

**PREVALENCE OF CRICKET RELATED MUSCULOSKELETAL PAIN AND INJURIES
AMONGST WICKETKEEPERS**

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Article Received on 10/11/2020

Article Revised on 30/11/2020

Article Accepted on 20/12/2020

ABSTRACT

Wicketkeeping is a physically demanding job. They are prone to various injuries due to either diving or due constantly being in a crouched position causing overuse injuries. These injuries can either be overuse injuries or acute injuries. Aim of this study was to find the prevalence of common musculoskeletal injuries amongst wicketkeepers. Forms were given to 27 elite wicketkeepers to find the injuries which were common. This study found out that Back injury(40%) recorded the highest as due to sustained crouching position. Second highest recorded were lower limb injuries(33%) and upper limb injuries third highest(27%). This study will not only help physiotherapist to plan a proper rehab protocol to avoid injuries but also players to understand what injuries they are prone to.

KEYWORDS: Wicketkeeper, Acute Injuries, Overuse injuries, Back Injury, Crouching position.**INTRODUCTION****Background**

Cricket is largely considered a non contact, low intensity sport while few consider it as a vigorous sport.^[1] Cricket is a very dynamic sport that involves many abstract skills and movements and to enhance these skills cricketers keep themselves fit and strong. Cricket comprises of three specialties Batsmen/Batswomen, Bowlers and Wicketkeepers.^[2] Cricket is the most popular game in the Indian subcontinent that is India Pakistan Afghanistan Sri Lanka Bangladesh. Cricket in India grew in popularity when India won the 1983 world cup in England,^[3] Indian Cricket Team currently stands 3rd in Test Team Rankings, 2nd in ODI Team Rankings and 3rd in T20I Team Rankings. Indian Womens team currently stands 2nd in ODI Team Rankings and 4th in T20I Team Rankings.^[9,10,11,12,13]

Wicketkeeping is one of the most difficult speciality position in cricket and requires immense stamina and concentration. A wicketkeeper needs to maintain full concentration and receive every ball every time it is bowled and repeated crouching. Wicketkeeper is the only fielder allowed to wear gloves.^[1] Cricket started in 16th century but players documented as Wicketkeepers in early 1800's.^[4]

Types of injuries

Common general cricketing injuries are hamstring strains and side strains.^[5] In cricket bowlers are recorded as the highest to get injured followed by Wicketkeepers/fielders

and then Batsmen/Batswomen.^[6] Common wicketkeeping injuries maybe muscle strains, ligament sprains, fractures, overuse injuries and maybe due to sudden twisting diving etc and other common injuries in cricket are due to sudden rotation movements, sliding and diving and struck by a ball.^[3,2]

Task Analysis

Bowling has been found to be major cause of cricket injuries due to technique frequency and duration of bowling in matches.^[7] But wicketkeeper are overlooked of their injuries but constant crouching being in game and keeping full concentration on every ball wicketkeeper are prone to injury as well. A wicketkeeper is prone to sustain all the injuries described by other cricketers as a consequence of catching, throwing and diving. However in addition to these injuries he is exposed to chronic muscle strains of back and lower limb in crouching positions and diving for the ball. They are prone to repetitive injuries too as they repetitively go into crouching positions and sustain that position for long durations.^[4]

Need of the study

Wicketkeepers are the players which keep the whole team on toes and have to be agile and concentrate on each and every ball without resting even for a second. They have to be athletic and require adequate practice, strength and musculoskeletal and cardiovascular endurance. The workload is immense and musculoskeletal injuries are bound to happen. As per

research wicketkeeper are 30% bound to land up with injuries hampering their training schedule, match selections and match performance. Hence, identifying these musculoskeletal problems and help them preventing in future.

Aim:- To find prevalence of musculoskeletal injuries in wicketkeepers.

Objectives

1) Finding common upper limb injuries, lower limb injuries and lower back injuries.

