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**A STUDY OF PREVALENCE OF INJURIES IN KHO-KHO PLAYERS**

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**ABSTRACT:**

*Present study aimed to assess the prevalence of injury in Kho-Kho players of Chhattisgarh. The data was collected with the help of questionnaire. Total 175 injured Kho-Kho players (152 female and 23 male) were selected as subjects to diagnose injury profile. Data were collected during day time between 6:00 am to 9:30 pm by the help of questionnaire. Most of the subjects were players who participated in national and intersarsity tournaments. Some of them participated in sports activity and present themselves at state and regional level. The data on various injury profiles were assessed. Descriptive analysis was done on various injury profiles. The result of the present study indicates that more than 63.4% were suffering from knee injury. Further, when the injury profile was assessed separately in relation to gender it was found that more number of female players was injured as compared to male players.*

**KEYWORDS:** Kho-Kho, injury, knee injury, players.

**INTRODUCTION :**

Optimal performance in sports is the results of unusual body movements which leads sports persons to sever complications. Kho-Kho is an indigenous game. Numerous studies deal with injury profile of players in other sports and games, but it is rare in case of Kho-Kho players. A Kho-Kho playground (or pitch) is rectangular. It is 27 meters in length 16 meters in width, mostly played in rural area. Kho-Kho is an indigenous game played across India. It is a tag sport played by teams of twelve who try to avoid being touched by members of the opposing team with only 9 players of the team entering the field. The game has not been able to demonstrate its worth at international level, but it is such a sport, practice of which can lead to development of most of the fitness components required for athlete of any game. Optimal performance in sports including Kho-Kho is the result of unusual body movements which may lead sports persons to severe complications. It is very harsh demanding elevated level of cardio-vascular efficiency, endurance, flexibility, agility and coordinative abilities. Collision, struck, and falling is normal in Kho-Kho lead to many hard and soft tissue injuries such as sprain, strain, shin splint, fractures, ligaments tear, dislocation, cartilage tear etc. The athlete who are involved in sports, are adapted to the stress of the training & hence improves the system to overcome the stress which ultimately leads to improvement of performance.



Kho-Kho games is very popular in rural India but has not gained cognizance at national level. Participation in this activity has to be stressed. Kho-Kho players hide their injury. Handful studies have been conducted on senior players but there is scarcity of studies to understand injury profile of the junior players. Hence, an attempt has been made to studies the prevalence of injury in kho-kho players of 10 to 28 years of age of Chhattisgarh.

## MATERIAL AND METHODS

To study the prevalence of Sports Injuries in Kho -Kho Players. Total 175 injured Kho-Kho players (152 female and 23 male) were selected as subjects to diagnose injury profile. All participants were informed about the objective of the study and gave their written consent for voluntary participation in this study. The research design of the study is descriptive. Descriptive research includes surveys and fact-finding inquiries of various kinds. For this study, descriptive research design is used where the data is collected through the questionnaire. The information is gathered from the Kho-Kho players of Chhattisgarh. The study is based on a descriptive and experimental sample of university Kho-Kho players in the age group of 10 to 28 years. The players belong to various districts of Chhattisgarh.

Data were collected during day time between 6:00 am to 9:30 pm by the help of questionnaire. Most of the subjects were players who participated in national and intervarsity tournaments. Some of them participated in sports activity and present themselves at state and regional level.

## STATISTICAL ANALYSIS

The data on various injury profiles were assessed. Descriptive analysis was done on various injury profiles.

