

An Analysis of Injury Characteristics among Kabaddi Men Players in Coimbatore

G. Kaviyarasu¹, Dr. S. Sakthivel²

¹II MPED Scholar, Faculty of General & Adapted Physical Education and Yoga Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore - 641020

²Assistant Professor, Faculty of General & Adapted Physical Education and Yoga Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore - 641020

Abstract: *The objectives of the study were to analyze the injury occurrences & sports achievements in Kabaddi players of various teams in Coimbatore district. This study may help to find out the injury characteristics, sports performance and the underlying causes and its effects among Kabaddi men players. Information on injuries were collected from 35 Kabaddi players who were participating in district, zonal, inter collegiate and state level competitions, a total of 18 players were participated in regional level and 17 players were participated in state level competitions, the age of the players ranges from 17 to 24 years. IOC - injury surveillance questionnaire developed by Junge et al., (2015). Results shows that the most common occurrence of injuries are sprains on the ankle, knee, and shoulder joints. Most sports injuries happen during games and tournaments and the chance of getting injured is more when playing in artificial mats then compared to natural surface. It is also evident that the least number of players consult a physiotherapist or undergo a proper rehabilitation therapy after the injury. It was concluded that in Kabaddi, players were injured due to not doing proper warming up exercises, not using the correct technique, insufficient knowledge about scientific procedures, and inadequate use of equipment. Regarding all these factors, more knowledge is required for the players, coaches, trainers, and organizers.*

Keywords: Injury characteristics, risk factors, Kabaddi

1. Introduction

Any kind of injury sustained while engaging in physical activity or sports is considered a sports injury **Bhandari (2021)**. India is home to the widely popular sport of kabaddi, which is played throughout the nation. It is a low - cost/no - cost game, and in the modern era of games and sports, the word "power" has been added, transforming it into "power sports" and "power games," ultimately taking on a "combat" aspect **Mondal, A., & Ghosh, M. C. (2017)**. Because of the enthusiastic support and total involvement of the spectators, it is also referred to as the "Game of the masses" (**Dey, S. K. et al., 1993, Selva, S. et al., 2018**). Kabaddi players require extraordinary levels of physical endurance, agility, individual skill, lung capacity, quick reflexes, neuromuscular coordination, intelligence, and mental focus (**Dey et al., 1993**). The frequent contact between players and the rough playing mat contribute to a fair number of injuries (**Venkatash, 2016**). Due to the high - intensity intermittent nature of the sport, success requires a well - built physique (**Pawar, S. B., & Borkar. P, 2018**). Every sport has some level of injury risk, but kabaddi is no exception due to the high force required in play. There is increasing the number of injuries in kabaddi players due to its competitive nature (**Sen. J, 2004**). Since it is a contact sport, there is a lot of pushing, pulling, jumping, and twisting involved in the game which has high possibilities of strains. The risk of these kinds of injuries is increased when specific body parts are used frequently. Ankles are particularly vulnerable to injuries because of the contact nature of the game. Establishing risk factors for injury and re - injury is a key component of injury prevention, which helps to promote safe

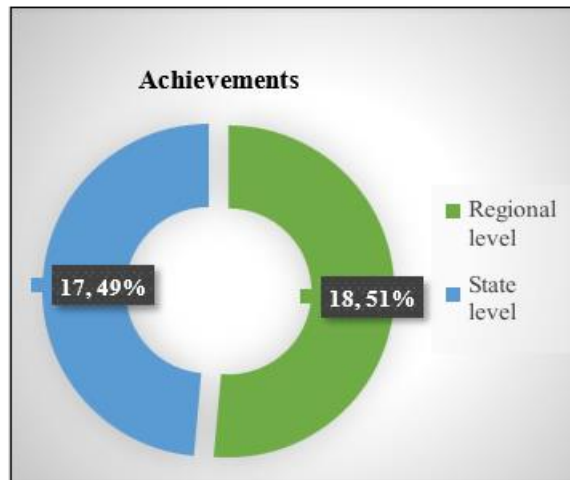
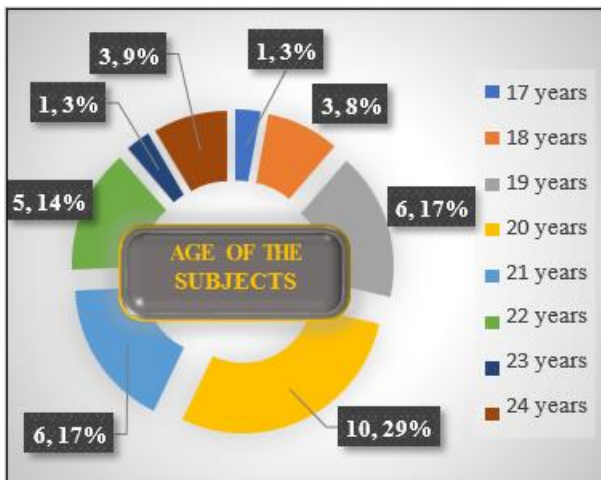
exercise participation. Over the past ten years, research on injury prevention has attracted more attention from around the world. Youth sports injuries have a substantial impact on young athletes' health and wellbeing, which may indirectly hinder their professional development. It is required to reduce these injury effects by developing suitable injury - prevention strategies based on precise epidemiological data. The introduction of various preventive strategies demands a multidisciplinary approach to manage these injuries and their consequences (**Gundre, S. D. et al, 2015**).

