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INJURIES AMONG MALE AND FEMALE SCHOOL LEVEL CRICKET PLAYERS AND THEIR IMPACT ON PERFORMANCE

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ABSTRACT

Objective: To compare the incidence and pattern of injuries among male and female school level cricket players, along with their impact on the players' performance.
Design: A comparative study.
Study population: 400 male and female (200 each) cricket players between 15 to 19 years.
Results: The statistical analysis revealed significant differences across various characteristics of players, highlighting gender disparities in sports engagement within the selected population. A significant majority of players sustained injuries while playing matches among male (86.0%) and female (85.0%) cricket players. It was observed that Abrasion (29.7%) was the most common type of injury among males, whereas female players highly reported Bruise (27.6%). Comparison of affected regions (according to OSICS classification) during injuries among male and female cricket players showed non-significant differences. Lower back (15.1%) among males and ankle (15.3%) among females were the significantly affected body parts. Analysing mechanism of injury, 'struck by ball' was most reported among all. Fielding was seen most vulnerable playing position for the sustained injuries among male (59.9%) and female (52.9%) cricket players. Also, it was seen that more than half of the injured players in male (58.1%) and female (50.6%) cricket players were unable to continue playing or missed the match due to sustained injury.
Conclusion: The findings highlight the significant impact of injuries in cricket, with variations observed between male and female players. Understanding injury patterns, risk factors, and prevention strategies is essential for improving player safety and performance in both genders. This research will help in understanding the need for developing gender-specific training and injury management programs to enhance the well-being of cricketers at all levels.

Keywords: Cricket Players, Type of Injury, Mechanism, Protective Equipment

1. INTRODUCTION

Cricket is a physically demanding sport that exposes players to various types of injuries, ranging from minor strains to severe musculoskeletal damage. The nature and impact of these injuries can vary based on factors such as playing position, training intensity, and gender. Male and female cricketers may experience different injury patterns due to physiological differences, biomechanics, and game dynamics. Understanding these injury trends is crucial for developing effective prevention strategies, improving player safety, and enhancing overall performance. This paper explores the prevalence, types, and impact of injuries among male and female cricket players, highlighting key differences and the need for tailored injury management approaches. Cricket, a globally popular sport, demands physical endurance, skill, and agility, making players susceptible to various injuries. Research on cricket-related injuries has expanded over the years, identifying common injury patterns, risk factors, and prevention strategies. Studies indicate that cricket injuries commonly affect the lower limbs, upper limbs, and spine, with fast bowlers experiencing the highest injury rates. Orchard et al. (2002) and Olivier et al. (2023) found that bowling-related injuries account for nearly 50% of all cricket injuries,

primarily due to repetitive stress and high-impact movements. Batsmen and fielders also experience injuries, though at lower frequencies. Injuries such as hamstring strains, lower back pain, and shoulder injuries are frequently reported (Frost & Chalmers et al., 2012). According to Stretch et al. (2003), younger cricketers are more prone to overuse injuries, particularly in the lower limbs; players experience a higher incidence of acute injuries such as muscle strains and joint dislocations. This is attributed to differences in muscle strength, joint stability, and training intensity. While doing meta-analysis Soomro et al. (2018) tried to study the cricket injury rates, risk factors, mechanism of injury in twenty first century discovered higher injury rates among junior and amateur cricket players. Lesser research comparing male and female cricketers suggests identifying differences in injury patterns due to physiological and biomechanical variations. Several studies highlight key risk factors, including inadequate warm-up, poor biomechanics, overuse, and playing conditions. Dennis et al. (2003) emphasized the impact of workload on fast bowlers, showing a direct correlation between excessive bowling and stress fractures in the lumbar spine. Environmental factors, such as pitch conditions and weather, also play a role in injury occurrence Cricket injuries not only affect short-term performance but also have long-term consequences on players' careers. Recurrent injuries, particularly in bowlers, often lead to early retirement or reduced playing efficiency. Psychological stress associated with injury recovery may also play as a challenge for professional cricketers. Effective injury prevention programs needs to be developed like Stretching routines, strength training, and workload management for reducing injury risks. Advanced rehabilitation techniques, including physiotherapy and biomechanics assessment, can play crucial role in ensuring successful recovery and return to play.

