

Original Research

Comparative study on Site Sport Injuries among Players of Different Age and Gender in Kabaddi

Fatehjeet Singh Maan

Associate professor, Department of Physiotherapy, State Institute of Nursing and Para Medical Sciences, Badal (Baba Farid University of Health Sciences, Faridkot)

Corresponding Author:

Fatehjeet Singh Maan

Associate professor, Department of Physiotherapy, State Institute of Nursing and Para Medical Sciences, Badal (Baba Farid University of Health Sciences, Faridkot)

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Abstract

Kabaddi is a popular contact sport with deep roots in the ancient history of India and South Asia. It involves both offensive and defensive skills, which makes players susceptible to a variety of sports-related injuries. Thus, to highlight the nature of injuries on various sites of body among different age and gender groups the researcher conducted the survey study in various training schools, sports academy and District Kabaddi Tournaments during matches or rehearsals. From the study, it was found that among senior male Kabaddi players, ankle ligament (sprain) injuries accounted for 21.25%, while knee ligament (sprain) injuries were 15%. In senior female players, ankle ligament (sprain) injuries were 23.40%, and knee ligament (sprain) injuries were 14.89%. Similarly, in the under-19 male group, knee ligament injuries were the most common at 26.22%, followed by ankle ligament (sprain) injuries at 18.03%. For under-19 female players, knee ligament (sprain) injuries were 22.85%, and ankle ligament (sprain) injuries were 20%. Thus, from this survey study, it was concluded that among all body parts, knees and ankles were major sites of injury followed by back muscle and shoulder dislocation.

Keywords: Sport, injuries, male, female, kabaddi

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Introduction

Kabaddi is one of the most popular forms of combat sport which has its origin in South Asia and has spread gradually to other countries like Canada, Iran, Japan, the UK, etc., [1]. It is the state game of Haryana, Punjab, Tamil Nadu, Bihar, and Maharashtra. Since 1990, it is part of the Asian Games [2]. Kabaddi, a widely popular contact sport, originated in South Asia and has progressively gained popularity in countries such as Japan, Canada, UK, Iran, and others [1]. Contact sports are those in which players physically engage with one another, aiming to stop the opposing player or team from winning the game or competition [2,3]. Kabaddi is the state sport of Punjab, Bihar, Haryana, Maharashtra and Tamil Nadu. Later in 1990, it has also been a part of the Asian Games [4]. In India, Kabaddi is especially popular and widely played in the state of Punjab. Kabaddi is a simple and affordable game that doesn't require a large playing area or expensive gear [5]. Kabaddi players must possess remarkable intelligence, physical strength, quick reflexes, endurance, neuromuscular coordination and mental acuity to excel in the sport. Like wrestling, Kabaddi is a sport that involves intense physical contact. Injuries in Kabaddi can occur at different sites, genders, and age groups due to lack

of proper fitness knowledge, the competitive nature among players, unnatural body actions and occasional foul play [6,7]. Several authors have proposed different schemes for classifying sports injuries. These injuries can be categorized based on type of sport or the anatomical location of the injury. Some athletic trainers and physicians classify injuries either as "acute" or "chronic." Another classification system categorizes injuries based on the type of sport, such as individual sports, team sports, etc. In the present study, the researchers aim to focus on the nature and location of injuries that occur during training and competitions among different age and gender groups of Kabaddi players.

Purpose of the study

The purpose of the study was as follows: -

1. To study the common site of injuries among the kabaddi players of different age groups.
3. To observe gender wise incidence of sports injuries among kabaddi players.
4. To compare types of injuries that occurs among different age and gender groups of kabaddi players.

Materials and Methods

1. Data Collection:

This was a survey type of study conducted in training schools, sports academy and District Kabaddi Tournaments during matches or rehearsals in state of Punjab. Coaches were briefed in detail about the purpose and significance of the study, ensuring they understood its importance and were fully informed. Informed consent was obtained from all the players. Common injuries related to Kabaddi during both competitions and practice sessions were identified using a questionnaire. The study recorded the incidence of injuries across various body regions (upper limb, lower limb, and other body parts) among Kabaddi players. The study also assessed the players' awareness of physiotherapy and its importance. The questionnaire was created in English and divided into the following two sections:

a) Section A contained six questions related to the demographic details.

b) Section B contained the twelve questions regarding injuries in various body regions and the use of physiotherapy treatment

2. Selection of the Samples:

A total of 80 players (N=80) were surveyed to collect data on injuries. The age groups and genders considered in the study were as follows:

- Senior: (Male and female); [n=48+32]
- Under nineteen: (Male and female); [n=42+38]

3. Formula for Analysing Data:

Data was entered into MS excel and Descriptive method i.e. mean, percentage were used to calculate various parameters of data. The tables and Graphs were used to illustrate the data characteristics.

Results and Discussion

Among the total kabaddi players, the distribution of site of injuries and nature of injuries according to age and gender was as follows in Table 1, 2 and 3

Table 1: Site of injuries among senior male and female Kabaddi players.