2. Research Questions

- 1) What are the common types of injury in kabaddi?
- 2) When there is a maximum chance of occurrence of injury?
- 3) Which is the most injury prone area in body?
- 4) What is the major cause of injury in kabaddi?
- 5) At which activity/skill the chance of injury is more?
- 6) What is the impact of playing surface on occurrence of injury?
- 7) What are the means and methods of treatment after the injury?

3. Methodology Selection of Subjects

To complete the purpose of this study 35 men Kabaddi players from Coimbatore district were selected who has participated in various Kabaddi tournaments held in Tamil Nadu during August 2023 to October 2023.



Selection of the Test and Criterion Measures

S. no	Variables	Name of the test	Unit of measurements
1	Injury assessment	IOC questionnaire (Junge et al.,2015)	Scores
2	Sports achievement	Questionnaire	Scores

Statistical Techniques

The intention of the study was to analyze the injury characteristics and sports achievement among men Kabaddi players in Coimbatore. To find out any significant in injuries level and their achievements, for which the data collected from above said method was tested using descriptive statistics such as mean and standard deviation which were found in order to get the basic idea of the distribution of injuries and sports achievement among men Kabaddi players of Coimbatore.

4. Results

Percentage of Types of Injury Occurred in Kabaddi Player

Table 2: Types of injury

Injuries	Frequency	Percent %
Subluxation, dislocation	1	2.90%
Disc injury	1	2.90%
Muscle spasm	1	2.90%
Fracture	4	11.40%
Ligament rupture (Partial rupture, Complete rupture)	6	17.10%
Sprain (Ligament, Joint Capsule)	22	62.90%

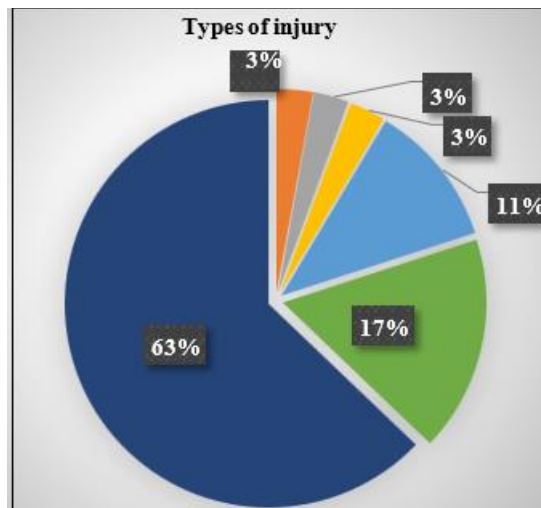


Table 2 states the percentage of occurrence of injuries among kabaddi players in Coimbatore, sprain (62.9%) is the most common injury, 17.1% of injuries are ligament rupture which includes both partial and complete rupture, 11.4% of injuries are fracture, muscle spasm, disc injury, subluxation and dislocation each has 2.9% of injury occurrence.

The Percentage of the Time that the Injury Occurred

Table 3: Time of injury occurrence

Time that injury occurred	Frequency	Percent
Practice Morning	1	2.90%
Practice Evening	8	22.90%
Competition First Half	12	34.30%
Competition Second Half	14	40%

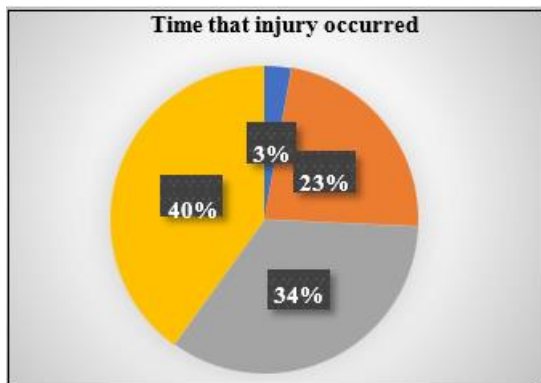


Table 3 states the percentage of time of occurrence of injuries among kabaddi players in Coimbatore, 40% of injuries occurs during 2nd half of the competition, 34.3% of injuries occurs during 1st half of the competition, Evening and morning practice sessions has 22.9% and 2.9% of occurrence of injuries respectively.