2. METHODS

The present study was aimed to study the incidence and pattern of injuries among male and female school level cricket players, along with their impact on the players' performance. Thus cricket players in the age group of 15 to 19 years were enrolled from different performance levels i.e. inter school, inter district, state and school national level cricket. Purposive sampling technique was used for recruiting 200 players of each gender including equal distribution of Batter, Fast Bowler, Spin Bowler, and All Rounder. The JECS-SL injury survey questionnaire (Gamage et al., 2018) was used to study the injuries that occurred during matches, including the body part injured, type of injury, mechanism and activity at the time of injury, treatment received and use of protective equipment. Orchard Sports Injury and Illness Classification System (OSICS v15) was used for classifying the body regions and areas for injuries. Data was collected from diverse states (Chandigarh, Punjab, Haryana, Delhi, Uttar Pradesh and Himachal Pradesh) to ensure the participation from varied populations.

Statistical Analysis:

The collected data was entered into an Excel worksheet. The statistical analysis was then performed using SPSS (version 20.0, SPSS Inc., Chicago, IL). The test of proportions : Pearson's Chi square, Yates' corrected and Fisher's exact test were used for various comparison between male and female cricket players, related to prevalence of injuries, type of injuries, mechanism, identifying most affecting body parts, effect on injury on performance of players and use of protective equipment. A probability value (p value) less than 0.05 was considered statistically significant

Results:

A total of 400 individual, females and males, each comprising 200 participants were recruited for the study. The participants were equally distributed across four playing specialities: Batter, Fast Bowler, Spin Bowler, and All Rounder, with each category representing 50 individuals of the sample.

Table 1: Characteristics of the sample population (n-400)

Characteristics	Male (n-200)		Female (n-200)		Test value	p-value
Age(years)	F	%	F	%		
Under 15	85	42.5	30	15.5	46.542	0.000[S]
Under 17	55	27.5	50	25.0		
Under 19	60	30.0	120	60.0		
State						
Himachal Pradesh	22	11.0	14	7.0	13.523	0.019[S]

Haryana	17	8.5	35	17.5		
Delhi	10	5.0	6	3.0		
Chandigarh	105	52.5	106	53.0		
Punjab	22	11.0	27	13.5		
Uttar Pradesh	24	12.0	12	6.0		
Participation level						
Inter School	136	68.0	91	45.5	31.470	0.000S
Inter District	29	14.5	33	16.5		
Inter State	33	16.5	53	26.5		
School National	2	1.0	23	11.5		
Matches played						
1 – 3	40	20.0	63	31.5	10.047	0.007S
4 – 6	106	53.0	77	38.5		
> 6	54	27.0	60	30.0		

S - Significant (p value <0.05)

Table 1 presents a detailed overview of the sample population, categorized by gender, age, state of residence, participation level in sports, and the number of matches played. Among the age groups, a significant proportion of males (42.5%) and females (15.5%) are under 15 years old, while the highest proportion is seen in the under 19 category, with 60% females. The players were significantly varying according to age categories. Cricket being more popular among males, was significantly more selected at the early years of their age.

In case of state, compared to Himachal Pradesh (7.0%) significantly more female cricket players were found in Haryana (17.5%). Whereas Chandigarh had the highest number of participants in both genders, with 52.5% males and 53% females.

In terms of participation levels, 68% of males participate at inter-school levels compared to only 45.5% of females. Moreover, regarding matches played, females show higher participation (31.5%) in the 1-3 matches category compared to males (20%), while males dominate the 4-6 matches category (53%). The statistical analysis indicates significant differences across various characteristics, highlighting gender disparities in sports engagement within this population.

Table 2: Frequency distribution of players having any Injury

Any injury	**Male**	**(n-200)**	**Female**	**(n-200)**	**Test value**	**p-value**
	F	**%**	**F**	**%**		
Yes	172	86.0	170	85.0	0.081	0.776NS
No	28	14.0	30	15.0		
Number of injuries						
No injury	28	14.0	30	15.0	0.081	0.776NS
Single injury	172	86.0	170	85.0		

NS - Non Significant (p value >0.05)

The above table shows the prevalence of injuries in the cricket players by gender. Out of the total participants, 86% males and 85% females reported experiencing an injury. While 14% of males and 15% of females reported no injuries, highlighting major proportion of the population experiencing injury while playing matches. The analysis showing p-value of 0.776 indicated no significant difference in injury rates between males and females. Analysing the number of injuries,

it was seen that none of the cricket players were sustaining multiple injuries. All the injured players whether male or female were reporting single injury sustained by them while playing Cricket (86.0% and 85.0% respectively).

