



Evaluation Of Sports Injuries Among Sports Person With Special Reference To West Bengal, India

Harisadhan Betal Research Scholar, Department of Physical Education, Sri Satya Sai University of Technology & Medical Sciences, Sehore, M.P.

Dr. V.S. Panwar Research Guide, Department of Physical Education, Sri Satya Sai University of Technology & Medical Sciences, Sehore , M.P.

ABSTRACT:

The goal of this research was to better understand the different sorts of injuries that occur in sports and games. Sports medicine and science are two distinct branches of science that deal with different aspects of sports training. Athlete injury management is an important aspect of sports science and medicine. This is a survey type of study in which the researcher was find out the nature of the sports injuries at various levels of athletes. When used as a research technique, it was involved systematic collection, analysis, interpretation and presentation of pertinent facts concerning an enterprise, institution or population wholly or partially with a view to determine their present status or effectiveness in context in which they function or operate. As a result, this research was provided a basic notion of sports medicine with special reference to West Bengal, India.

Keywords: Sports, Injuries, Sportsperson, Medicine.

INTRODUCTION:

The subjects of the study were athletes of various levels from five sports disciplines. Of the disciplines three were contact sports football, kabaddi, basketball and two were noncontact sports track and field and volleyball. Level of participations were classified into four categories - sub-division, district, state and national. Since, only injured sportsperson were the subjects of this study [1-6]. Therefore, such subjects were collected from various places of West Bengal (W.B).

RESEARCH METHODOLOGY:

The total number of male subjects covered was 298 and 142 female subjects. Among male subjects 100 were football, 45 basketball, 48 kabaddi, 50 volleyball and 55 athletics. There were no female players in football. Similarly female subjects were 35 basketball, 32 kabaddi, 30 volleyball and 45 athletics. There were no female players in football.

Table No.: 1 Distribution of subjects as per their level of participation per discipline

DISCIPLINE	NUMBER OF INJURED ATHLETES		TOTAL (Male and Female)
	Male	Female	
Football	100	00	100
Basketball	45	35	80
Kabaddi	48	32	80
Athletics	55	45	100
Volleyball	50	30	80
Total	298	142	440

Table No. 2: Distribution of injured athletes according to their participation level

LEVEL OF PARTICIPENTS	FOOTBALL		BASKETBALL		KABADDI		ATHLETICS		VOLLEY BALL	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
SUB-DIVISION	05	0	04	03	03	05	07	08	04	01
DISTRICT	10	0	07	10	10	08	12	11	11	06
STATE	25	0	08	15	15	13	20	17	17	13
NATIONAL	47	0	26	07	19	06	16	09	18	10
INTERNATIONAL	13	0	00	00	01	00	00	00	00	00
TOTAL	100	0	45	35	48	32	55	45	50	30

A draft questionnaire for the purpose of the study were prepared. The draft questionnaire were used in a pilot study. On the basis of pilot study few points were deleted and some inputs were included. Finally the questionnaire was duly approved by the specialist and the supervisor and only the set questionnaire was used for the collection of relevant information.

Some most important questions from the questionnaire are given below:

- Name of the injured sportsperson.
- Age, weight and height of the sportsperson.
- Highest achievement of the sportsperson.
- Occurrence of injury
- Nature of injury
- Location of injury
- Doctor's treatment.
- Rehabilitation advice for injury

According to the conversation of the players of West Bengal state, the researcher met with them and used to distribute the questionnaire. Injured sportsperson himself filled the questionnaire, however as and when required due discussion between the researcher and the athletes were made and helped the athletes to filled the said questionnaire. To collect information for 440 injured sportspersons, the researcher took more than 1 years' time.

