



## A SURVEY OF INJURIES TO THE SKIERS (SKI PLAYERS) AT GULMARG, JAMMU AND KASHMIR, INDIA

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### **Abstract:**

The present study was conducted with purpose to survey the related injuries in university skiers (ski players) at Gulmarg. These injured players were selected as a subject for the present study. Their age was ranging from 19 to 25 years. After screening of 63 questionnaires, only 48 Skiers (ski players) were included in the study. Questionnaire prepared by Cromwell F. J. Walsh Gromely for the elite Gaelic footballers (2000) were develop by researcher and utilized for the present study. Mean, standard deviation and percentages were used to identify the nature, location and the cause of the injury in university skiers (ski players). The study concluded that most of the injuries in the university skiers (ski players). Study concluded that most of the injuries sustained to the lower limb (65.27%), the mostly commonly injured anatomical site was knee (26.38%), and the ankle (21.42%). Upper limb injuries were relatively low (36.10%) of which the shoulders injuries were predominant (19.64%). Regarding the nature of injuries, ligament sprain are the most common injuries in the skiers (ski players). Regarding treatment of injuries, doctors and physiotherapist are the most common attention providers of skiers (ski players).

**Keywords:** injuries, skiers, sports, Gulmarg, Jammu and Kashmir

### **1. Introduction**

Gulmarg is a town, a [hill station](#), a popular skiing destination and a [notified area committee](#) in the [Baramula district](#) of the [Indian state](#) of [Jammu and Kashmir](#). The town

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is situated in the [Pir Panjal Range](#) in the western [Himalayas](#). The resort was named *Gulmarg* ("meadow of flowers") by [Sultan Yusuf Shah](#) of the Chak Dynasty who frequented the place with his queen Habba khatoon in the 16th century.

Gulmarg Resort is a big ski hill serviced by a gondola, and you are going to have to get the lungs going to make the most of it. The lift tops out at about 4,000m with the summit of Mt Apharwat another couple of hundred meters above that, which provides 1,500+ meters of vertical. Some of the bowls off the summit have a straight 1,200 meters of thigh-destroying vertical descent. The amount of Gulmarg ski terrain is virtually unlimited and includes alpine bowls, chutes, cornices, glade skiing amongst ancient pines, and glacier skiing without the glacier. That's not to mention the epic ski journeys down to some of the local shrines and villages which add a whole new dimension to the terrain. The Gulmarg skiing and snowboarding is suited to advanced and expert riders who enjoy off-piste backcountry terrain. Gulmarg is definitely not the place for the average beginner or intermediate rider. Gulmarg is also best appreciated by those with a propensity for hiking and skinning, and laid-back riders who can cope with an "adventure".

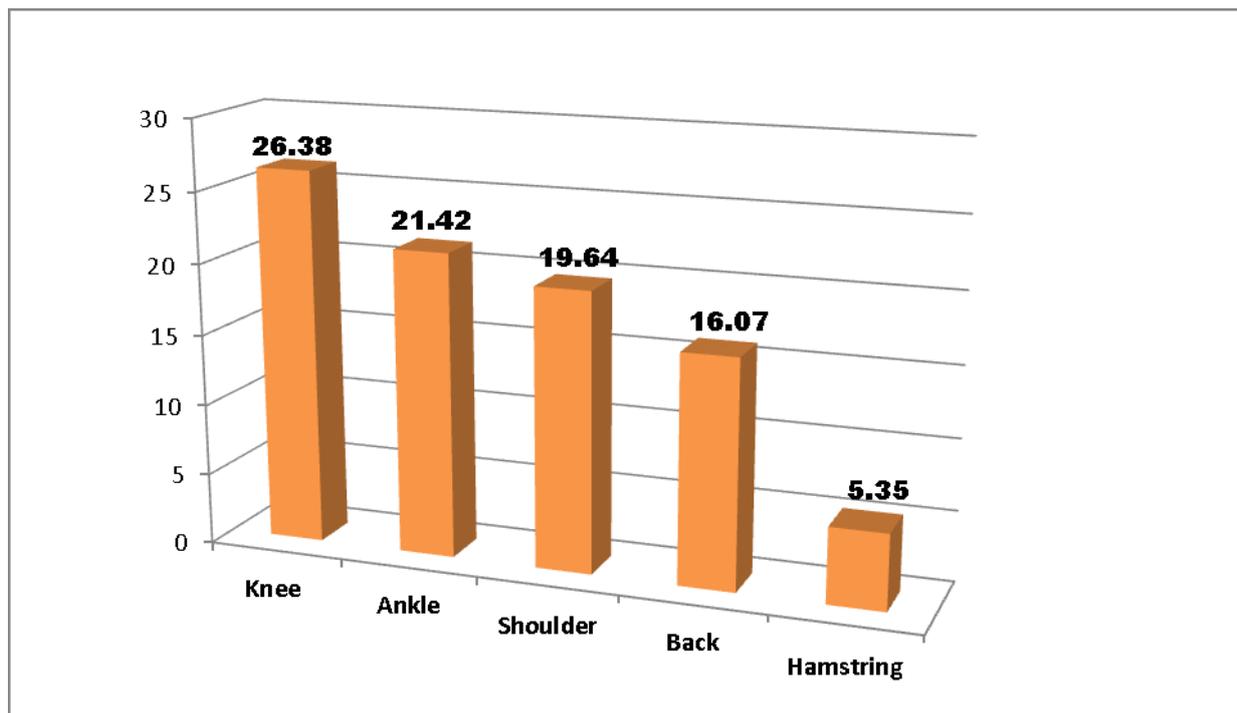
During training or in competitions there are more than ten ski runs from the hill in a day. Skiing is a game which makes heavy demand on the players. The physical work is intermittent involving high intensity activity interspersed with sports phase. Skiing has received little sports medicine interest based on the few existing studies on injuries.