## FINDINGS

**Table 1:Prevalence of injuries in male and female Kho-Kho players of Chhattisgarh.**

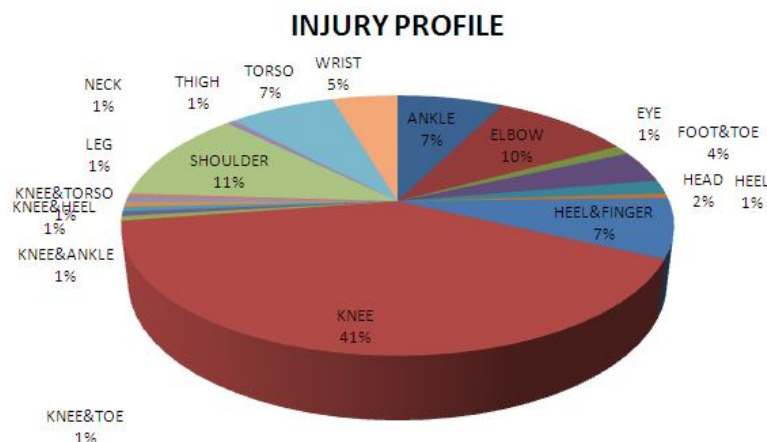
Region of injury	Frequency	Percent	Valid Percent	Cumulative Percent
Ankle	13	7.4	7.4	7.4
Elbow	17	9.7	9.7	17.1
Eye	2	1.1	1.1	18.3
Foot&toe	7	4.0	4.0	22.3
Head	3	1.7	1.7	24.0
Heel	1	.6	.6	24.6
Heel&finger	13	7.4	7.4	32.0
Knee	71	40.6	40.6	72.6
Knee&ankle	1	.6	.6	73.1
Knee&heel	1	.6	.6	73.7
Knee&toe	1	.6	.6	74.3
Knee&torso	1	.6	.6	74.9
Leg	1	.6	.6	75.4
Neck	1	.6	.6	76.0
Shoulder	20	11.4	11.4	87.4
Thigh	1	.6	.6	88.0
Torso	13	7.4	7.4	95.4
Wrist	8	4.6	4.6	100.0
Total	175	100.0	100.0	

**Table 2 Frequency and percentage distribution as function of gender.**

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	F	152	86.9	86.9	86.9
	M	23	13.1	13.1	100.0
	Total	175	100.0	100.0	

The prevalence of injury of Kho-Kho players covers different region of the body and that is head to lower extremities. The result shows that maximum injury is witnessed at knee (40.6%) and least injury is at the thigh and heel (0.60%). The remarkable injuries seen at ankle, 9.7% elbow, foot & toe, 8.7% Head, 11.4% shoulder, 7.4% torso and 4.6% wrist injury. The result of the present study indicates that more than **63.4%** were suffering from knee injury (table 1 and figure 1). Further, when the injury profile was assessed separately in relation to gender it was found that more number of female players were injured as compared to male players. (table 2)



**Figure 1- Pie Chart showing prevalence of injuries among male and female Kho Kho players of Chhattisgarh.**

## DISCUSSION

At the beginning an attempt was made to survey the prevalence of injury in kho-kho players of Chhattisgarh. Result show that predominantly (4.6%) Kho-Kho players are suffering from knee injury. The Kho-Kho game requires explosive movement in nature. It is presumed that bursting movement in sport or activity can crush the knee's ability to adjust and lead to muscular fatigue and strain at knee joint. Injuries at knee joints, are relatively infrequent in the general population but are believed to be much more common in young athletic patient populations (Joshua Mitchel et.al.; 2015). Joshua Mitchel et.al. (2015) studied the epidemiology of patellofemoral instability injuries among high school athletes in the United States and noted that the highest injury rates were in girls' gymnastics (6.19 per 100,000 AEs), boys' football (4.10), and boys' wrestling (3.45).

Sports injuries varies with magnitude of factors such as type of sports, type of exposure, competition, and sex. While injuries as function of gender was seen it was found that prevalence of injuries were more in female as compares to girls. This study corroborated with previous study (Timothi et.al.; 2005) but contradict with study conducted by Joshula Mitchel et.al. (2015). Female athletes participating in high-risk sports suffer anterior cruciate ligament injury at a 4- to 6-fold greater rate than male athletes. Knee motion and knee loading during a landing task are predictors of anterior cruciate ligament injury risk in female athletes. Female athletes with increased dynamic valgus and high abduction loads are at increased risk of anterior cruciate ligament injury (Timothi et.al.; 2005). In contrast, Joshua Mitchel et.al. (2015) found that the overall injury rate was significantly lower for girls than boys. The knee is an anatomically and biomechanically complex joint. Majewski et.al., (2006) conducted study on sport injuries over a 10-year period of time and witnessed that among total injuries 39.8% injuries were related to the knee joint. The injury profile of Kho-Kho players, has been a great concern for coaches & athletes and other related sports personnel.

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The further study in this direction is needed to find out the reasons for the same and to come out with preventive measures. An insight has been developed regarding the injury profile.

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