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## A prospective analysis of injuries among basketball players

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### Abstract

**Background of the Study:** Basketball is a very famous sport which played all over the globe. Basketball involves intense activities during match or practice. It is team game which played on a court of 28×15 meter (length × width) within 10 players of 5 players each team. When fast movements occur it will lead the chance of injuries in the respective game. Therefore, keeping in mind this point of view, present study has been designed to investigate a prospective analysis of injuries among basketball players.

**Objectives of the Study:** To assess the injuries and body part associated with injuries in Basketball players.

**Methodology:** For accomplish the study a total 25 Basketball player were selected purposively as sample for the present study. The level of competition of the selected respondents was University and National respectively. The age of the sample were ranged from 17 to 35 years. A self-structured injury report form was used to report the injuries in Basketball players. The percentage method was used to analysis the obtained raw data into meaningful facts.

**Keywords:** Sports injury, basketball

### Introduction

Injuries in sports due to acute distress or repetitive pressure related to athletic activities. Games wounds will affect bones or delicate tissue (tendons, muscles, ligaments). Consistently, a great deal of people (everything being equal) inside the world partake in physical activity and games exercises, from affiliation football field to softball jewels and Kabaddi courts. It's called playing at the same time; however wears exercises are more than play. Cooperation in sports enhances physical wellness, coordination and self-restraint, and give kids and individual profitable chances to learn collaboration. Amusement and games can likewise bring about wounds some minor, some genuine, and still others bringing about long lasting medicinal issues.

Sports carry an element of risk in the form of injury. In fact, there is no sport-whether amateur or professional-where injury does not occur. In some sports, chance injury may be much more due to the nature of the sport itself; in others, it may be less. The athletic injury may be as simple and insignificant as a bruise on the knee or elbow and as serious and fatal as a thigh fracture or skull smash. Athletic injuries occur from two different mechanisms: macrotrauma, and microtrauma. Macrotrauma-a deeply distressing experience-is a sudden injury from a major force. This could for example, be due to a bad fall from a horizontal (or parallel) bar or a ball hit during play in field hockey or cricket. Such situations abound in almost all sports, and can cause fractures, sprains or ligament, muscle strains (tear) and bruises or contusion, which are commonly termed as acute injuries. Microtrauma is due to repetitive injury over a long period of time and these injuries are also termed overuse. Types of injuries include stress fracture, little league elbow and shoulder impingement syndrome. Most sports injuries involve musculoskeletal system

### Methodology adopted for the present study

**Selection of Sample:** For accomplish the study a total 25 Basketball player were selected purposively as sample for the present study. The level of competition of the selected respondents was University and National respectively. The age of the sample were ranged from 17 to 35 years.

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**Selection of the Variables**

Common sports injuries, Body Part associated with injuries were the variables of the present study.

**Tool Used**

A self-structured injury report form was used to report the injuries in Basketball players. The reliability of injury report form was established through Intra-rater reliability

coefficient method which involves the rating of three experts of concerned field.

**Statistically Method**

The percentage method was used to analysis the obtained raw data into meaningful facts. Suitable graphs and tables were used to illustrate the obtained outcomes.

**Results**

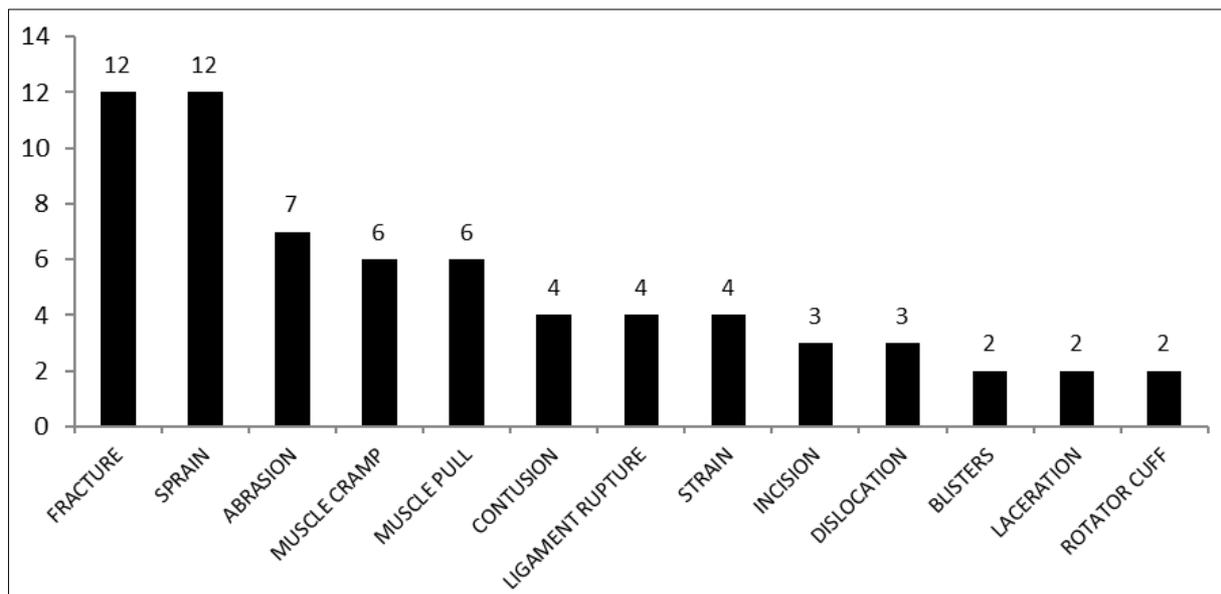
**Table 1:** Frequency, percentage and rate of common injuries in basketball

