



# Academic Sports Scholars

## SPORTS INJURY- A CRITICAL STUDY

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### ABSTRACT

Sports Injuries' are typically occurring while participating in organized sports, competition, training session or organized fitness activities. Exercising is good, but some times can injury when play sports or exercises. So, we can say that in spite of development of modern equipments, safety devises,

improved fitness level and appropriate training, nutrition, number of injuries occurred in various level of competition and training seasons. In the present presentation the main emphasis has been given to understanding type of injury that is prevalent in the field of sports and games. For the purpose of the study around 180 athletes of repute by considered as the subjects of the study. Each was provide a questionnaire in connection with sports injuries genesis, history and frequency of injury suffered by an athlete. From the analysis of the specific questionnaires its appear that around of 80 athletes (Kabaddi players) there may be 20.83% of injured players had knee ligament injury for male and 28.12% for female followed by ankle ligament injury 18.75% for male and 15.62% for female. Out of 100 athletes



(Track and Field) there approximately 18.18% knee ligament injury for male and 31.11% for female followed by hamstring muscle injury 18.18% for male and 24.44% for female. From the analysis on the basis of questionnaires its can safely be concluded that knee ligament injury is more than other injuries.

**KEYWORDS** :sports injuries type, nature, management.

## INTRODUCTION :

In the present work the main emphasis has been given to understanding type of injury that are prevalent in the field of sports and game. It is very much important to know the knowledge about Sports Medicine before sports injury because an injury occupies a very large part of the discipline of Sports Medicine.

A new branch of medical science has evolved i.e. "sports medicine" - the scientific and medical aspects of exercise and athletics.

Sports Injuries are very large part of the discipline of sport medicine.

In spite of development of modern equipments, safety devices, improved fitness level, appropriate training, number of injuries occurred in various levels of competitions and training season are not decreasing.

Sports injuries typically occur while participating in organized sports, competitions, training session or organized fitness activities. Some sports injuries results from accidents, others are due to poor training practices, improper equipments, lack of conditioning or insufficient warm up & stretching.

"Sports injuries are injuries that occur during participation in sports".

## TYPES OF SPORTS INJURIES :

There are two general types –

1) Acute traumatic injury -

- A fracture
- A bruise
- A strain
- A sprain

2) Overuse or chronic injury –

- Stress fracture.
- Minimal muscle tears.
- Tendonitis.
- Bursitis.

## METHODOLOGY

This is the survey type of study in which the investigator trying to find out the nature of sports injuries at various levels of athletes. Each athlete was provided with a questionnaire to understand the genesis, nature, types and history of sports injuries suffered by an athlete.

The main purposes of the study were to find various types of sports injuries common to the athletes that occur among different games and sports of various levels of athletes and also find out the injury rates of male and female athletes of various levels.

Table - 1 Distribution of subjects

Disciplines	Number of injured athletes		Male & Female (Total)
	Male	Female	
Kabaddi	48	32	80
Athletics	55	45	100

Table:2 The distribution of injured athletes according to their level of participation.

Level of participants	Kabaddi (80)		Athletics (100)	
	Male (48)	Female (32)	Male (55)	Female (45)
Sub-division	04	05	07	08
District	10	08	12	11
State	15	13	20	17
National	19	06	16	09
Total	48	32	55	45

**RESULT AND DISCUSSION:**

Using the questionnaire method following findings were found in two different disciplines:

**Kabaddi Injuries:**

N= 80 (N= Sample size or number of subjects, male 48 and female 32).

