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Injury Types Sustained by Male Cricketers of Chandigarh

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Abstract

The game of cricket is known for its physical demands and players are susceptible to various types of injuries. This study aims to explore the types of injuries sustained by male cricketers. The sample comprised of 100 male cricketers from Chandigarh. Data were collected for 3 months using a self-report questionnaire. Results showed that the most common injury types among cricketers are abrasions at the upper and lower limbs followed by a strain more prone at the lower back followed by bruises mostly at the knee and ankle. These findings highlight the need for injury prevention strategies for cricketers.

Keywords: Cricket, Injury, Abrasion, Strain, Bruise

Introduction

Cricket is a game in which each team has to bowl and bat according to certain rules and regulations. A team which scores a greater number of runs will be the winner (Raman, 1983). With the introduction of day Cricket and more recently Twenty20, the game has gone through major changes and the physical demands made on a Cricketer's body have also increased dramatically. Depending on the version of the game being played and the role of the player in the team, the importance of fitness will vary: the fitness requirements of a fast bowler will be greater

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and also different than that of an opening batsman, and one day Cricket will be more demanding than a test match (Chappell, 1978).

Game denotes physical exertion for amusement or competition governed by definite rules. Sports mean all those physical activities are done for diversion, amusement, pleasure or success (Sharma, 2005). Batsmen stay at the crease for as long as possible, sometimes for periods of over four hours. To occupy this position, a good batsman must be able to stay focused, have good ball/eye skills, and have the strength and fitness to make each played shot productive. Fielders need the ability to sustain a concentrated effort for six hours or more without fatigue and in sometimes very warm conditions. The body must be capable of explosive bursts at any given time - such as racing for a ball or jumping for a catch (Buchanan, J. 2008)

Methodology

The study was a descriptive study focusing on the type of injury sustained by the cricketers of Chandigarh. A sample of hundred school-level cricketers (20 batters, 20 fast bowlers, 20 spinners, 20, All-Rounder and 20 Wicket keepers) of the age group 15-19 years was taken purposively as subject for the study.

The JECS-SL injury survey questionnaire was used in the present study, the questionnaire was developed from two existing resources: (1) the validated cricket injury record form used in the Australian Juniors Enjoying Cricket Safely (JECS) project and (2) the consensus statement for injury surveillance in cricket for details on injury definitions and reporting methods. The newly developed questionnaire was reviewed and approved by all members of the research team to obtain the English version of the JECS-SL questionnaire. The JECS-SL injury survey questionnaires was provided to the selected samples and were asked to complete it. The tester

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S .Iss2, 2022

assisted the subjects to fill out the questionnaire carefully without any difficulty. For a sufficient amount of questionnaires to be collected, contact was made with the cricketers of Chandigarh.

Descriptive analysis has been undertaken to obtain, as appropriate to the variable, means, standard deviations, numbers and percentages of participants who have provided each response.

Results

A total of 100 male cricketers (20 batters, 20 fast bowlers, 20 spinners, 20, All-Rounder and 20 Wicket keepers) from Chandigarh were selected randomly and provided a questionnaire. The age of cricketers ranged from 15 to 19 years. The collected data were tabulated and computerized to draw out desired results with help of SPSS. The injury type and rate of occurrence concerning playing position have been shown in Table- 1. most common type of injury sustained by male cricketers of Chandigarh was abrasion (N=30, 30 % of total injuries), further Abrasion is found at 50% in All-Rounder, Followed by Batters 40 %, followed by Fast bowlers 30%, followed by wicket-keepers 15% and Spin bowlers 15%. The second most prevalent injury type was Strain (N=27, 27 % of total injuries), The Strain was mostly found in Fast bowlers 45%, followed by Spin bowlers, followed by batters 25% and All-rounders 15%. Further Bruise was found to be the third most prevalent injury (N=20, 20 % of the total injuries), Bruise was found to be most common among Wicket keeper 35 %, followed by Spin bowlers 25%, followed by Fast bowlers and All-rounder 10 % each. Further Joint injury (N=7, 7 % of the total injuries) was found to be in fourth place.