Table 3: Type of injuries

Type of injury	Male (n-172)		Female (n-170)		Test value	p-value
	F	%	F	%		
Abrasion	51	29.7	28	16.5	8.362	0.004S
Bruise	46	26.7	47	27.6	0.035	0.851NS
Laceration cut	9	5.2	11	6.5	0.238	0.626NS
Strain	41	23.8	21	12.4	7.597	0.006S
Sprain	13	7.6	28	16.5	6.436	0.011S
Joint Injury	7	4.1	25	14.7	11.404	0.001S
Bone Injury	4	2.3	7	4.1	0.882	0.348NS
Head Injury	0	0.0	2	1.2	0.515	0.473NS

S - Significant(p value <0.05) NS - Non Significant(p value >0.05)

Various types of injuries reported by male and female participants are represented in table 3. Abrasions were significantly (p = 0.004) more reported injury among males (29.7%) compared to females (16.5%). Strains showed a significant difference (p = 0.006), with 23.8% of males and 12.4% of females. In contrast, sprains were more frequent among females, with 16.5% compared to 7.6% of males. Joint injuries were also significantly higher in females (14.7%) as compared to 4.1% in males (p = 0.001). Other injuries, such as bruises and lacerations, showed no significant differences between genders (p = 0.851 and 0.626, respectively). However, head injuries were reported only by females (1.2%), while no males indicated such injuries.

Regarding type of sustained injury, it was observed that Abrasion (29.7%) was the most common type of injury among males followed by Bruise (26.7%). Whereas female players highly reported Bruise (27.6%) followed by Abrasion (16.5%) and Sprain (16.5%) equally. Least reported injury among all cricket players was head injury that was only visible among 2 female players.

Table 4: Region (OSICS classification) affected during injury

Regions affected	Male (n-172)		Female (n-170)		Test value	P-value
	F	%	F	%		
One	153	89.0	161	94.7	4.244	0.096NS
Two	18	10.5	8	4.7		
More than two	1	0.6	1	0.6		
Region						
Head and Neck	8	4.7	14	8.2	1.825	0.177NS
Upper Limb	70	40.7	65	38.2	0.217	0.641NS
Trunk	28	16.3	17	10.0	2.950	0.086NS
Lower Limb	86	50.0	83	48.8	0.047	0.828NS
Multiple regions	19	11.0	9	5.3	3.764	0.052NS

NS - Non Significant (p value >0.05)

The majority of both male (89.0%) and female (94.7%) players sustained injuries in a single body region, with fewer cases involving two regions (male: 10.5%, female: 4.7%) or multiple regions (0.6% for both). Lower limb injuries were the most common (male: 50.0%, female: 48.8%), followed by upper limb injuries (male: 40.7%, female: 38.2%). Trunk injuries were more frequent in males (16.3%) than females (10.0%), while head and neck injuries were higher in females

(8.2%) than males (4.7%). Multiple region injuries were slightly more common in males (11.0%) than females (5.3%). However, the differences between genders were not statistically significant ($p > 0.05$).

The distribution of cricket players according to number of injured regions showed similarity between both genders. Lower limb was most injured region in male (50.0%) and female (48.8%) players. Upper limb, was the second most similarly affected region in both gender male (40.7%) and female (38.2%).