Kabaddi injuries in male & female players are described in tabular form:

**MALE KABADDI INJURIES:- (16)**

NATURE OF INJURIES	OCCURRENCE	DO'S & DON'T'S ACCORDING TO DOCTOR	RETURN TO NORMAL SCHEDULE
<b>1. Knee ligament Injury</b>	i.Serious tackle ii.Twisting leg by opponent player. iii.opponent player falling down on leg.	<b>DO'S:-</b> rest, ice, medicine, physiotherapy, swimming, gym. for strength dev.. <b>DONT'S:-</b> practices, knee folding, stair-up-down.	2 to 5 months later (according to severity of injury).
<b>2. Ankle ligament injury</b>	i.Serious tackle. ii.Suddenly twist during game. iii.Opponent player falling down on ankle.	<b>DO'S:-</b> rest, ice, medicine & physiotherapy, exercise. <b>DONT'S:-</b> playing, cycling & running.	2 weeks to 4 months later (according to severity of injury).
<b>3. Shoulder injury</b>	i. Serious tackle. ii. Falling down.	<b>DO'S:-</b> rest, ice, medicine & physiotherapy, solder band, exercise & swimming. <b>DONT'S:-</b> hand movement weight carries, play.	3 weeks to 2 months later (according to severity of injury).
<b>4. Wrist injury</b>	i. Sudden falling down during game. ii. Serious tackle.	<b>DO'S:-</b> rest, ice, medicine & physiotherapy, st. dev exercises <b>DONT'S:-</b> movement, weight carry, play.	15 days to 2 & half month later (according to severity of injury).

<b>5. Lower back injury</b>	i. Weight training, over load.	<b>DO'S:-</b> rest, ice, medicine, back st.dev exercise. <b>DONT'S:-</b> movement & forward bending.	3 month to 6 month later (according to severity of injury).
<b>6. Elbow dislocation</b>	i. Serious tackle.	<b>DO'S:-</b> rest, ice, physiotherapy, st. dev. Exercise. <b>DONT'S:-</b> hand movement & weight training.	2 month later.
<b>7. Knee dislocation</b>	i. Serious tackle. ii. force fully knee twisting.	<b>DO'S:-</b> rest, ice, medicine & physiotherapy, exercise & swimming. <b>DONT'S:-</b> walking, running, knee folding.	half to 2 months later (according to severity of injury).
<b>8. Eye brow cut</b>	i. Serious tackle.	<b>DO'S:-</b> rest, dressing, medicine. <b>DONT'S:-</b> water touch, dust, practices.	1 week later.
<b>9. Ribs injury</b>	i. Serious tackle.	<b>DO'S:-</b> rest, ice, medicine, hot & cold water. <b>DONT'S:-</b> play & practices.	3 week to 1 months later (according to severity of injury).
<b>10. Ankle joint crack</b>	i. Serious tackle. ii. Twisting ankle by opponent player.	<b>DO'S:-</b> ice, rest, plaster, physiotherapy, ankle joint exercise. <b>DONT'S:-</b> body weight on ankle.	2 months later (according to severity of ankle crack).
<b>11.Trunk pain</b>	i. Falling down after jump.	<b>DO'S:-</b> rest, ice, hot water bag. <b>DONT'S:-</b> weight carry & practices.	1 & half months later (according to severity of injury).
<b>12.Thigh muscle injury</b>	i. Serious tackle. ii. Falling down during practices.	<b>DO'S:-</b> rest, ice, hot water therapy <b>DONT'S:-</b> playing & practices.	3 week later (according to severity of injury).

<b>13. Keck pain</b>	i. Serious tackle. ii. During jumping exercise.	<b>DO'S:-</b> rest, ice. <b>DONT'S:-</b> movement.	3 months later (according to severity of injury).
<b>14. Hand finger fracture</b>	i. Serious tackle.	<b>DO'S:-</b> rest, ice, plaster. <b>DONT' S:-</b> movement.	1 month later (according to severity of injury).
<b>15. Nose fracture</b>	i. Serious tackle.	<b>DO'S:-</b> rest, ice & use band <b>DONT' S:-</b> practices.	1 & half months later (according to severity of injury).
<b>16. Blood clot in ankle joint</b>	i. Serious tackle. ii. Opponent player falling down on ankle.	<b>DO'S:-</b> rest, ice. <b>DONT' S:-</b> movement & body weight on ankle joint.	1 months later (according to severity of injury).