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S .Iss2, 2022

Table- 1

Playing Position and Injury type Cross tabulation

			Injury type								Total
			Abrasion	bruise	Laceration	strain	sprain	joint injury	bone injury	not sure	
playing position	Batter	Count	8	4	1	5	0	1	0	1	20
		% within playing position	40.0%	20.0%	5.0%	25.0%	0.0%	5.0%	0.0%	5.0%	100.0%
		% withinInjury type	26.7%	20.0%	25.0%	18.5%	0.0%	14.3%	0.0%	16.7%	20.0%
		% of Total	8.0%	4.0%	1.0%	5.0%	0.0%	1.0%	0.0%	1.0%	20.0%
	fast bowler	Count	6	2	0	9	1	0	1	1	20
		% within playing position	30.0%	10.0%	0.0%	45.0%	5.0%	0.0%	5.0%	5.0%	100.0%
		% withinInjury type	20.0%	10.0%	0.0%	33.3%	33.3%	0.0%	33.3%	16.7%	20.0%
		% of Total	6.0%	2.0%	0.0%	9.0%	1.0%	0.0%	1.0%	1.0%	20.0%
	spin bowler	Count	3	5	2	6	0	2	0	2	20
		% within playing position	15.0%	25.0%	10.0%	30.0%	0.0%	10.0%	0.0%	10.0%	100.0%
		% withinInjury type	10.0%	25.0%	50.0%	22.2%	0.0%	28.6%	0.0%	33.3%	20.0%
		% of Total	3.0%	5.0%	2.0%	6.0%	0.0%	2.0%	0.0%	2.0%	20.0%
	All-rounder	Count	10	2	1	3	1	2	1	0	20
		% within playing position	50.0%	10.0%	5.0%	15.0%	5.0%	10.0%	5.0%	0.0%	100.0%
		% withinInjury type	33.3%	10.0%	25.0%	11.1%	33.3%	28.6%	33.3%	0.0%	20.0%
		% of Total	10.0%	2.0%	1.0%	3.0%	1.0%	2.0%	1.0%	0.0%	20.0%
	Wicket-keeper	Count	3	7	0	4	1	2	1	2	20
		% within playing position	15.0%	35.0%	0.0%	20.0%	5.0%	10.0%	5.0%	10.0%	100.0%
		% withinInjury type	10.0%	35.0%	0.0%	14.8%	33.3%	28.6%	33.3%	33.3%	20.0%
		% of Total	3.0%	7.0%	0.0%	4.0%	1.0%	2.0%	1.0%	2.0%	20.0%
Total		Count	30	20	4	27	3	7	3	6	100
		% within playing position	30.0%	20.0%	4.0%	27.0%	3.0%	7.0%	3.0%	6.0%	100.0%
		% withinInjury type	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	30.0%	20.0%	4.0%	27.0%	3.0%	7.0%	3.0%	6.0%	100.0%

Table- 2 shows the body parts most prone to various types of injuries. Abrasions highly occurred in the elbow and Knee 33.3 % each, followed by the forearm 13.3%. The lower back is found to be more at risk for Strain at 48%, followed by 25.9% at thighs, Bruise found to be very prone to Hands at 50%, followed by the lower leg at 15% and Joint injury mostly occurred at Hand 42.9% and at knee 28.6%. See appendix for Table 2