Table 5: Injured body parts

Injured body part	Male (n-172)		Female (n-170)		Test value	P-value
	F	%	F	%		
Head, Scalp	1	0.6	7	4.1	3.260	0.071^{NS}
Face organs(eyes, nose, ears)	3	1.7	1	0.6	0.241	0.623^{NS}
Face(cheek, chin, forehead, other face)	3	1.7	3	1.8	0.000	1.000^{NS}
Mouth(lips, tongue, other oral cavity)	1	0.6	0	0.0	0.000	1.000^{NS}
Dental(Gum, teeth)	0	0.0	0	0.0	-	-
Neck(front, back)	0	0.0	3	1.8	1.369	0.242^{NS}
Chest(front/back)	2	1.2	0	0.0	0.491	0.483^{NS}
Abdomen and trunk	0	0.0	1	0.6	0.000	0.995^{NS}
Upper back(Thoracic spine)	0	0.0	3	1.8	1.369	0.242^{NS}
Lower back(Lumber spine)	26	15.1	13	7.6	4.721	0.030^{S}
Pelvic/Gluteal region(buttoks)	0	0.0	0	0.0	-	-
Hip and groins	3	1.7	4	2.4	0.000	0.988^{NS}
Thigh	31	18.0	23	13.5	1.299	0.254^{NS}
Knee	31	18.0	26	15.3	0.458	0.498^{NS}
Lower leg	12	7.0	4	2.4	4.099	0.043^{S}
Ankle	12	7.0	26	15.3	5.989	0.014^{S}
Foot(toes, nails, sole, other foot)	1	0.6	3	1.8	0.265	0.607^{NS}
Shoulder	4	2.3	7	4.1	0.882	0.348^{NS}
Upper arm	0	0.0	4	2.4	2.312	0.128^{NS}
Elbow	24	14.0	16	9.4	1.708	0.191^{NS}
Fore arm	4	2.3	5	2.9	0.000	0.986^{NS}
Wrist	2	1.2	7	4.1	1.874	0.171^{NS}
Hand(fingers, nails, palm)	36	20.9	29	17.1	0.832	0.362^{NS}

S - Significant (p value <0.05) NS - Non Significant (p value >0.05)

Table 5 provides a sight of the injured body parts among male and female players. Lower back injuries were more common in males (15.1%) than females (7.6%), a difference that is statistically significant ($p = 0.030$). Males also report higher rates of thigh (18.0%) and knee (18.0%) injuries than females (13.5% and 15.3%, respectively). In contrast, ankle injuries are more frequent among females with 15.3% compared to 7.0% of males, a statistically significant difference ($p = 0.014$). Injuries to other body parts, such as the head and scalp, were reported by 0.6% of males and 4.1% of females. Additionally, some areas, like the neck and pelvic region, had no reported injuries among males, while females reported minor injuries in these areas.

It was seen in the study that majority injured parts were similar between both genders with statistically non significant differences in proportions. Significantly more males were reporting injured Lower back (15.1%) and Lower leg (7.0%) compared to females. Whereas significantly more females had injured ankle (15.3%) than male cricket players.

Table 6: Mechanism of the injury

Mechanism of injury	Male (n-172)		Female (n-170)		Test value	P-value
	F	%	F	%		
Struck by ball	58	33.7	62	36.5	0.284	0.594^{NS}
Overextension	26	15.1	17	10.0	2.036	0.154^{NS}
Struck by bat	0	0.0	3	1.8	1.369	0.242^{NS}
Slip/trip	6	3.5	7	4.1	0.093	0.761^{NS}
Collision with other player/Umpire	2	1.2	2	1.2	0.000	1.000^{NS}
Twisting to change direction	6	3.5	14	8.2	3.499	0.061^{NS}
Collision with fixed objects(eg. fence)	2	1.2	4	2.4	0.182	0.670^{NS}
Rapid change in speed(acceleration or deceleration)	4	2.3	2	1.2	0.158	0.691^{NS}
Mishandling ball while fielding	2	1.2	6	3.5	1.188	0.276^{NS}
Overuse/gradual onset	5	2.9	6	3.5	0.106	0.744^{NS}
Dive for catch	46	26.7	37	21.8	1.153	0.283^{NS}
Awkward landing from jump	9	5.2	6	3.5	0.591	0.442^{NS}
Other	4	2.3	4	2.4	0.000	1.000^{NS}
Dive for run	2	1.0	0	0.0	6.995	0.249^{NS}
Dive to field	1	0.5	0	0.0		
Dive to get in crease	0	0.0	2	1.0		
Running between wickets	0	0.0	1	0.5		
Scratched during off spin	0	0.0	1	0.5		
Throwing	1	0.5	0	0.0		

NS - Non Significant (p value >0.05)

Table 6 presents the mechanisms behind injuries sustained by male and female participants. The most frequent way reported is being struck by a ball, with 33.7% males and 36.5% females. Other mechanisms such as overextension affected 15.1% of males and 10.0% of females while diving for catches was reported by 26.7% of males and 21.8% of females. Both mechanisms show no significant differences in occurrence between genders, as indicated by their respective p-values (0.154 and 0.283). While no males reported injuries from being struck by a bat, 1.8% of females did, though this difference is also not statistically significant (p = 0.242). Additional mechanisms such as twisting to change direction and mishandling the ball while fielding show some variation in rates between genders, but none reach statistical significance either.