## FEMALE KABADDI INJURIES:- (13)

<b>NATURE OF INJURIES</b>	<b>OCCURRENCE</b>	<b>DO'S &amp; DONT' S ACCORDING TO DOCTOR</b>	<b>RETURN TO NORMAL SCHEDULE</b>
<b>1. Knee ligament injury</b>	i. Serious tackle ii. Twist leg during game iii. Opponent player falling down on knee.	<b>DO'S:-</b> rest, use crape bandage, water therapy, swimming & gym. <b>DONT' S:-</b> jump, play, stair up-down, knee folding.	2 to 3 months later (according to severity of injury).
<b>2. Ankle ligament injury</b>	i. Suddenly twist during game ii. Twist ankle by opponent player.	<b>DO'S:-</b> rest, ice, use crape bandage, hot water therapy. <b>DONT' S:-</b> pressure on ankle, movement.	3 week to 1 month later (according to severity of injury).
<b>3. Shoulder injury</b>	i. Serious tackle ii. Opponent player falling down on shoulder.	<b>DO'S:-</b> ice, rest, use band, physiotherapy, exercise & swimming. <b>DONT' S:-</b> movement, practices.	2 months later (according to severity of injury).
<b>4. Wrist injury</b>	i. Serious tackle	<b>DO'S:-</b> ice, plaster, rest. <b>DONT' S:-</b> movement, weight carry, practices.	2 months later (according to severity of injury).
<b>5. Lower back injury</b>	i. During weight training.	<b>DO'S:-</b> ice, rest, physiotherapy. <b>DONT' S:-</b> weight bearing, forward bending.	3 months later (according to severity of injury).

<b>6. Hand fracture</b>	i. Serious tackle ii. Falling down during practice.	<b>DO'S:-</b> plaster, medicine, physiotherapy, light weight exercise. <b>DON'T S</b> practices, head movement, weight carry.	2 & half month to 3 months later (according to severity of injury).
<b>7. Laceration</b>	i. Serious tackle ii. Falling down during game.	<b>DO'S:-</b> wash by water, medicated cream, rest, dressing. <b>DONT' S:-</b> practices.	2 to 7 days later
<b>8. Eye brow cut</b>	i. Serious tackle, ii. Hitting by another player.	<b>DO'S:-</b> ice, stitch, rest, bandage. <b>DON'T'S:-</b> water touch, dust, practices.	10days later (according to severity of injury).
<b>9. Leg finger fracture</b>	i. Injury by slip ii. Serious tackle.	<b>DO'S:-</b> ice, plaster, rest. <b>DON'T'S:-</b> passer on foot, practices	1 & half months later (according to severity of injury).
<b>10. Lip cut</b>	i. Serious tackle	<b>DO'S:-</b> ice, stitch, rest. <b>DON'T'S:-</b> hard food, any tackle.	15 days to 1 months later (according to severity of injury).
<b>11. Foot injury</b>	i. Repeated movement during raiding.	<b>DO'S:-</b> ice, crape bandage, rest. <b>DON'T'S:-</b> pressure on foot.	2 week later (according to severity of injury).
<b>12. Thigh muscle injury</b>	i. Falling down during game	<b>DO'S:-</b> ice, rest, stretching-exercise. <b>DON'T'S:-</b> practices.	20 days later (according to severity of injury).
<b>13. Nose fracture</b>	i. Serious tackle.	<b>DO'S:-</b> ice, bandage. <b>DON'T'S:-</b> cold food & drinks, practices.	1 to 2 months later (according to severity of injury).

#### DISCUSSION ON KABADDI INJURIES IN MALE & FEMALE PLAYERS

In this present study it has been observed that male and female kabaddi players of various levels (sub-division, district, state and national level) are suffered from different types of injuries, knee ligament injury 20.83% for male and 28.12% for female. ankle ligament injury (sprain) 18.75% for male and 15.62% for female.

