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## Common injury among school level volleyball in Kerala

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### Abstract

The purpose of the study was to survey the post seasonal common sports injuries among school level volleyball players in Kerala. All the players were involved in their daily training programme and were participated in various state and national level championships. The subjects belonged to different parts of Kerala and their age ranged 13 to 18 years. For the purpose of study, survey of common injuries to the different anatomical regions such as skull, upper extremity, chest, spine and lower extremities were done. Information were also sought regarding the causes and treatment of injuries and other related aspects. The data were collected through questionnaire and following personal interviews of players. The percentage analysis was employed to analyze the incidence of common injuries on the different anatomical regions and regarding the causes and treatment following injuries.

**Keywords:** common injury, school level volleyball, Kerala.

### Introduction

The term sports injuries means the kinds of injuries that most commonly occur during sports or exercise. Some sports injuries result from accidents; others are due to poor training practices, improper equipment, lack of conditioning, or insufficient warm up and stretching. Although virtually any part of your body can be injured during sports or exercise, the term is usually reserved for injuries that involve the musculoskeletal system, which includes the muscle, bones, and associated tissues like cartilage. Sports injuries can generally be classified in one of two ways; acute and chronic.

### Sports injury

Sports injuries are injuries that occur to athletes participating in sporting event. These types of injuries are due to over use of the part of the body when participating in certain type of sports. For example, tennis elbow is the form of repeated stress injury at elbow. Other types of injuries can be caused by hard contact with something. This can often cause a broken bone or torn ligament or tendon. Every day, thousands of people in the world participating sports and other games activities. Games and sports can also result in injuries some minor, some major and still others resulting in lifelong medical problems. Young athletes taking part in sports activities are in majority and they are not merely small adults. Their bones muscles tendons ligaments are still growing, which make them more susceptible to injury. Each year, about 3, 2 million children's between the age of five and fourteen are injured while participating in the sports activities. Injury rate are highest for athletes who participate in contact sports. But the most serious injury is associated with individual activities. The term sports injury, in the broadest sense, refers to the kinds of injuries that most commonly occur during sports or exercise. Sports injuries occur in various reasons, due to poor training practices, improper equipment, lack of conditioning, or insufficient warming up and stretching ect.

### Prevention from injury

The risk of injury accompanies participation in almost all sporting activities. As the number of participation in both competitive and recreational sports has increased, there has been a corresponding increasing in the number of injuries. Sports injuries can have profound, long lasting effects on sportsperson. Injuries, particularly those not properly cared for, may develop into conditions that can last lifetime. Some of these conditions are chronic tennis elbow, runner's knee, ect.

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### **Most sports injuries are caused by one or more of the following factors.**

- Poor coaching or coaching error.
- Lack of conditioning.
- Improper use of equipment.
- Inadequate first aid care.
- Inadequate rehabilitation.

### **Treatment of the injury**

The sports injury treatment depends upon the type of injury of the sports person. The immediate care of common sports injuries (strain, sprain, contusion) consist of four step program that should be followed as soon as an injury occur, the four part program is called RICE. This stands for REST, ICE, COMPRESSION, and ELEVATION. As soon as an injury occur, it is important to stop the activity immediately as possible. Long delay of stopping the activity cause further damage to the injured part. Put the ice on the injured part soon as possible, it will help to control swelling by constricting the blood and lymph vessels, decreases the muscle spasm and decreases pain caused by the inflammation. By reducing the swelling on the injured area, the rehabilitation time will be lessen and injured person will be able to return to sports quickly as possible. The ice should apply for 20-30 minutes with ice bag or chemical pack not at all applied directly to the skin. Compression also help to limit swelling in the injured area. Compression should be applied with the cold treatment. After the ice treatment a dry elastic wrap or tape should be applied to comfortably and not too tighten and not too loosen. The wrap should loosen before going to bed. To elevate the injured part while being compressed. In elevating, support should place under the enter limb. The height should be above the level of heart to help drain the excess fluid from the injured part.