## 2. Methods

Information on injuries was collected from 70 university ski players who were on intermediate ski training camp at Gulmarg. A questionnaire prepared by Cromwell F. J. Walsh Gromely (2000) for elite Gaelic football players and it was developed by the investigator. Mean, Standard deviations and percentage were calculated and used to identify the injuries and physical characteristics of the players. The investigator personally contacted with the skiers (ski players), ski instructors and the other related persons of the training camp at Gulmarg and the purpose of the study was explained to them. Further instructions were given by the investigator to the players for the completion of the questionnaire. A total of 70 questionnaires were administered and 63 were returned by the players, hence response rate was 92%.

### 3. Result

A total of 48 respondents out of 70 skiers (ski players) sustained injuries over the study period. 48 injuries were recorded. Their age ranged between 19 to 25 years. The mean, (SD) age of the skiers (ski players) was 21.66 (1.33) years, their height was 169.33(8.46) cm. Their weight was 59.25(8.33) kg and their training duration was 2.12 (.48) hours. The result if skiers (ski players) with their injuries are shown in figure 1 to 4.



**Figure 1:** Percentage of Injuries located at different sites

Figure 1 illustrates that the percentage of location of injuries in skiers (ski players). Knee injuries were recorded 26.78%, ankle injury was recorded 21.42 %, shoulder injury was recorded 19.64%, back injury was 16.07% and hamstring was recorded 5.35%. Knee, ankle and shoulder injuries were observed as the most common injuries in the skiers (ski players).

Khan Muneer Aslam -  
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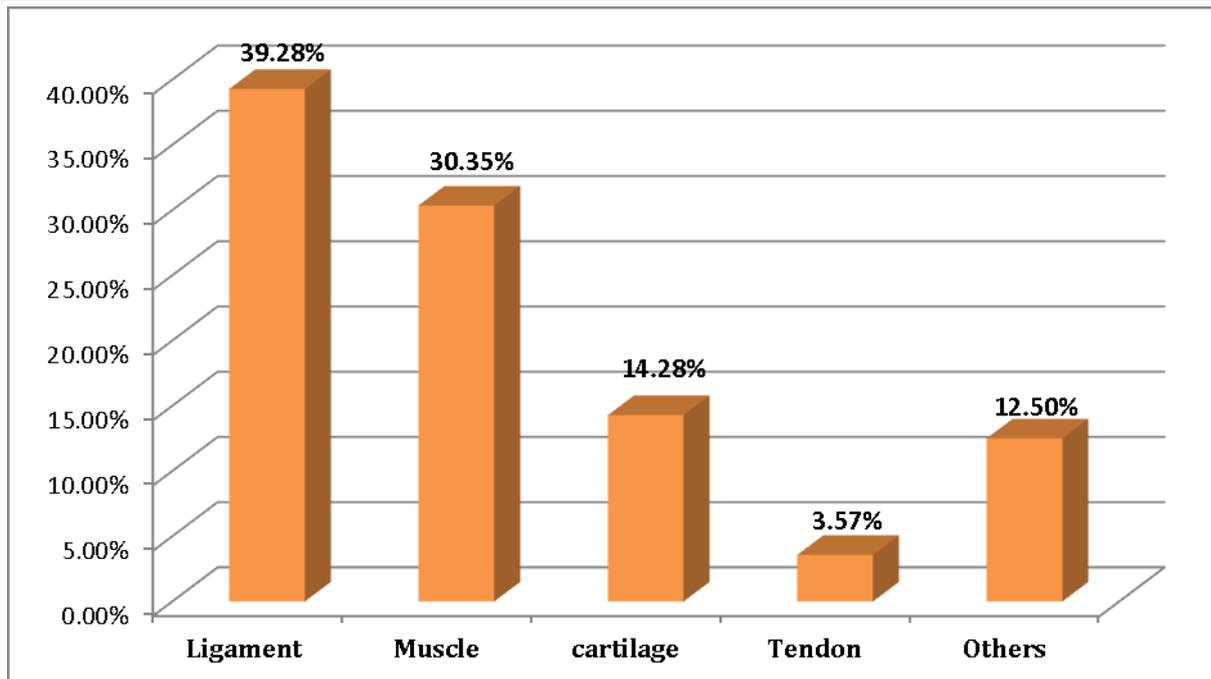