ANALYSIS OF DATA AND RESULTS:

Mean and SD of personal data of all the participants are presented in tabular form. The details of sports injuries as per procedure of collection of information of athletes of various levels in five sports disciplines (Football, Basketball, Kabaddi, Athletics and Volleyball) were presented. There were five sports on which survey was conducted for both male and female sportsperson (in football only male) are presented as per following categories:

- Football injuries of male players.
- Basketball injuries of male & female players.
- Kabaddi injuries of male and female players.
- Athletics (track & field) injuries of male & female athletes.
- Volleyball injuries of male and female players.

After interpretation of the data based on above mentioned categories, the discussion and conclusion were drawn in this research. The analysis were summarized below:

1. Personal Data:

Mean and S.D of Age (Years), Height (cm.), Weight (Kg.) of injured athletes in five sports disciplines i.e., football, basketball, kabaddi, athletics, volleyball were determined.

2. Football Injuries of Male Players:

- Distribution of Knee Ligament Injury according to achievement -35 (35.00%).
- Distribution of Ankle Ligament Injury according to achievement - 14 (14.00%).
- Distribution of Hamstring Muscle Injury according to achievement -10 (10.00%).
- Distribution of Trank Injury according to achievement- 06 (06.00%)
- Distribution of Thigh Muscle Injury according to achievement-06 (06.00%)
- Distribution of Knee Cartilage Injury according to achievement – 06 (06.00%)
- Distribution of Shoulder Injury according to achievement – 04 (04.00%)
- Distribution of Muscle Cramp according to achievement - 03 (03.00%)
- Distribution of Groin Injury according to achievement – 03 (03.00%)
- Distribution of Foot Injury according to achievement – 03 (03.00%)
- Distribution of Shin Bone Pain according to achievement – 02 (02.00%)
- Distribution of Head Injury according to achievement – 02 (02.00%)
- Distribution of Abdomen Injury according to achievement – 02 (02.00%)
- Distribution of Facial Injury according to achievement – 02 (02.00%)
- Distribution of Knee Pain according to achievement - 01 (01.00%)
- Distribution of Ear Injury according to achievement - 01 (01.00%)

3. Basketball Injuries of Male Players:

- Distribution of Ankle Ligament Injury according to achievement - 16 (35.55%)
- Distribution of Knee Ligament Injury according to achievement - 10 (22.22%)
- Distribution of Hand Finger Fracture Injury according to achievement - 06 (13.33%)
- Distribution of Wrist Injury according to achievement – 04 (08.89%)
- Distribution of Trunk Injury according to achievement – 02 (04.44%)
- Distribution of Shin Bone Pain according to achievement – 02 (04.44%)
- Distribution of Cut Lip according to achievement - 02 (04.44%)
- Distribution of Elbow Dislocation according to achievement – 01 (02.22%)
- Distribution of Shoulder Injury according to achievement – 01 (02.22%)
- Distribution of Muscle Cramp according to achievement – 01 (02.22%)

4. Basketball Injuries of Female Players:

- Distribution of Ankle Ligament Injury according to achievement - 13 (37.14%)
- Distribution of Knee Ligament Injury according to achievement - 05 (14.28%)
- Distribution of Hand Finger Fracture Injury' according to achievement - 04 (11.43%)
- Distribution of Cut Lip according to achievement - 03 (8.57%)
- Distribution of Laceration according to achievement - 03 (8.57%)
- Distribution of Wrist Injury according to achievement – 03 (8.57%)
- Distribution of Hip Muscle Injury according to achievement – 03 (8.57%)

- Distribution of Shoulder Dislocation according to achievement - 01 (02.86%)