### **Volleyball game**

Volleyball is an enjoyable activity for the beach or the park. The game is played by the two tram of six players; with up to six substitution allowed in a team. A net is fixed across the middle of the court 18m long and 9m wide. Two flexible antennae mark the extreme between which the ball must pass over the net. Play starts by one player serving the ball over the net from behind the base line; when the ball has pass over the net; the receiving team may play the ball three times before they must pass back over the net. Each player is only allowed to touch the ball once. The objective of game is to force the down to floor of the opponent court; or to put them under so much pressure that they are unable to return the ball. In volleyball; if the ball does not go back over the net; the opposition wins a point; after each time a team wins the ball back from the opposition each player rotates one position clockwise. This rotation is special feature of the game.

### **Statement of the problem**

The purpose of the study is to find out most post common injury among school level volleyball in Kerala.

### **Delimitations**

- The study was delimited to a total seventy (N=70) school level volleyball players from Kerala.
- The age groups of the subject were ranged between 13 to 18 years.

### **Limitations**

- Questionnaire research may have its limitations. As such

any bias that might have erupted into the response on the account may be considered as limitation of the study.

- Individual difference among the subject such as lifestyle, daily routine and other factors that may have influenced the subjects remain as limitation of the study.
- No special motivational technique is use during the data collection.

### **Hypothesis**

- Possibly there should be a significant difference between lower and upper extremity injuries. Lower extremity injuries are more as compared with upper extremity injury.
- Possibly there should be a significant difference between the injuries in all anatomical regions. Compare to other injuries ankle injury is more common in school level volleyball players.

### **Significance of the study**

Volleyball is currently one of the most popular sports and more than millions of people participate in the sport at all levels of the competition. The present study on survey of incidence causes and management of sports injuries among school level volleyball players is significance in following ways.

- The study provides background in formations of the common sports injuries among school level volleyball players.
- The study reveals the drawback in injury management in the terms of immediate
- Treatment and rehabilitation aspects among players.
- The result of the study may be helpful in establishing the need for broad base education program on prevention and management to players, coaches and physical Education teachers.
- The study will provide adequate knowledge to physical education teachers and coaches regarding various injuries in volleyball.

### **Methodology**

This chapter describes the methodology and procedure adopted for the selection of subject of variables, questionnaire development, collection of data and statistical technique employed.

### **Selection of Subjects**

The study was conducted on 100 boys volleyball players. All the subject were involved in their daily training programe and were participating inter schools, national level, and state level competitions. The subjects belonged to different parts of Kerala and their age ranged 13 to 18 years.

### **Selection of Variables**

The present survey of injuries among volleyball players took the account of the incidence of common injuries to the different anatomical region of ankle, knee, shoulder, hip, elbow, wrist, back, finger, internal organs and neck. Information was also sought regarding the causes, treatment and other pertinent aspects relating to injuries and their management.

### **Questionnaire Development**

The survey type research depends to a large extent on the questionnaire being employed. Keeping this in mind, the research scholar made all possible effort to prepare a well-

planned questionnaire to seek as best information as possible. A standardized questionnaire took from sports injury survey journals of University of Delaware. The questionnaire was later reviewed by experts. The questionnaire for the study consisted of ten questions.

**Collection of data**

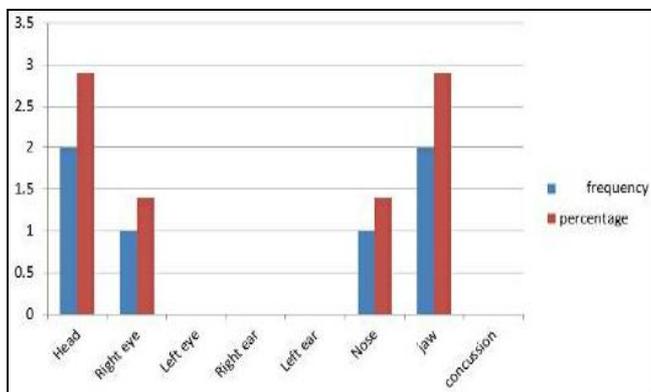
The data were collected through a well framed questionnaire seeking as much information as possible regarding the incidence of injuries, the causes, the treatment they received and other related aspects. Further the researcher arranged personal interviews with the volleyball players at their leisure time enquire any other information's about their injury, which was not included in the questionnaire. The information so obtained from the questionnaire and the interviews were carefully noted down, classified on the basis of injury type, anatomical areas locations are analyzed.

