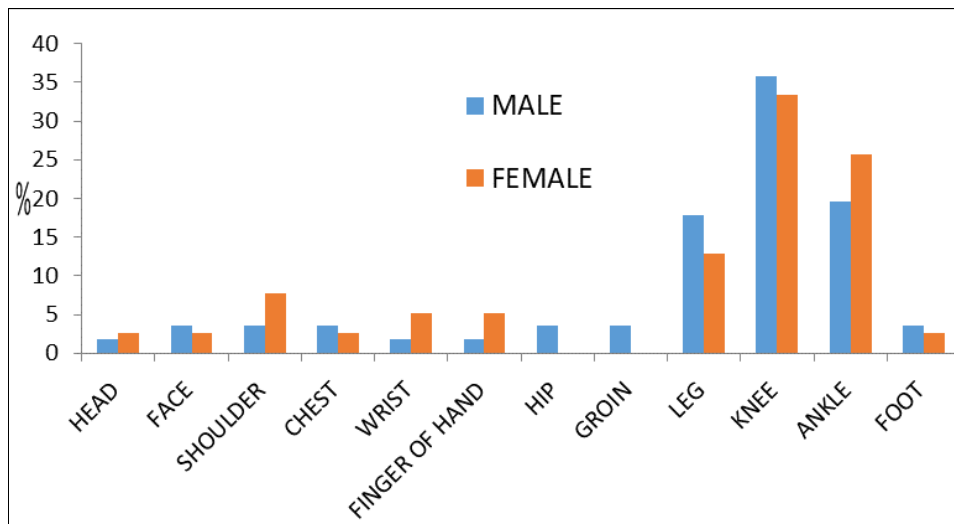
**Results**

**Injuries of Football Players**

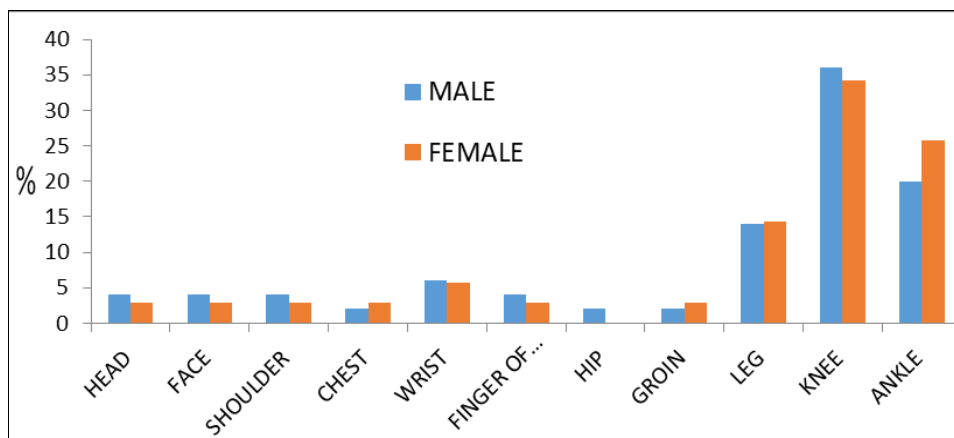
**Statement of injuries in different age and gender groups**



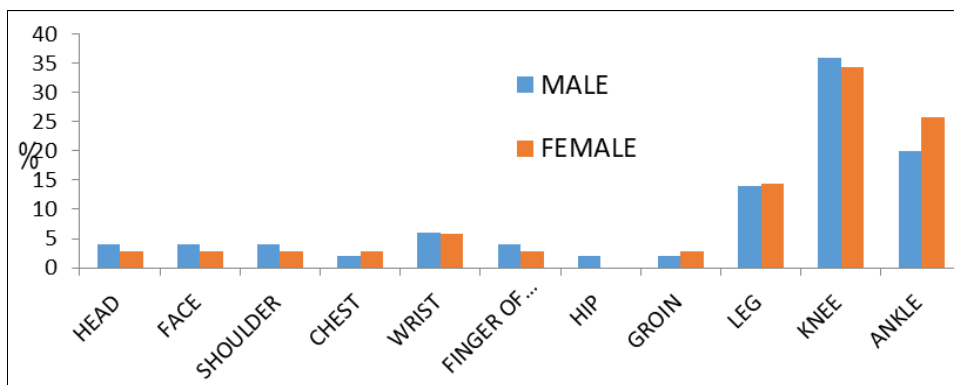
**Fig 1:** Graphical presentation of % of injuries of senior male and female football players