ISSN PRINT 2319 1775 Online 2320 7876

 UGC CARE Listed (Group -I) Journal Volume 11, S .Iss2, 2022

Table- 2

Injury type and Body part Cross tabulation

			Body part																	Total
			head, scalp	face organs(eyes, nose, ears)	chest	abdomen and trunk	upper back	lower back	pelvic, glutes	hip and groins	thigh	knee	lower leg	ankle	shoulder	elbow	forearm	wrist	hand	
Injury type	abrasion	Count	0	0	0	1	1	0	0	1	1	10	0	0	1	10	4	0	1	30
		% withinInjury type	0.0%	0.0%	0.0%	3.3%	3.3%	0.0%	0.0%	3.3%	3.3%	33.3%	0.0%	0.0%	3.3%	33.3%	13.3%	0.0%	3.3%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	33.3%	11.1%	83.3%	0.0%	0.0%	50.0%	90.9%	80.0%	0.0%	5.9%	31.9%
		% of Total	0.0%	0.0%	0.0%	1.1%	1.1%	0.0%	0.0%	1.1%	1.1%	10.6%	0.0%	0.0%	1.1%	10.6%	4.3%	0.0%	1.1%	31.9%
	bruise	Count	1	1	1	0	0	0	0	0	1	0	3	1	0	1	1	0	10	20
		% withinInjury type	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	0.0%	15.0%	5.0%	0.0%	5.0%	5.0%	0.0%	50.0%	100.0%
		% withinthe Body part	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	0.0%	100.0%	16.7%	0.0%	9.1%	20.0%	0.0%	58.8%	21.3%
		% of Total	1.1%	1.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.2%	1.1%	0.0%	1.1%	1.1%	0.0%	10.6%	21.3%
	laceration	Count	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	2	4
		% withinInjury type	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	50.0%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	11.8%	4.3%
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	2.1%	4.3%
	strain	Count	0	0	0	1	1	13	1	1	7	0	0	1	1	0	0	1	0	27
		% withinInjury type	0.0%	0.0%	0.0%	3.7%	3.7%	48.1%	3.7%	3.7%	25.9%	0.0%	0.0%	3.7%	3.7%	0.0%	0.0%	3.7%	0.0%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	50.0%	50.0%	86.7%	50.0%	33.3%	77.8%	0.0%	0.0%	16.7%	50.0%	0.0%	0.0%	50.0%	0.0%	28.7%
		% of Total	0.0%	0.0%	0.0%	1.1%	1.1%	13.8%	1.1%	1.1%	7.4%	0.0%	0.0%	1.1%	1.1%	0.0%	0.0%	1.1%	0.0%	28.7%
	sprain	Count	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	3
		% withinInjury type	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	0.0%	0.0%	6.7%	50.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%
	joint injury	Count	0	0	0	0	0	0	0	1	0	2	0	1	0	0	0	0	3	7
		% withinInjury type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	28.6%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	42.9%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	16.7%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	17.6%	7.4%
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	2.1%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	3.2%	7.4%
	bone injury	Count	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3
		% withinInjury type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%	0.0%	0.0%	33.3%	100.0%
		% withinthe Body part	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	5.9%	3.2%
		% of Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	1.1%	3.2%
Total		Count	1	1	1	2	2	15	2	3	9	12	3	6	2	11	5	2	17	94
		% withinInjury type	1.1%	1.1%	1.1%	2.1%	2.1%	16.0%	2.1%	3.2%	9.6%	12.8%	3.2%	6.4%	2.1%	11.7%	5.3%	2.1%	18.1%	100.0%
		% withinthe Body part	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	1.1%	1.1%	1.1%	2.1%	2.1%	16.0%	2.1%	3.2%	9.6%	12.8%	3.2%	6.4%	2.1%	11.7%	5.3%	2.1%	18.1%	100.0%

Findings and Discussion

The findings of the study indicate that the most common type of injury sustained by male cricketers of Chandigarh was abrasion which is most prevalent in All-rounder followed by batters followed by fast bowlers followed by wicketkeepers and spin bowlers. Further, the study shows that the abrasion has highly occurred in the elbow, knee and forearm. Fielding could be the reason for abrasion among the cricketers. The second most prevalent injury type was Strain

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which was found to be most prevalent among fast bowlers followed by spin bowlers followed by the batter with the lower back and thighs most affected body parts. Thighs could be due to more stress on the lower back and thighs during bowling and batting. According to the study, the bruise is at number third followed by abrasion and strain. Wicket keeper, spin bowlers and batters were found more prone in playing positions for bruises and hands followed by lower legs are found most affected body parts to bruise. As wicket keeping, spin bowling and batting have higher chances for direct contact with the ball could be the reason for bruising among these playing positions.

Conclusion

After the findings and discussion of the study, we can conclude that abrasions followed by strain followed by bruises are the most prevalent type of injuries. Abrasion occurred mostly in all-rounder, batter and fast bowler, strain is more prone to fast bowler, spin bowler and batter and bruise is found to be highly occurring in wicket-keepers, spin bowler and batter. Abrasion is more prone to elbow and knee, strain occurred mostly at lower back and thighs and bruise highly occurred at hand and lower leg

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