		Responses		Percent of Cases	Injury Ranking
		N	Percent		
Injuries	Abrasion	7	10.4%	36.8%	3
	Blisters	2	3.0%	10.5%	12
	Contusion	4	6.0%	21.1%	7
	Incision	3	4.5%	15.8%	10
	Laceration	2	3.0%	10.5%	12
	Dislocation	3	4.5%	15.8%	10
	Fracture	12	17.9%	63.2%	2
	Ligament Rupture	4	6.0%	21.1%	7
	Muscle Cramp	6	9.0%	31.6%	5
	Muscle Pull	6	9.0%	31.6%	5
	Sprain	12	17.9%	63.2%	2
	Strain	4	6.0%	21.1%	7
	Rotator Cuff	2	3.0%	10.5%	12
Total		67	100.0%	352.6%	

- a. Dichotomy group tabulated at value 1.
- b. Percentage of Injury cases.
- c. Injury Ranking (1<sup>st</sup> rank denote highest score) (based on injury rate)
- d. Ranks are in descending order

Table no. 1 shows the dispersion of common injuries in Basketball and it is analyzed that fracture and sprain are highest possible injuries in Basketball. A total 67 injuries were recorded with the help of injury report form and out of total 12 are sprain and 12 are fracture. The injury rate of both injuries is 63.2% respectively. Second most prone injuries in Basketball are muscle cramp and muscle pull. Frequency of

muscle pull is 6, percentage distribution is 9% and injury rate is 31.6 and muscle cramp is also same value because their frequencies are same. Third highest frequent injury is abrasion with a frequency of 7, percentage distribution is 10.4 and injury rate is 36.8%. Blisters, laceration, and rotator cuff are considered as lowest frequent injuries in Basketball as per their ranking and rate of injuries per/100 athletes.