Figure 2: Percentage of Injuries located at different sites

Figure 2 shows that the percentage of nature of injuries, ligament injuries was 39.28%, muscle injury was 30.35%, cartilage injury was 14.28%, tendon injury was 3.57% and others injuries were found 12.5%.

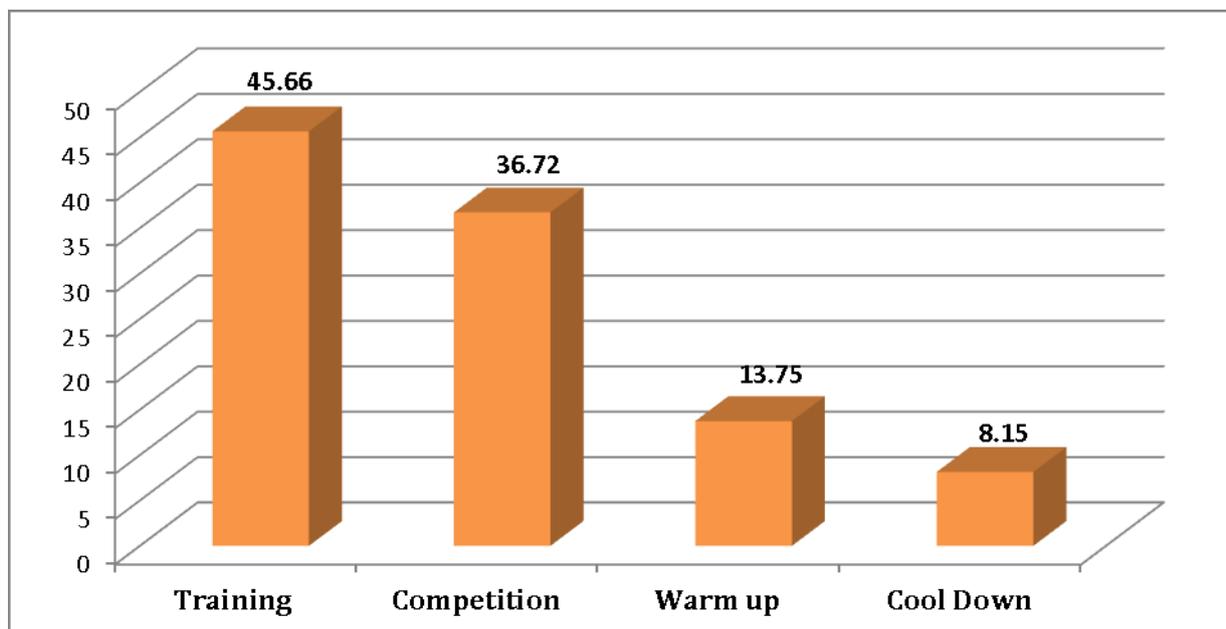
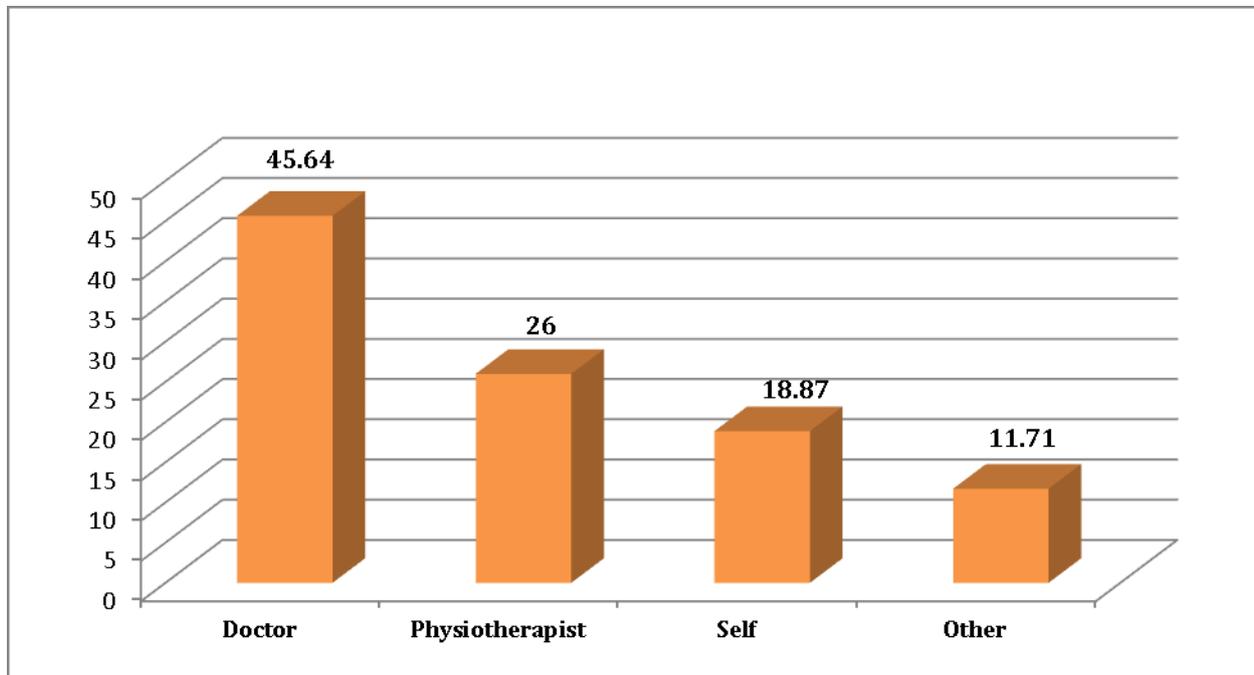