Jayati Sen conducted a study to measure the injuries sustained by female Indian kabaddi players during the 2001-2002 seasons. Among all body parts, knees (19%) were more injury-prone followed by ankles (14%).

According to [www.mykabaddi.com](http://www.mykabaddi.com), result showed that – 40% injuries are to the knees and 29% of all injuries are to the ankle.

## Athletics Injuries

N= 100 (N= Sample size or number of subjects, male 55 and female 45).

Athletics injuries in male & female athletes are described in tabular form:

## MALE ATHLETICS INJURIES:- (11)

<b>NATURE OF INJURIES</b>	<b>OCCURRENCE</b>	<b>DO'S &amp; DONT' S ACCORDING TO DOCTOR</b>	<b>RETURN TO NORMAL SCHEDULE</b>
<b>1.Knee ligament injury</b>	i. During sprint training. ii. Repeated take off practice iii. Due to hard surface practice & during road running etc.	<b>DO'S:-</b> rest, ice, X-ray use crape bandage, medicine & physiotherapy, swimming & gym. <b>DONT' S:-</b> jump, play, cycling, stair up-down, knee folding.	4weeks to 4 months later (according to severity of injury).
<b>2.Ankle ligament injury.</b>	i. During long jump & triple jump practice. ii. Landing after long jump iii. During take off in long jump.	<b>DO'S:-</b> ice, rest, medicine & physiotherapy, stretching exercises. <b>DONT' S:-</b> practice, competition, heavy movement.	20 days to 2 months later (according to severity of injury).
<b>3. Hamstring muscle injury.</b>	i. During 100m sprint running. ii. During hurdles practice and during triple jump competition.	<b>DO'S:-</b> ice, rest, medicine & physiotherapy, stretching & light weight exercises. <b>DONT' S:-</b> practice running, jumping, cycling.	1 to 2 months later (according to severity of injury).
<b>4. Back muscle injury.</b>	i. During weight training & during repeated high jump practice etc.	<b>DO'S:-</b> ice, rest, physiotherapy medicine, hot water bag. <b>DONT' S:-</b> practice, forward bending.	30 to 40 days later (according to severity of injury).
<b>5. Knee pain.</b>	i. During sprint training ii. Repeated jumping practice & during 1500m run in competition.	<b>DO'S:-</b> ice, rest, X-ray, physiotherapy, gym & sand training for str.dev. <b>DONT' S:-</b> stair-up, knee jerking & knee folding.	30 to 45 days later (according to severity of injury).
<b>6. Trunk injury.</b>	i. Landing after high jump (sand pit)	<b>DO'S:-</b> X-ray, medicine, physiotherapy, use hot water bag. <b>DONT' S:-</b> forward bending, weight bearing.	1 to 2 months later (according to severity of injury).
<b>7. Thigh muscle injury.</b>	i. Due to over stretch ii. Hurdles jump & during 400m run.	<b>DO'S:-</b> ice, rest, physiotherapy, stretching & swimming. <b>DONT' S:-</b> practice & more movement.	20 to 30 days later (according to severity of injury).

<b>8. Shinbone pain.</b>	i. Due to hard surface & improper shoe.	<b>DO'S:-</b> ice, rest, medicine, hot water therapy. <b>DONT' S:-</b> running & jumping.	4 to 45 days later (according to severity of injury).
<b>9. Elbow joint injury.</b>	i. During discus throw. ii. During repeated javelin throw.	<b>DO'S:-</b> ice, rest, medicine, physiotherapy, light weight exercise. <b>DONT' S:-</b> practice, weight bearing & movement.	3 weeks to 30 days later (according to severity of injury).
<b>10. Shoulder joint injury.</b>	i. During javelin & discus throw. ii. Repeated javelin throw.	<b>DO'S:-</b> ice, rest, X-ray, physiotherapy, shoulder band & stretching exercises. <b>DONT' S:-</b> practice movement & wt. carry.	30 to 45 days later (according to severity of injury).
<b>11. Calf muscle cramp.</b>	i. During 5000m run in competition. ii. During practice season.	<b>DO'S:-</b> ice, rest, massage & hot water therapy. <b>DONT' S:-</b> practice.	2 weeks later.