Methodology

Study Population:- Wicketkeepers

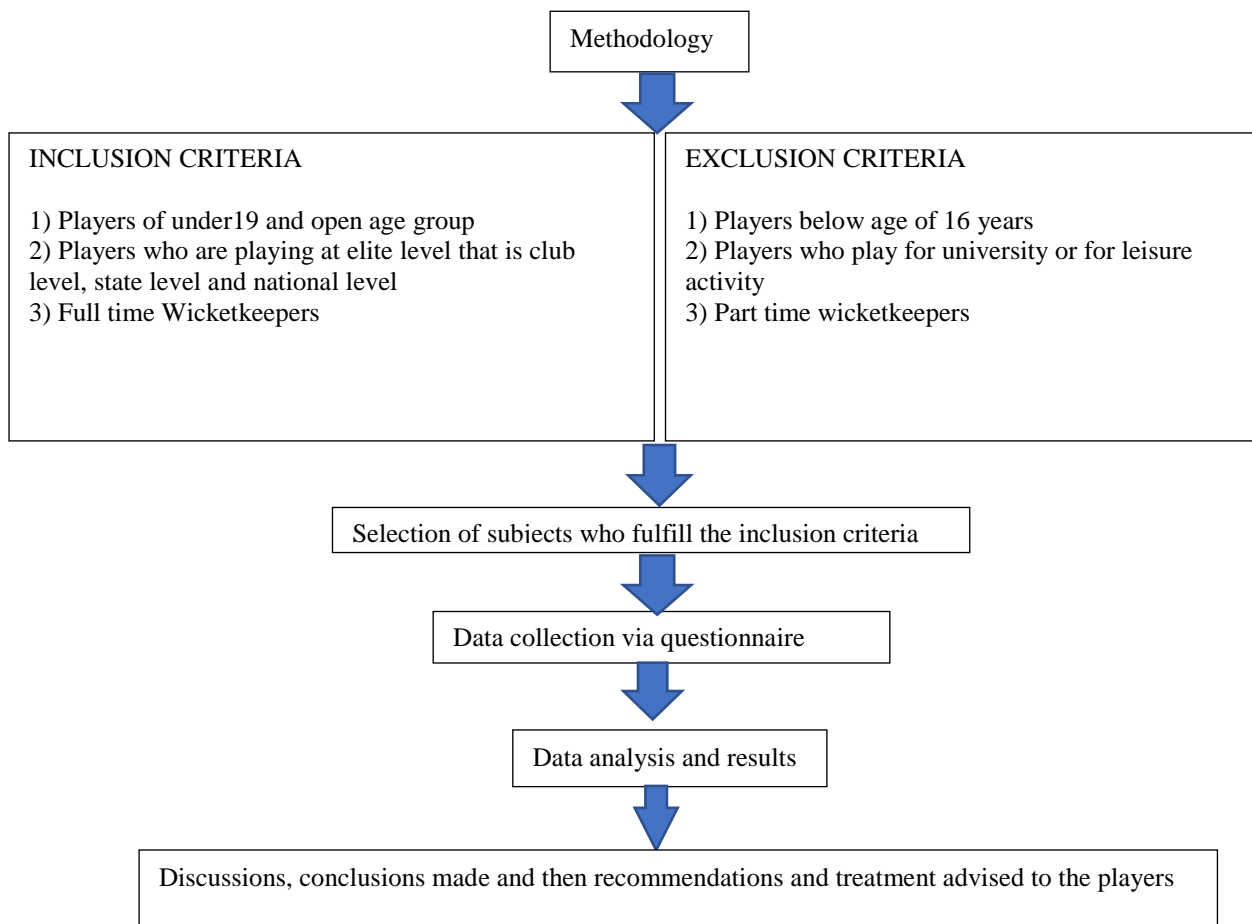
Sample size:- 25

Study design:- Cross-sectional

Materials required:- Google forms, Handout forms, self made questionnaire

Study setting:- Online forms to players

Method: Wicketkeepers are selected from elite clubs and questionnaire forms would be given to them to fill out. Subjects participating in this voluntarily and consent forms will be taken from them to include their details in this study. Players will be assured that their information would be kept anonymous. Players would fill the form after researcher explains the form and data collected would be used to derive results and conclusions.