**Statistical Technique Employed**

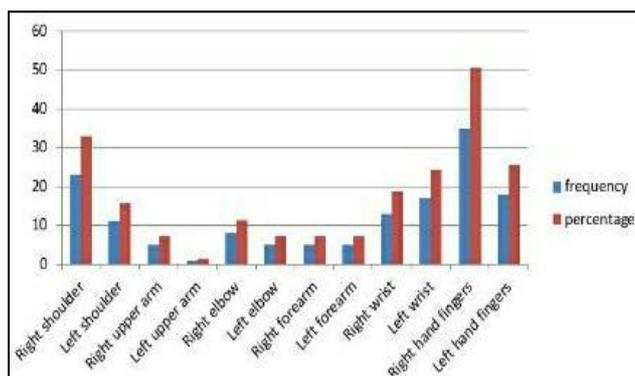
The information sought through the questionnaire and the interview schedules were classified with respect to frequencies and other descriptive measures. The percentage analysis was employed to describe the relative incidence of injuries, their causes, treatment and other pertinent aspects.

**Analysis of Data and Results of the Study**

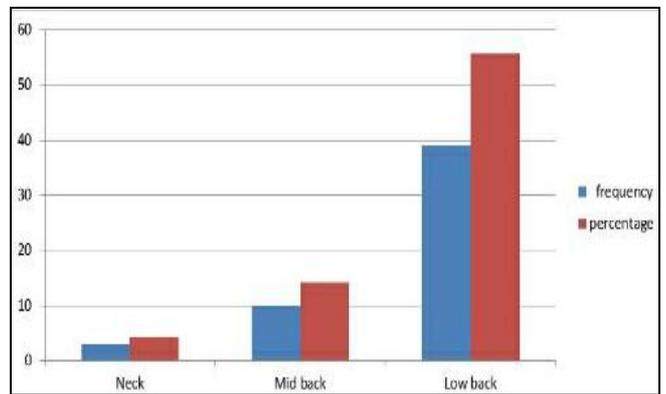
The analysis of data pertaining to post seasonal common sports injuries collected from seventy school level volleyball players from Kerala are presented in this chapter. The incidents of injuries among the volleyball players and related responses were obtained with the help of questionnaire and personal interviews of players. The response obtained from the subjects with regard to the post seasonal common sports injuries, their causes and treatment are analyzed and presented with respect to frequencies and percentages.



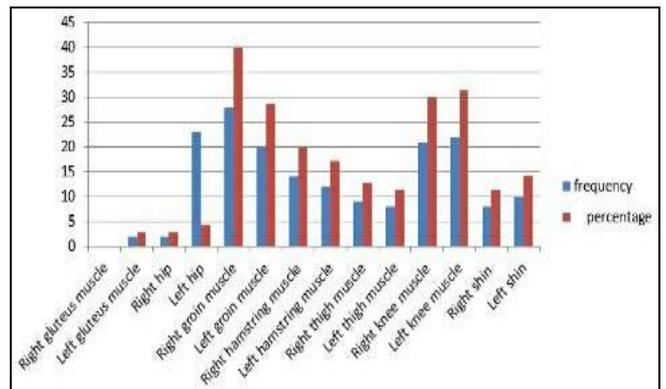
**Fig 1:** Percentage Indicatioin of Injuries to Different Part of Skull