## FEMALE ATHLETICS INJURIES:- (08)

<b>NATURE OF INJURIES</b>	<b>OCCURRENCE</b>	<b>DO'S &amp; DONT' S ACCORDING TO DOCTOR</b>	<b>RETURN TO NORMAL SCHEDULE</b>
<b>1. Knee ligament injury.</b>	i. Repeated 4*400m relay practice ii. Road running. iii. During putting the shot. iv. Landing out side the pit. Etc.	<b>DO'S:-</b> rest, ice, X-ray, MRI, surgical operation, use crape bandage, medicine & physiotherapy, swimming & gym. <b>DONT' S:-</b> jump, play, cycling, stair up-down, knee folding.	4 weeks to 5 months later (according to severity of injury).
<b>2. Ankle ligament injury.</b>	i. During high jump & triple jump practice. ii. Landing after high jump. iii. Falling down after putting the shot.	<b>DO'S:-</b> ice, rest, medicine & physiotherapy, st.dev. & stret. exercises, <b>DONT' S:-</b> practice, competition, pressure on ankle.	1 to 2 months later (according to severity of injury).
<b>3. Hamstring muscle injury.</b>	i. During 100m sprint running. ii. During jumping exercise practice and during high jump competition.	<b>DO'S:-</b> ice, rest, medicine & physiotherapy, stretching & light weight exercises. <b>DONT' S:-</b> practice running, jumping, cycling.	2 to 5 months later (according to severity of injury).



<b>4. Back muscle pain.</b>	i. During weight training & during repeated discus practice etc.	<i>DO'S</i> :- ice, rest, physiotherapy medicine, hot water bag, gel. <i>DONT' S</i> :- practice, forward bending, long duration standing & walking.	30 to 45 days later (according to severity of injury).
<b>5. Knee pain.</b>	i. Turning during putting the shot. ii. Repeated triple jump practice.	<i>DO'S</i> :- ice, rest, physiotherapy, use band. <i>DONT' S</i> :- practices & excess presser on knee.	1 month later (according to severity of injury).
<b>6. Knee cartilage injury.</b>	i. Landing after water jump (3000m steeplechase)	<i>DO'S</i> :- X-ray, MRI, surgical operation, medicine, physiotherapy, swimming & exercise. <i>DONT' S</i> :- Indian style toilet, knee folding, practice.	5 to 6 months later (according to severity of injury).
<b>7. Knee crack.</b>	i. During hop in triple jump. ii. Falling down after landing of long jump ect.	<i>DO'S</i> :- ice, rest, X-ray, plaster, physiotherapy, medicine, walking with support. <i>DONT' S</i> :- practice & knee folding.	3 to 4 months later (according to severity of injury).
<b>8. Calf muscle cramp.</b>	i. During long distance run. ii. During approach run in high jump etc.	<i>DO'S</i> :- ice, rest, stretching, massage & hot water therapy. <i>DONT' S</i> :- practice.	1 week later.