5. Kabaddi Injuries of Male Players:

- Distribution of Knee Ligament Injury according to achievement 10 (20.83%)
- Distribution of Ankle Ligament Injury according to achievement - 09 (18.75%)
- Distribution of Shoulder Injury according to achievement - 08 (16.66%)
- Distribution of Wrist Injury according to achievement - 03 (6.25%)
- Distribution of Lower Back Injury according to achievement - 03 (06.25%)
- Distribution of Elbow Dislocation according to achievement - 02 (04.16%)
- Distribution of Knee Dislocation according to achievement - 02 (04.16%)
- Distribution of Eye Brow Cut according to achievement - 02 (04.16%)
- Distribution of Ribs Injury according to achievement - 02 (04.16%)
- Distribution of Ankle Joint Crack according to achievement - 01 (02.08%)
- Distribution of Trunk Injury according to achievement - 01 (02.08%)
- Distribution of Thigh Muscle Injury according to achievement - 01 (02.08%)
- Distribution of Neck Pain according to achievement - 01 (02.08%)
- Distribution of Hand Finger Fracture according to achievement - 01 (02.08%)
- Distribution of Nose Fracture according to achievement - 01 (02.08%)
- Distribution of Blood Clot in Ankle Joint according to achievement - 01 (02.08%)

6. Kabaddi Injuries of Female Players:

- Distribution of Knee Ligament Injury according to achievement - 09 (28.12%)
- Distribution of Hand Fracture according to achievement - 05 (15.62%)
- Distribution of Ankle Ligament Injury according to achievement - 04 (12.5%)
- Distribution of Laceration Injury according to achievement - 04 (12.50%)
- Distribution of Shoulder Dislocation Injury according to achievement - 02 (06.25%)
- Distribution of Leg Finger Fracture according to achievement - 01 (03.12%)
- Distribution of Nose Fracture according to achievement - 01 (03.12%)
- Distribution of Eye Brow Cut according to achievement - 01 (03.12%)
- Distribution of Lip Cut according to achievement - 01 (03.12%)
- Distribution of Lower Back Injury according to achievement - 01 (03.12%)
- Distribution of Foot Injury according to achievement - 01 (03.12%)
- Distribution of Wrist fracture according to achievement - 01 (03.12%)
- Distribution of Thigh Muscle Injury according to achievement - 01 (03.12%)

7. Athletics Injuries of Male Athletes:

- Distribution of Knee Ligament Injury according to achievement - 10 (18.18%)
- Distribution of Ankle Ligament Injury according to achievement - 10 (18.18%)

- Distribution of Hamstring Muscle Injury according to achievement -10 (18.18%)
- Distribution of Back Muscle Injury according to achievement – 05 (09.10%)
- Distribution of Knee Pain according to achievement - 04 (07.27%)
- Distribution of Trunk Injury according to achievement – 04 (07.27%)
- Distribution of Thigh Muscle Injury according to achievement - 03 (5.45%)
- Distribution of Shin Bone Pain according to achievement – 03 (5.45%)
- Distribution of Elbow Joint Injury according to achievement – 02 (3.63%)
- Distribution of Shoulder Injury according to achievement – 02 (3.63%)
- Distribution of Muscle Cramp according to achievement – 02 (3.63%)

8. Athletics Injuries of Female Athlete:

- Distribution of Knee Ligament Injury according to achievement -14 (31.11%)
- Distribution of Hamstring Muscle Injury according to achievement - 11 (24.44%)
- Distribution of Ankle Ligament Injury according to achievement - 06 (13.33%)
- Distribution of Back Muscle Pain according to achievement – 03 (06.66%)
- Distribution of Muscle Cramp according to achievement – 03 (06.66%)
- Distribution of Knee Crack according to achievement – 03 (06.66%)
- Distribution of Knee Pain according to achievement - 03 (06.66%)
- Distribution of Knee Cartilage Injury according to achievement - 02 (04.44%)

9. Volleyball Injuries of Male Players:

- Distribution of Ankle Ligament Injury according to achievement - 15 (30.00%)
- Distribution of Knee Ligament Injury according to achievement - 09 (18.00%)
- Distribution of Shoulder Injury according to achievement – 09 (18.00%)
- Distribution of Back Muscle Injury according to achievement – 04 (8.00%)
- Distribution of Crack on Ankle Joint according to achievement - 04 (8.00%)
- Distribution of Elbow Joint according to achievement – 03 (06.00%)
- Distribution of Knee Patella Crack according to achievement – 02 (4.00%)
- Distribution of Hamstring Muscle Injury according to achievement - 02 (4.00%)
- Distribution of Laceration according to achievement - 02 (4.00%)