Sr.no.	Site of injury	Male		female	
		No of injuries	% of injuries	No of injuries	% of injuries
1.	Head	2	1.56	3	2.91
2.	Face	4	3.12	5	4.85
3.	Eye	3	2.34	2	1.94
4.	Neck	4	3.12	6	5.82
5.	Upper Back	3	2.34	3	2.91
6.	Shoulder	14	10.93	10	9.70
7.	Chest	5	3.90	2	1.94
8.	Wrist	7	5.46	8	7.76
9.	Arm	3	2.34	4	3.88
10.	Elbow	2	1.56	2	1.94
11.	Hand	2	1.56	2	1.94
12.	Lower back	16	12.5	12	11.65
13.	Lower limb	7	5.46	4	3.89
14.	Thighs	6	4.68	2	1.94
15.	Knee	19	14.84	15	14.56
16.	Ankle	23	17.96	17	16.50
17.	Foot/toe	8	6.25	6	5.83
18.	Total	128	100	103	100

Table 2: Nature of injuries among senior male and female Kabaddi players.

Sr.no.	Nature of injury	Senior male		Senior female	
		No of injuries	% of injuries	No of injuries	% of injuries
1	Chest rib fracture	1	1.25	-	
2	Shoulder dislocation	9	11.25	3	6.38
3	Elbow dislocation	2	2.5	2	4.25
4	Back muscle strain	9	11.25	4	8.51
5	Quadriceps Strain	6	7.5	4	8.51
6	Knee ligament (sprain)	12	15.00	7	14.89
7	Knee dislocation	7	8.75	3	6.38
8	Ankle ligament (sprain)	17	21.25	11	23.40
9	Contusion or bruise	5	6.25	2	4.25
10	Laceration	3	3.75	3	6.38
11	Muscle/tendon (strain)	4	5.00	6	12.76
12	Bone fracture	5	6.25	2	4.25

	Total	80	100	47	100
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Table 3: Nature of injuries among under 19 male and female Kabaddi players.

Sr.no.	Nature of injury	Male		Female	
		No of injuries	% of injuries	No of injuries	% of injuries
1	Chest rib fracture	-		-	-
2	Shoulder dislocation	5	8.19	1	2.85
3	Elbow dislocation	1	1.63	2	5.71
4	Back muscle strain	2	3.27	2	5.71
5	Quadriceps strain	4	6.55	4	11.42
6	Knee ligament (sprain)	16	26.22	8	22.85
7	Knee dislocation	9	14.75	2	5.71
8	Ankle ligament(sprain)	11	18.03	7	20.00
9	Contusion or bruise	3	4.91	3	8.57
10	Laceration	3	4.91	1	2.85
11	Muscle or tendon (strain)	3	4.91	4	11.42
12	Bone fracture	4	6.55	1	2.85
	Total	61	100	35	100

It was found that among senior male Kabaddi players, ankle ligament (sprain) injuries accounted for 21.25%, while knee ligament (sprain) injuries were at 15%. Following that, shoulder dislocation and back muscle strain were reported at 11.25%, while knee dislocation occurred at 8.75%. Quadriceps strain was observed in 7.5% of cases, and contusions, bruises, and bone fractures were seen in 6.25%. Muscle or tendon strains accounted for 5.56% of the injuries. Other injuries, such as lacerations and elbow dislocations, were less than 5%.

On the other hand, among female Kabaddi players, ankle ligament (sprain) injuries were the most common at 23.40%, followed by knee ligament (sprain) injuries at 14.89%. Muscle/tendon strains accounted for 12.76%, while back muscle strain and quadriceps strain were reported at 8.51%. Lacerations, knee dislocations, and shoulder dislocations each occurred at 6.38%. Other injuries, such as elbow dislocations, contusions, or bruises, were less than 5%.

Among under-19 male Kabaddi players, 26.22% of all injured players experienced knee ligament injuries. Ankle ligament (sprain) injuries accounted for 18.03% of the total injuries. Knee dislocations followed at 14.75%, while shoulder dislocations were reported at 8.19%. Bone fractures and quadriceps strains each made up 6.55% of the injuries. Other injuries, such as contusions, bruises, and lacerations, were less than 5%.

Among under-19 female Kabaddi players, 22.85% of all injuries were knee ligament (sprain) injuries, while 20% were ankle ligament (sprain) injuries. Quadriceps strains and muscle/tendon strains accounted for 11.42%. Contusions or bruises made up 8.57%, and elbow dislocations, back muscle strains, and knee dislocations each accounted for 5.71%. Other injuries, such as shoulder dislocations and lacerations, were less than 5%.

It was found that majority of the injuries were occurred in lower body parts as compared to the upper body parts. Laceration of skin was particularly common to shoulders, legs, palms and thigh among Kabaddi players.

Among all body parts, knees and ankles were most common sites of injury followed by back muscle and shoulder dislocation.

Conclusion(S)

Kabaddi is a high intensity, competitive sport, so the prevalence of injury is high. In the upper limb, shoulder constituted most of the injury whereas in lower limb, knee constituted most of the injuries.

The present study concluded that in today's modernise healthcare system physiotherapy and a sports physiotherapist should be included in the rehabilitation service for Kabaddi players also

Conclusion

Kabaddi is a dynamic and intense sport, which contributes to a high prevalence of injuries among players. The present study concluded that, in the upper body part, the shoulder was the most common site of injury, while in the lower part, the knee and ankle were the most frequently injured areas. Within the modern healthcare system, a sports physiotherapist should be an essential part of the rehabilitation process for Kabaddi players. Additionally, it was observed that the frequency and severity of injuries were greater in higher (senior) age groups.

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