#### DISCUSSION ON ATHLETICS INJURIES IN MALE & FEMALE PLAYERS

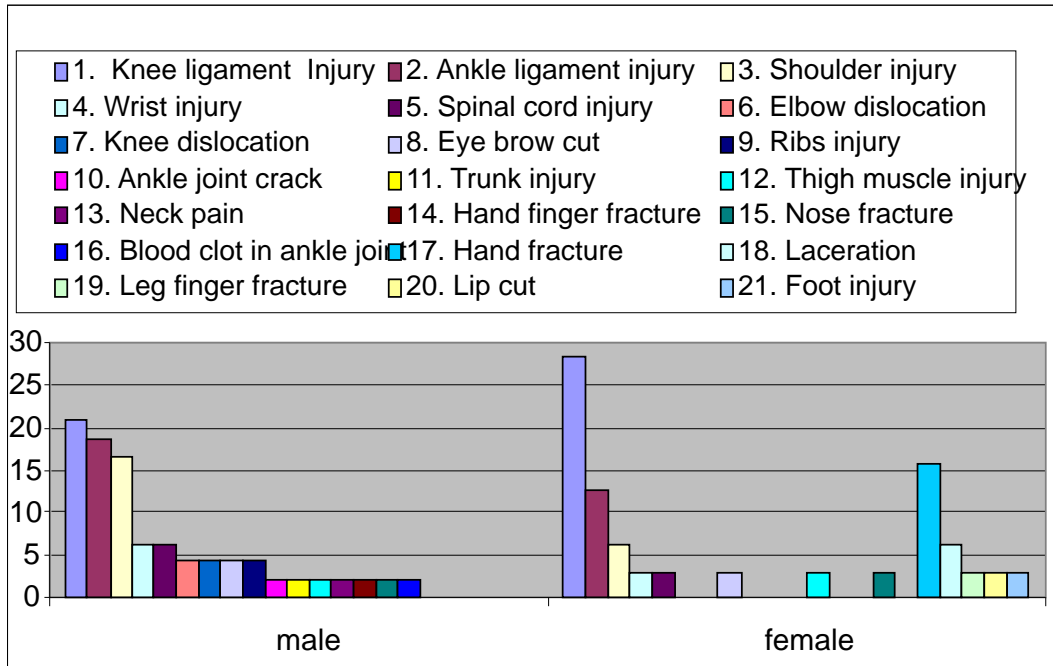
In this presents study the researcher find out the various types of injuries suffered by both male and female athletes, like knee ligament injury (18.18% for male & 31.11% for female) followed by ankle sprain (18.18% for male & 13.33% for female). Another prominent athletics injury was hamstring muscle injury (18.18% for male & 24.44% for female).

Bennell KL, Crossley k. (1996) worked on track and field musculo-skeletal injury and result showed 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%).