Figure 3: Percentage of injuries

Figure 3 shows that percentage of injuries when it was sustained during training 45.66% during match it was recorded 36.72%, during warm up 13.75% and during cool down 8.15%.



**Table 4:** Percentage of Given Treatment

Figure 4 shows that the percentage of treatment of injuries given by doctors was 45.64%, physiotherapist was recorded as 26%, self-treatment was recorded 18.87% and other was recorded as 11.71%. As per figure, doctors treated maximum skiers (ski players).

#### 4. Discussion

In this study, it was investigated that a total of 48 responded out of 70 skiers (ski players) sustained injuries over the period. 56 injuries were recorded. An overall injury incidence rate of 0.92 per player was calculated.

This study reveals that the most injuries were sustained to the lower limb out (65.27) of which 26.38% and ankle 21.42%. The probable reasons for the high incidence in skiers (ski players) injuries are due to jumping, landing, falling and slipping on snow. Upper limb injuries were relatively very low (36.10%) out of which shoulder injuries predominates 19.64%, the relativity high incidence of shoulder injuries might have been due to the fact that the skiers (ski players) felt on side wards from ski on snow. Ski player requires a large amount of arm action, during landing the sticks.

This study also reveals that the injuries occurred more during training 45.66%, while were received during competition the relatively high incidence injuries during training were probably due to poor techniques, low fitness, low balance etc,

Ligament and muscle injuries were the most common injuries to the skiers (ski players). The most common cause of injuries was probably related to low balance and due to slippery snow. The study further shows that the doctors treated 45.64% injuries. In this study, 29% were recurring injuries, 74% of injuries resulting in degradation of performance. Finally, injuries are very serious problem for all skiers (ski players).

## 5. Conclusion

Most of the injuries of skiers (ski players) are sustained in lower limb; knee and ankle are the most injuries among the skiers.

- 1) In the upper limb the most common found in injuries were occurred in shoulder.
- 2) Regarding the nature of injuries, ligament injury and muscle injury are most common in skiers (ski players).
- 3) Maximum injuries occurred in training.
- 4) Regarding treatment of injuries, doctors are most common for providing their services to the skiers (ski players).

This research paper provides a platform for further research in the field of sports, physical education and sports medicine.

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Khan Muneer Aslam -  
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