The mechanism of injury was statistically identical in both genders with non significant p value for each and every component. Generally majority cricket players sustained injuries while struck by ball with somewhat more injuries among female players(36.5%).Another visible injuries occurred while diving for catch by players of both gender (26.7% and 21.8%). Overextension and twisting to change direction were other contributing mechanisms of injury among male and female players.

Table 7: Playing position (activity) at the time of sustained injury

Playing position/activity	Male (n-172)		Female (n-170)		Test value	P-value
	F	%	F	%		
Batting	19	11.0	41	24.1	10.098	0.001S
Fielding	103	59.9	90	52.9	1.676	0.195NS
Bowling	39	22.7	28	16.5	2.089	0.148NS
Wicket keeping	7	4.1	5	2.9	0.322	0.571NS
Other	3	1.7	6	3.5	0.481	0.488NS
Knocking	0	0.0	1	0.5	5.413	0.273NS
Road running	1	0.5	0	0.0		
Running between	0	0.0	1	0.5		
Throwing	1	0.5	0	0.0		
Warming up	1	0.5	4	2.0		

S - Significant(p value <0.05) NS - Non Significant(p value >0.05)

Table 7 displays various playing positions or activities during which injuries were sustained by male and female participants. More female players (24.1%) experienced injuries while batting as compared to males (11.0%), a statistically significant difference (p = 0.001). Fielding was the most common activity leading to injuries for both genders, with 59.9% of males and 52.9% of females affected. Meanwhile, bowling injuries were more frequent among males (22.7%) than females (16.5%). Other activities such as wicket keeping and warming up showed minimal injury reports for both genders, with no significant differences noted. It is also shown that activities like knocking and road running had very few related injuries, particularly among males.

Fielding was seen most vulnerable playing position for the sustained injuries among male (59.9%) and female (52.9%) cricket players. Significantly more female (24.1%) players got injured while batting compared to males (11.0%). Whereas comparatively more males (22.7%) were injured bowling.

Table 8: Effect of sustained injury on the play of players

	Male (n-172)		Female (n-170)		Test value	P-value
	F	%	F	%		
Unable to continue playing/missed match						
No	72	41.9	84	49.4	1.965	0.161NS
Yes	100	58.1	86	50.6		
Match time missed(in min)						
≤ 10 min	13	13.0	5	5.8	35.820	0.001S
11-20 min	28	28.0	9	10.5		
21-30 min	24	24.0	12	14.0		
31-60 min	17	17.0	9	10.5		
61-120 min	8	8.0	31	36.0		
>120 min	10	10.0	20	23.3		
Days took to recover						
0 day	44	44.0	13	15.1	26.287	0.001S
1 day	9	9.0	25	29.1		

2 days	11	11.0	14	16.3		
3 days	9	9.0	7	8.1		
4-6 days	3	3.0	6	7.0		
7-10 days	11	11.0	9	10.5		
11-15 days	5	5.0	5	5.8		
16-20 days	1	1.0	1	1.2		
>20 days	7	7.0	6	7.0		
Missed next match						
No	48	48.0	38	44.2	0.271	0.603^{NS}
Yes	52	52.0	48	55.8		
Hospitalized						
No	98	98.0	82	95.3	0.365	0.546^{NS}
Yes	2	2.0	4	4.7		
Days hospitalized						
1 day	1	50.0	2	50.0	2.551	0.600^{NS}
2 days	1	50.0	0	0.0		
3 days	0	0.0	2	50.0		

S - Significant (p value <0.05) NS - Non Significant(p value >0.05)

Table 8 shows the effects of sustained injuries on players' ability to continue participating in matches. A majority of both genders reported being unable to continue playing after an injury, with 58.1% of males and 50.6% of females indicating they missed matches. Regarding match time missed due to injuries, 13% of males missed 10 minutes or less compared to only 5.8% of females, with a p-value of 0.001. Additionally, males were more likely to recover within the same day (44.0%) compared to females (15.1%), also showing significant differences (p = 0.001). Additionally, a similar number of males (52.0%) and females (55.8%) missed their next match. Hospitalization rates were low, with only 2% of males and 4.7% of females.