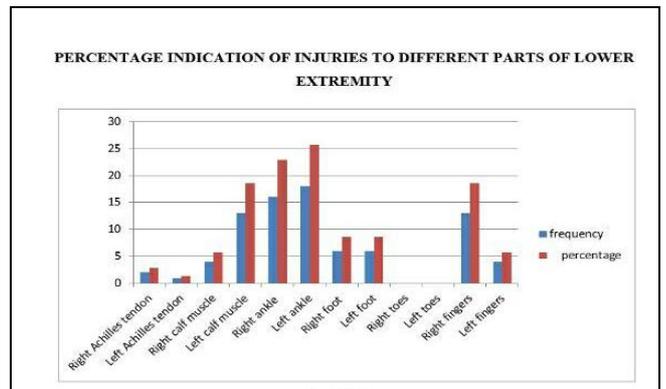
**Fig 2:** Percentage Indication of Injuries to Different Parts of Upper Extremity



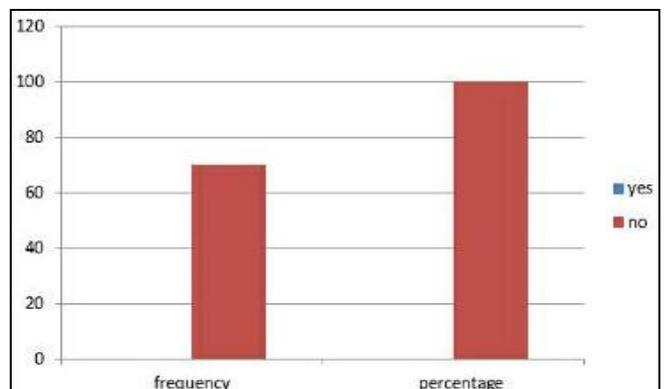
**Fig 3:** Percentage Indication of Injuries to Different Parts of Spine