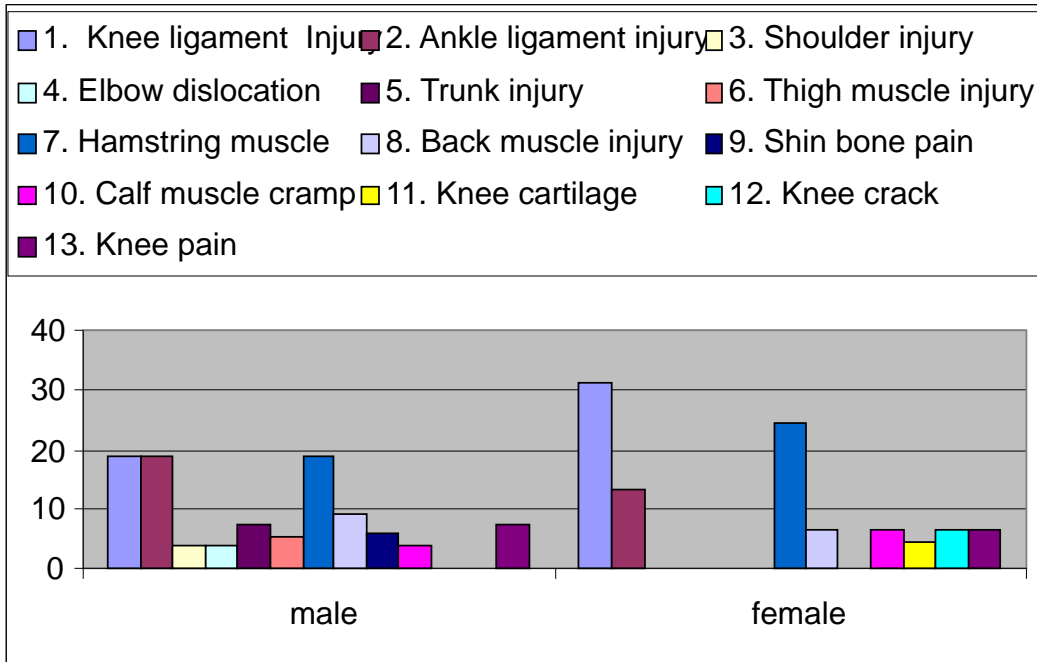
## TABULAR DISTRIBUTION OF INJURIES IN TWO SPORTS DISCIPLINES

<i>Discipline</i>	<i>KABADDI (IN %)</i>		<i>ATHLETICS (IN %)</i>	
	<i>MALE</i>	<i>FEMALE</i>	<i>MALE</i>	<i>FEMALE</i>
<b>1. Knee ligament Injury</b>	20.83%	28.12%	18.87%	31.31%
<b>2. Ankle ligament injury</b>	18.75%	12.5%	18.87%	13.33%
<b>3. Shoulder injury</b>	16.66%	6.25%	3.63%	NA
<b>4. Wrist injury</b>	6.25%	3.12%	NA	NA
<b>5. Lower back injury</b>	6.25%	3.12%	NA	NA
<b>6. Elbow dislocation</b>	4.16%	NA	3.63%	NA
<b>7. Knee dislocation</b>	4.16%	NA	NA	NA
<b>8. Eye brow cut</b>	4.16%	3.12%	NA	NA
<b>9. Ribs injury</b>	4.16%	NA	NA	NA
<b>10. Ankle joint crack</b>	2.08%	NA	NA	NA
<b>11. Trunk injury</b>	2.08%	NA	7.27%	NA
<b>12. Thigh muscle injury</b>	2.08%	3.12%	5.45%	NA
<b>13. Neck pain</b>	2.08%	NA	NA	NA
<b>14. Hand finger fracture</b>	2.08%	NA	NA	NA
<b>15. Nose fracture</b>	2.08%	3.12%	NA	NA
<b>16. Blood clot in ankle joint</b>	2.08%	NA	NA	NA
<b>17. Hand fracture</b>	NA	15.62%	NA	NA
<b>18. Laceration</b>	NA	6.25%	NA	NA
<b>19. Leg finger fracture</b>	NA	3.12%	NA	NA
<b>20. Lip cut</b>	NA	3.12%	NA	NA
<b>21. Foot injury</b>	NA	3.12%	NA	NA
<b>22. Hamstring muscle</b>	NA	NA	18.87%	24.44%
<b>23. Back muscle injury</b>	NA	NA	9.10%	6.66%
<b>24. Shin bone pain</b>	NA	NA	5.45%	NA
<b>25. Calf muscle cramp</b>	NA	NA	3.63%	6.66%
<b>26. Knee cartilage</b>	NA	NA	NA	4.44%
<b>27. Knee crack</b>	NA	NA	NA	6.66%
<b>28. Knee pain</b>	NA	NA	7.27%	6.66%

GRAPHICAL PRESENTATION OF KABADDI INJURIES (%)



GRAPHICAL PRESENTATION OF ATHLETICS INJURIES (%)



CONCLUSION

From the survey following specific conclusions can be made –

- + Among male & female kabaddi players maximum injury observed was knee ligament injury followed by ankle ligament injury (sprain).
- + Other than these injuries there are 14 others specific injuries observed among male kabaddi players & 11 other specific injuries observed among female kabaddi players.

- + Among male & female athletes maximum injury observed was knee ligament injury followed by ankle ligament injury (sprain) & hamstring injury.
- + Other than these injuries there are 8 other specific injuries observed among male athletes & 5 others specific injuries observed among female athletes.
- + Injury verities are more in body contact sports than individual sports.

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