During the study it was seen that nearly more than half of the injured players in male (58.1%) and female (50.6%) cricket players were unable to continue playing or missed the match due to sustained injury. The comparative missed match time was significantly more seen in female players compared to their counterpart where almost 60% missed >60 minutes of the match time after sustained injury. Number of days taken for recovery were significantly lesser among the male participants (44.0%) who recovered within 24 hours i.e 0 day while majority of the injured 29.1% females recovered after 1 day. Statistically non significant proportion (more than 50%) of injured players from both gender had to miss their next match. Only 6 patients (2 male and 4 female) cricket players were hospitalized at the most 3 days for the sustained injuries.

Table 9: Preventive equipment usage by cricket players

	Male (n-172)		**Female (n-170)**		**Test value**	**P-value**
	F	**%**	**F**	**%**		
Preventive equipment used at the time of injury						
No	35	20.3	54	31.8	5.788	0.016^{S}
Yes	137	79.7	116	68.2		
Preventive equipment used						
Helmet without faceguard	2	1.2	6	3.5	1.188	0.276^{NS}
Box	0	0.0	0	0.0	-	-

Helmet with faceguard	8	4.7	1	0.6	4.036	0.045[S]
Forearm guard	1	0.6	2	1.2	0.000	0.992[NS]
Gloves	20	11.6	11	6.5	2.759	0.097[NS]
Mouth guard	0	0.0	1	0.6	0.000	0.995[NS]
Leg pads	16	9.3	9	5.3	2.027	0.155[NS]
Compression sportswear	0	0.0	5	2.9	3.295	0.069[NS]
Thigh pads	11	6.4	11	6.5	0.001	0.977[NS]
Other	13	7.6	19	11.2	1.320	0.251[NS]

S - Significant (p value <0.05) NS - Non Significant (p value >0.05)

The preventive equipment usage among cricket players at the time of injury is depicted in the above table 9. A higher percentage of males (79.7%) admitted to using preventive equipment compared to 68.2% of females. Among the specific types of equipment used, males were more likely to wear helmets with faceguards (4.7%) compared to females (0.6%), a difference that is significant (p = 0.045). Other equipment, such as gloves and leg pads, showed no significant differences in usage rates between genders, although a higher percentage of males (11.6%) wore gloves compared to females (6.5%). Moreover, certain items like boxes and mouthguards were not reported as being used by males, while a small percentage of females indicated they used a mouthguard (0.6%). It can also be noted that while both groups reported similar usage of thigh pads, the overall trend suggests that males tend to utilize preventive equipment more frequently than females during play.

Results showed that use of various protective equipment was almost comparable among male and female cricket players with non significant differences. Significant majority of male players (79.7%) were injured in spite of using protective equipment while playing. Most common protective equipment used by players were gloves, leg pads and thigh pads. Significantly more male players sustained injuries while wearing Helmet with faceguard (4.7%).

Table 10 : Prevention measures for sustained injuries

	Male (n-172)		**Female (n-170)**		**Test value**	**P-value**
	F	**%**	**F**	**%**		
Could be prevented						
No	34	19.8	44	25.9	1.816	0.178[NS]
Yes	138	80.2	126	74.1		
How, could be prevented						
By using appropriate protective equipment	20	11.6	30	17.6	2.482	0.115[NS]
By improving fitness level	42	24.4	30	17.6	2.359	0.125[NS]
By improving cricket skills/techniques	94	54.7	73	42.9	4.692	0.030[S]
Other methods	1	0.6	2	1.2	0.000	0.992[NS]

S - Significant (p value <0.05) NS - Non Significant (p value >0.05)

Table 10 tabulates the views of male and female cricket players on preventability of injuries sustained during play. Majority of both the genders were of the view that their injuries could have been prevented, with 80.2% males and 74.1% females. Regarding the specific ways to prevent these injuries, both groups identified the importance of using appropriate protective equipment. However, a higher percentage of females (17.6%) believed this compared to males (11.6%). Another preventive measure was improving fitness levels, with 24.4% of males suggesting it compared to 17.6% of females, but this difference was not statistical significant (p = 0.125). A significant difference (p= 0.030) was found in the belief that enhancing cricket skills and techniques could prevent injuries, with 54.7% males and 42.9% females.