**Fig 1:** Frequencies Distribution of Common Injuries in Basketball

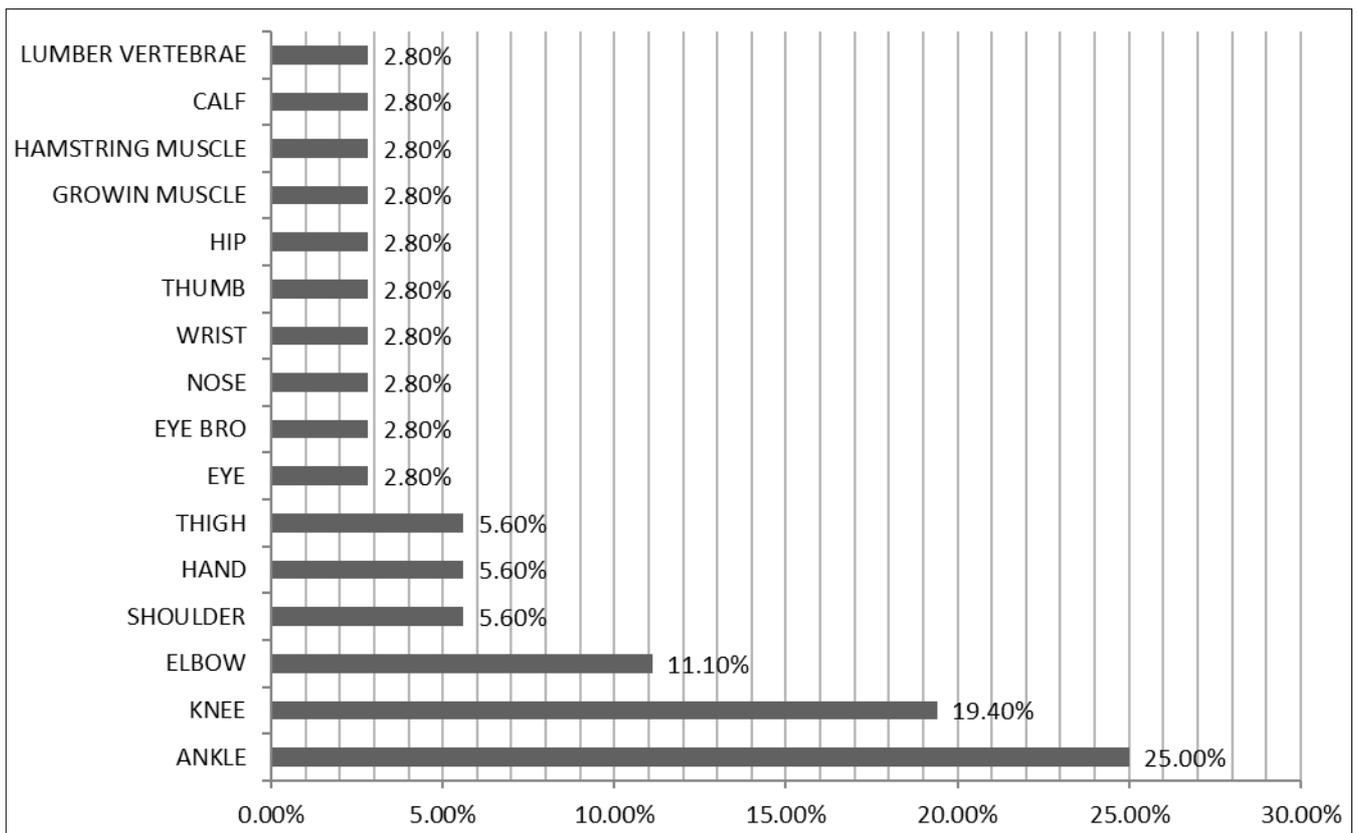
**Table 2:** Body parts associated with injuries in basketball

		Responses		Percent of Cases
		N	Percent	
Body Parts <sup>a</sup>	Ankle	9	25.0%	64.3%
	Knee	7	19.4%	50.0%
	Elbow	4	11.1%	28.6%
	Shoulder	2	5.6%	14.3%
	Hand	2	5.6%	14.3%
	Thigh	2	5.6%	14.3%
	Eye	1	2.8%	7.1%
	Eye bro	1	2.8%	7.1%
	Nose	1	2.8%	7.1%
	Wrist	1	2.8%	7.1%
	Thumb	1	2.8%	7.1%
	Hip	1	2.8%	7.1%
	Growin muscle	1	2.8%	7.1%
	Hamstring muscle	1	2.8%	7.1%
	Calf	1	2.8%	7.1%
Lumber vertebrae	1	2.8%	7.1%	
Total		36	100.0%	257.1%

a. Dichotomy group tabulated at value 1.

The table 2 evident the frequencies, percentage distribution and injury rate of Basketball players. Only three highest and three lowest parts were described within the table. Percentage of Ankle was 25% and IR was 64.3%. Percentage of Knee was 19.4% and IR was 50%. Percentage of Elbow

was 11.1% and IR was 28.6%. The lowest in the wind body parts were Hamstring Muscle, Calf and Lumber Vertebrae their percentage distribution was 2.8% and Injury Rate (IR) was 7.1% respectively.



**Fig 2:** Percentage Distribution of Injured Body Parts in Basketball Players

**Conclusions of the Study**

After analysis of the obtained results it was observed that sprain and fracture is the most frequent injuries in Basketball whereas, the percentage distribution of sprain was 17.9% and similarly the fracture has also 17.9% occurrences observed in basketball. Abrasion was the 3<sup>rd</sup> highest prone to be occur injury noticed in basketball. Muscle cramp and muscle pull is

also a significant percentage (9%) noticed. 4 ligament rupture which cover 6% of the total injuries were observed in basketball players. if we take notice into the body parts associated with injuries it was observed that ankle (25%), knee (19.4%) and elbow (11.1%) are the highest body parts which prone to be injuries in basketball during practice and match also. therefore, it is concluded on the basis of the

results outcomes following injuries stated above and associated body parts should be taking into notice to be injured in basketball.

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