The Percentage of the Bodily Location of the Injury of the Kabaddi Players

Table 4: Bodily location of injuries

Bodily Location of injury	Frequency	Percent
Wrist (Medial, Lateral)	1	2.90%
Hand	1	2.90%
Hip	1	2.90%
Elbow (Medial, Lateral)	2	5.70%
Ankle (Anterior, Medial, Lateral)	5	14.30%
Shoulder, Clavicle (Anterior, Posterior)	8	22.90%
Knee (Medial, Lateral)	17	48.60%

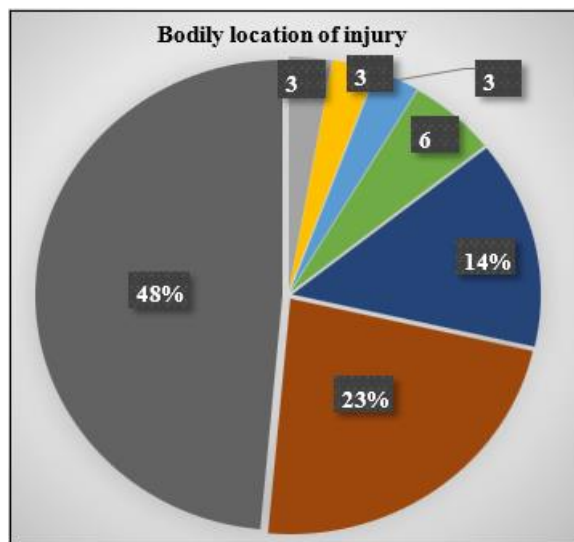


Table 4 states the percentage of the bodily location of the injuries among kabaddi players in Coimbatore, knees are most prone to injuries among kabaddi players which has 48.6% of injury occurrence, anterior and posterior Shoulder has 22.9% of injury occurrence, ankle has 14.3% of injury occurrence, elbow has 5.7% of injury occurrence, hip, hand and wrist each has 2.9% of injury occurrence.

The Percentage of the Injury During Attack or Defense of the Playing Situation

Table 5: Prevalence of injuries during game

Injury during attack or defense of the playing situation	Frequency	Percent
Unrelated to the Situation	1	2.90%
Defense	13	37.10%
Raid	21	60%

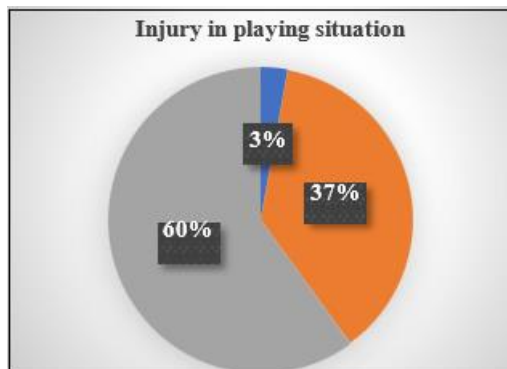


Table 5 states the percentage of the prevalence of injuries during game among kabaddi players in Coimbatore, mostly injuries are occurred during raid which has 60% while defense has 37.1% and 2.9% of injuries occurred irrelevant to the playing situation.

The Percentage of the Particular Activity during which Injury Occurred

Table 6: Activity during which injury occurred

Skills	Frequency	Percent %
Landing	1	2.90%
Avoidance	1	2.90%
Kick	3	8.60%
Releasing	3	8.60%
Jumping	3	8.60%
Touch	3	8.60%
Falling	9	25.70%
Blocking	12	34.30%

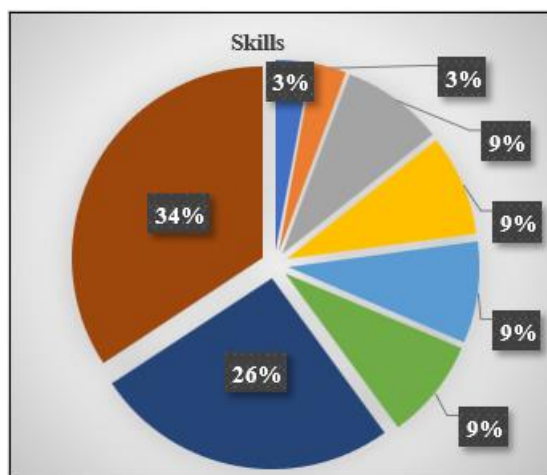


Table 6 states the percentage of the particular activity during which injury occurred among kabaddi players in Coimbatore, 34.30% of injuries occurred during blocking, 25.7% of injuries occurred during falling, occurrence of injuries during touch, jumping, releasing and kicking are

each 8.6% and occurrence of injuries during landing and avoidance are 2.9%.