More than 3/4th of the injured players in both gender (80.2% male and 74.1% female) were agreeing that injured could have been prevented. Use of appropriate protective equipment and improving fitness level were equally agreed by both gender to avoid injuries whereas improving cricket skills/techniques was significantly more approved measure by male (54.7%) cricket players than females (42.9%).

3. DISCUSSION

This study on cricket-related injuries provides valuable insights into their prevalence, types, causes, and prevention. The findings are consistent with existing research, which highlights a high incidence of injuries in the sport, especially among younger players and those competing at competitive levels. Research indicates that acute injuries are predominant in cricket, often resulting from the dynamic and high-impact nature of the game. (Pardiwala et al., 2017)

Demographic characteristics show a clear trend of higher injury rates among younger players, particularly those under 19 years old. This observation is consistent with studies indicating that younger athletes are more susceptible to injuries due to their developing physical capabilities and less experience with injury prevention strategies (McLeod et al., 2020). Additionally, data on participation levels underscores that inter-school competitions yield higher injury rates, likely due to increased competitive pressure and potentially inadequate training or protective measures.

The analysis highlights that both male and female players report similar overall injury rates, with approximately 86% experiencing at least one injury. However, nuances in injury types reveal critical gender differences; males tend to sustain more strains and sprains, while females report a higher incidence of joint injuries. This finding is corroborated by studies suggesting that gender-specific factors influence injury patterns in cricket, necessitating tailored interventions for each group (Prakash et al., 2017).

The data suggests that cricket-related injuries affected regions equally among both male and female players, with a slightly higher proportion of females sustaining injuries to a single body region. Lower limb injuries were the most frequently reported, likely due to the high impact and stress on the legs from running, jumping, and sudden directional changes during play. Upper limb injuries were also prevalent, which could be attributed to the repetitive strain involved in batting, bowling, and fielding. The slightly higher percentage of head and neck injuries among females might suggest different playing techniques, less protective gear usage, or biomechanical differences in impact absorption.

The mechanisms of injury elucidate how specific activities contribute to injury risk. The prevalence of injuries resulting from being struck by a ball aligns with findings from other studies that identify impact injuries as a common occurrence in cricket (Prabhakar et al., 2016). Moreover, the emphasis on diving for catches as a frequent cause of injury highlights the need for improved training techniques to mitigate risks associated with such high-impact movements.

Preventive measures reveal a concerning trend: despite a majority of players believing their injuries could have been prevented through better use of protective equipment and skill enhancement, actual usage rates remain low. The significant difference in preventive equipment usage between genders—79.7% for males versus 68.2% for females—suggests a gap in awareness or access to such equipment among female players. This observation parallels research indicating barriers faced by female cricketers in accessing appropriate protective gear. (A. Stretch et al., 2007)

4. CONCLUSION

This study provides valuable insights into the complex nature of injuries among cricket players, highlighting the necessity for a comprehensive understanding of their prevalence, underlying causes, and prevention strategies. The findings indicate distinct patterns, such as a higher incidence of injuries among younger players and significant gender differences in both injury types and perceptions of preventability. Although overall injury rates are comparable between male and female players, the variations in injury types emphasize the need for targeted prevention strategies tailored to the specific vulnerabilities of each group. The observation of OSICS classification reveals that among all regions lower limb and upper limb injuries are the most frequent among cricket players, irrespective of gender. Furthermore, the study underscores the critical role of protective equipment and skill development in mitigating injury risks. Despite a widespread belief among players that injuries could have been prevented, the actual use of protective gear remains suboptimal, particularly among female players. This disparity highlights the need for increased awareness, improved accessibility to protective equipment, and specialized training programs to enhance player safety.

These findings contribute to the existing body of literature on cricket-related injuries and reinforce the importance of ongoing research and surveillance in this area. The implementation of evidence-based injury prevention strategies and the promotion of a safety-focused culture within the sport can significantly enhance player well-being and reduce injury risks. Future research should further explore these dynamics to develop targeted interventions that improve injury prevention efforts at all levels of competitive play.

CONFLICT OF INTERESTS

None.

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