**Fig 4:** Percentage Indication of Injuries to Different parts of Lower Extremity



**Fig 5:** Percentage Indication of Injuries to Different Parts of Lower Extremity



**Fig 6:** Percentage Indication of Number of Players Who Reported Other Injuries

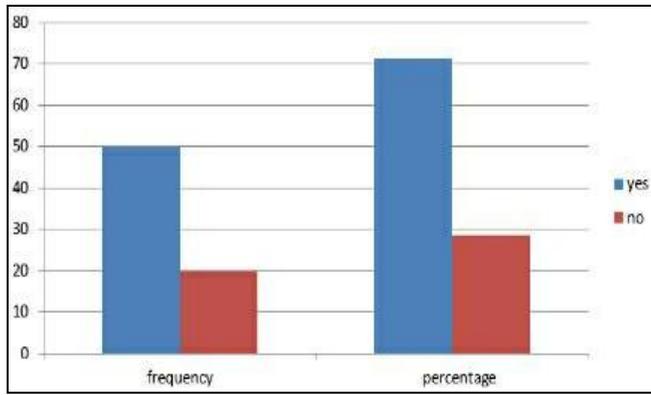


Fig 7: Percentage of Players Who Meet Sports Medicine Physician

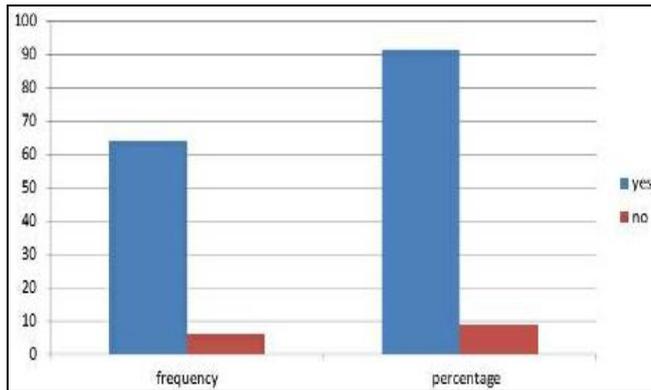


Fig 8: Percentage Indication of Number of Players Reported the Injuries to Coach

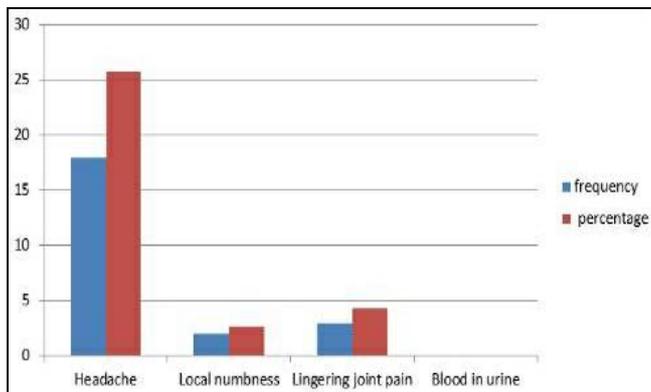


Fig 9: Lingering Joint Pain and Blood in Urine after Injury

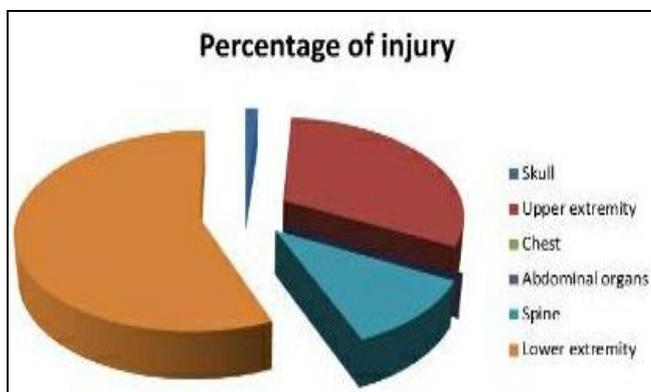


Fig 10: The Average Percentage Chance of Upper Extremity and Lower Extremity Injuries

because of volleyball is an explosive nature of activity and the players always need to perform jumps. So that during the conditioning we must focus more on lower extremities. The players should recommend making use of different protective ware for reducing the risk of lower extremity injuries. For individual injuries higher incidence of injury was found in low back (55.7%). This is because of lack of conditioning, using of improper weight training techniques, harder surface area, and improper shoes.

**Summary, Conclusions and Recommendations**

**Summary**

The purpose of the study was to survey the post seasonal common sports injuries among school level volleyball players in Kerala. All the players were involved in their daily training programe and were participated in various state and national level championships. The subjects belonged to different parts of Kerala and their age ranged 13 to 18 years For the purpose of study, survey of common injuries to the different anatomical regions such as skull, upper extremity, chest, spine and lower extremities were done. Information were also sought regarding the causes and treatment of injuries and other related aspects. The data were collected through questionnaire and following personal interviews of players. The percentage analysis was employed to analyze the incidence of common injuries on the different anatomical regions and regarding the causes and treatment following injuries.

**Conclusion**

Within limitation of the study and on the basis of the obtained results from the study, the following conclusions may be drawn.

1. As compare to another anatomical regions lower extremity injuries are more common in school level volleyball players. So that first hypothesis of the study was accepted.
2. Most common sports injury in school level volleyball player are low back injuries, finger injuries and groin injuries. So that second hypothesis of the study was rejected.

**Recommendation**

On the basis of the study results and in the light of the conclusion drawn, the following recommendations are made in order to strengthen the chance of recruiting and retaining Volleyball players.

- Volleyball requires a verity of physical attributes (explosive power, speed, agility, flexibility, endurance and coordination) and playing skills. Therefore, participants need train and prepare to meet at least a minimum set of physical, physiological and psychological requirements to cope with the demands of play and reduce the risk of injury. So that it is recommended that physical education teachers, coaches and players be given proper education and training with respect to the need of conditioning programs and proper warming up procedure before involving in practice sessions and cooling down after the practice sessions.
- Volleyball players should recommend making use of proper equipments like shoes, protective wares (knee cap, ankle tape) while participating in practice as well as during the competition. It will help to reduce the risk of injuries.
- Provision for appropriate first aid by trained

**Discussion of Findings**

The result of the survey indicated that higher incidence of injury was found in lower extremity (56.95%). This is

professionals, and proper treatment thereafter, be considered as a priority for the effective management of injuries to volleyball.

- Proper education and information be provide to players on regular basis that eating well-balanced meals setting the proper sleep each night and training moderation is key to proper health fitness and success.

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