10. Volleyball Injuries of Female Players:

- Distribution of Ankle Ligament Injury according to achievement - 09 (30.00%)
- Distribution of Shoulder Injury according to achievement – 05 (20.00%)
- Distribution of Knee Ligament Injury according to achievement - 04 (13.33%)
- Distribution of Back Muscle Injury according to achievement – 03 (10.00%)
- Distribution of Laceration according to achievement – 03 (10.00%)

- Distribution of Knee Patella Injury according to achievement – 02 (06.67%)
- Distribution of Wrist Injury according to achievement – 02 (06.67%)
- Distribution of Ankle Bone Crack according to achievement – 01 (3.33%)
- Distribution of Elbow Joint Injury according to achievement – 01 (3.33%)

The following chart also be used to measure the parameters:

- Injury occurred on account of :
- Location of injury:
- Consulted with doctor:
- Treatment of injury according to doctor:
- Doctor's advice 'to do'
- Doctor's advice 'not to do'
- Medicine:
- Physiotherapy:
- Rest:
- Mode of practice after recovery of injury:
- Whether re-injury occurred:
- Return to normal schedule:

DISCUSSION AND CONCLUSION:

- Among football player's maximum injury observed was knee ligament injury and followed by ankle ligament injury (sprain) and hamstring muscle injury (strain).
- Other than these injuries there are 13 specific injuries observed among football players but most of them were 5% to 6% or less.
- Higher the level of injured football players higher was the frequency and severity of injury
- Among basketball players maximum injury observed was ankle ligament injury (sprain) and common to both male and female players. This was followed by knee ligament injury and hand fracture injury for both the groups.
- There were also seven other specific injuries observed in male basketball players and five specific injuries were in female basketball players, such injuries were only 8% to 9% or less.
- Among the kabaddi players maximum injury observed was knee ligament injury for male and female players. This was followed by ankle ligament injury (sprain) and hand fracture for female kabaddi players. Ankle ligament injury (sprain) and shoulder injury were second most prominent injury for male athletes.
- There were 13 other specific injuries observed in male kabaddi players and 10 other specific injuries was among female kabaddi players. But between 4% and 6% or less , are most of these injuries were

- Higher the level of injured kabaddi players higher was the frequency and severity of injury in both male and female players.
- Maximum injury observed was knee ligament injury among track & field female athletes and was followed by hamstring injury and ankle ligament injury (sprain). And for male athletes, knee ligament, ankle ligament (sprain) and hamstring muscle injury were maximum.
- There were five other specific injuries observed in female track & field athletes and eight other specific injuries observed among male track & field athletes, except these injuries. But most of these injuries were between 5% to 7% or less.
- Higher the level of injured track and field athletes higher was the frequency and severity of injury for male and female players.
- Maximum injury observed was ankle ligament injury (sprain) among female and male volleyball players and was followed by shoulder injury and knee ligament injury.
- There were eight injuries in male volleyball players and six other specific injuries among female volleyball players but injuries were between 10% to 11% or less.
- For male and female players, higher the level of injured volleyball players higher was the frequency and severity of injury for both male and female players.

FUTURE SCOPE OF STUDY:

- Similar study may be conducted on female football players.
- Further study may be conducted according to playing position of the athletes in different sports.
- Further study may be conducted to compare the injury rate between male and female sportsperson in different sports.
- Further study may be conducted to compare the injury types on body contact sports, with non-body contact sports.
- Further study may be conducted to compare the injury types, treatment, rehabilitation and return to their sports according to body contact or non-body contact sports,
- Study may be conducted on prevention of injuries in different sports.
- Further Study may be conducted in different states of India.

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