**Fig 2:** Graphical presentation of % of injuries of under nineteen male and female football players



**Fig 3:** Graphical presentation of % of injuries of under seventeen male and female football players



**Fig 4:** Graphical presentation of % of injuries of under fourteen male and female football players

## Discussion

In the present study researcher found in case of senior male the 82.50% and female 80.39% of injury was in lower extremity. Where 43.75% and 35.29% was knee injury; 18.75% and 23.53% ankle injury; 16.25% and 17.65% leg injury respectively. Shoulder injury was found in male 7.5% and in female 3.29%. In case of under nineteen male and female football players, male reported higher knee injury 35.29% female 33.33%, but female reported higher ankle injury 25.64% male 19.64%. Male football players suffered by higher leg injury 17.86% female 12.82%. In Under Seventeen male and female football players male suffered by higher knee injury 36% female 34.29%, but female reported higher ankle injury 25.71% male 20%. Leg injury was nearly

identical male 14% female 14.28%. In case of under fourteen male and female football players injuries were scattered in nature, In male and female knee 28.57% and 31.58%; ankle 17.14% and 15.79%; wrist 14.29% and 15.79% and face 8.57% and 5.26% respectively.

Sen (2005) concluded that most injury making game was noted to be football (49.2%) followed by basketball (27.9%) and (22.8% volleyball). Lower extremities, particularly knee 28% and ankle (21%) were accounted for most injuries. Sprain (39%) was the prime nature of injury, followed by distortion. In the present study it was found that: Senior female athletes were suffered by very higher knee injury female 39.91%, male 22.45%. Male athlete reported very higher trunk injury male 24.39%, female 5.77%. But in case

of ankle and leg injury male and female were nearly same 14.36%, 13.46% and 32.52%, 30.77% respectively. Under nineteen female athletes were suffered by very higher knee injury female 37.81%, male 22.50%; male athlete recorded very higher trunk injury male 22.50% female 5.26%. But in case of ankle injury male 7.50%, female 13.16% and in leg injury male and female were nearly same 30.00% and 34.21% respectively. Under seventeen athletes were higher knee and ankle injury female 20%, male 16.67%. But in case of leg injury male reported nearly identical injury male 36.67% female 35.00%. Male reported higher trunk injury 16.67% female 5% only. In case of under fourteen male and female athletes it was detected that knee injury male 28.57% female 23.53%; ankle injury male 23.81% female 17.65%; and leg injury were male 33.33% female 29.54% respectively. D'souza (1994) conducted a one-year survey on track and field athletics injuries and he concluded that; 65.30% male athletes and 34.7% female athletes and ages ranged from 14 to 32 years, result showed that back injury 29.60% in sprinting events and 20.00% in long distance runner, shin bone injury 46.70% in middle distance runner, 30.00% long distance runner, hamstring injury, 18.57% sprints runner, knee injury 20.00% middle distance runner, thigh injury 18.50% sprinting events, ankle injury, 20.00% middle distance runners.

Bennell KL, Crossley K. (1996) reported that the most common sites of injury were the leg (28%), Thigh (22%) and knee (16%) with the most common diagnosis being stress fractures (21%) and hamstring strain (14%). Bacanac, Radovic and Veskovc (2007) [18] concluded that taekwondo, athletics and triathlon having greatest percentage of men injuries and in case of judo, shooting and handball girls were exposed to the greatest risk of experiencing serious sports injury. Owoeye, O.B.A., Odunaiya, N., Akinbo, S.R., and Odebiyi, D.O. (2009), recorded 171 sports injuries with a male to female ratio of 2:1 and the highest numbers of injuries were found in track and field events and majority of injuries were to the lower limbs.

## Conclusion

Higher age groups indicates higher frequency and severity of injury.

Most injuries in youth female Kabaddi players were acute and affected the lower extremities (senior 89.52%, under nineteen 95.70% and under seventeen 90.00%).

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