The Percentage of Which Types of Floors Got Injuries More In Kabaddi

Table 7: Playing surface and injury occurrence

Playing Surfaces	Frequency	Percent
Natural	6	17.10%
Artificial	29	82.90%

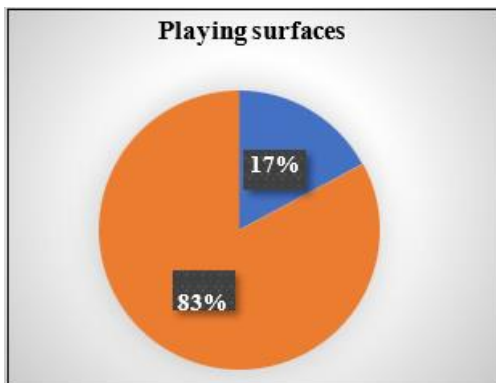


Table 7 states the percentage of the occurrence of injuries in artificial and natural playing surfaces among kabaddi players in Coimbatore. 82.9% of injuries has occurred while playing in artificial mat while only 17.1% of injuries has occurred while playing in natural playing surface

The Percentage of the Means and Methods for Treatment of Kabaddi Players after the Injury

Table 8: Means and methods of treatment of injuries

Frequency	Percent%
Massage	3 3.10%
Rehabilitation therapy	5 5.10%
Home remedy	11 11.34%
Taping	12 12.40%
Medication	15 15.50%
Wearing a protector	16 16.50%
Cold and hot packs	16 16.50%
Physiotherapy	19 19.60%

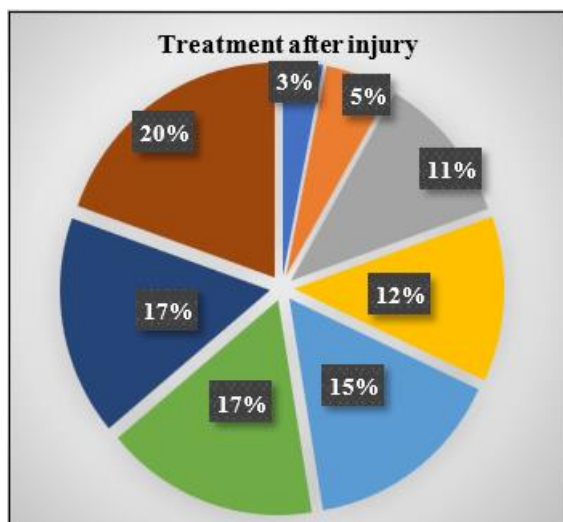


Table 5 states the percentage of the means and methods for

treatment of injuries among kabaddi players in Coimbatore, 19.6% of injuries have treated by physiotherapy, 16.5% used cold and hot packs while another 16.5% used to wear a protector, 15.5% used other medications, 12.4% used taping techniques, 11.34% stayed with home remedies, 5.1% undergone rehabilitation therapy and 3.1% used massaging techniques.

5. Discussion on Findings

Results shows that the most common occurrence of injuries reported by Kabaddi players is sprain of the ankle, knee, and shoulder joints which holds about 62.9% of injuries occurred. In a survey, **Prabhu and Kishore (2014)** discovered that ankle and knee injuries were the most common in Kabaddi which was further supported by **Dhillon et al. (2017), Mondal and Ghosh (2017), Moeini et al., 2011, Sen (2014), and Kurup and Chowdhery (2014)**. 74% sports injuries happen during games and tournaments compared to training sessions, or fitness activities which was further supported by **Datar and Singh (2021)**. It is also found that 60% of injury got in attack (raid) situation. The most particular activity during the injury occurrence is blocking 34.30% compared to falling, touching, kick and jumping. It is also found that the chance of getting injured is 82.9% when playing in artificial mats when compared to playing in natural surface which coincides with the findings of **Paliobeis et al. (2021)**. In many circumstances, these kinds of injuries might result from overdoing it physically when engaging in a certain activity which was supported by **Sajjan Pal (2021)** in his study. It is also evident that the least number of players consult a physiotherapy or undergo a proper rehabilitation therapy after the injury which make the players to take a long break after the injury.

6. Conclusion

According to the findings of the study, 94% of the players said that their injuries stopped them from performing at their best and achieving their goals. Based on these observations and findings, it was determined that improper warm - up exercises, incorrect technique, lack of knowledge about scientific procedures, and improper equipment use were the main causes of injuries among Kabaddi players. More knowledge in all these areas must be attained by coaches, trainers, organizers, and players.

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