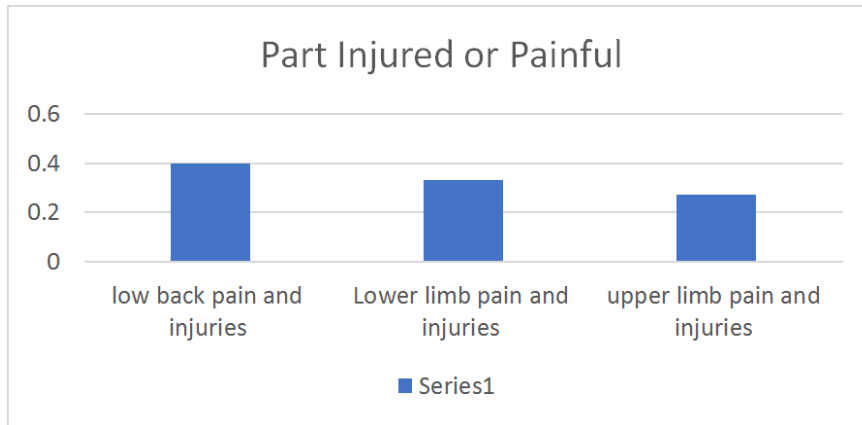
RESULTS

Graph 1:- Shows that 40% of wicketkeepers (14) have lower back injury, 33% have lower limb injuries (12) and 27% have upper limb injuries (10)

Graph 2:- Shows that 92% of wicketkeepers (24) have pain after playing for long durations and rest 8% have pain throughout the day (2)

Graph 3:- Shows that 82% of wicketkeepers practice warmups and cool downs before and after sessions and rest 18% don't practice it

27 Wicketkeepers who enrolled for this study filled the forms and were submitted. Out of that one wicketkeeper reported of being not injured so was excluded from the study as finding common injuries in Wicketkeepers was the aim. 24 wicketkeepers (92.3%) reported of pain after long durations of play and 2 Wicketkeepers (7.7%) complained of pain throughout the day having pain mostly from 2-8 months.



21 Wicketkeepers (81%) Wicketkeepers reported of undergoing off season training that include aerobic activities, anaerobic activities and technique work. 12 Wicketkeepers have reported of multiple pain and injuries. In 26 Wicketkeepers 36 injuries were recorded. Out of those 14 injuries were lower back pain or injuries which is 40%, 12 injuries were lower limb injuries that include hip, knee and ankle injuries which is 33% and 10 injuries were upper limb injuries that are shoulder, elbow, hand and finger injuries which comes upto 27%

16 Wicketkeepers injured their parts during a match or competition and 10 Wicketkeepers injured it during their practice session despite 81.5% practicing warm ups before their matches and practice sessions. All the reported injuries were treated conservatively either by rest, immobilisation analgesics and 13 Wicketkeepers (50%) went under extensive rehab sessions with physiotherapists. Only 15% of them reported of having difficulties with their daily activities due to pain.

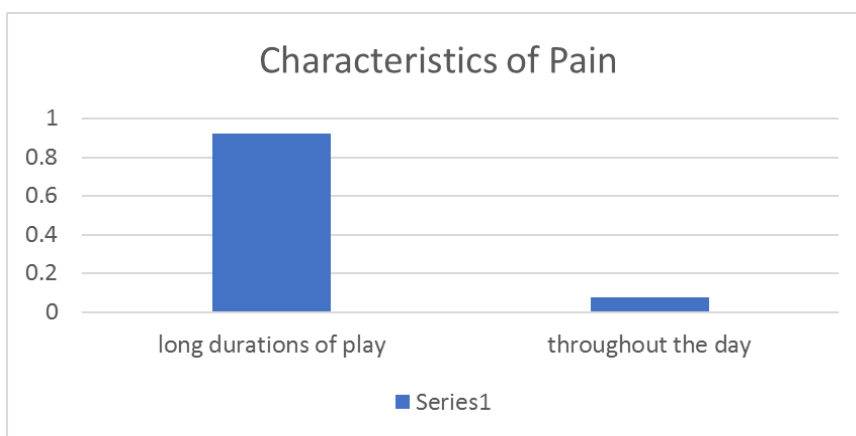
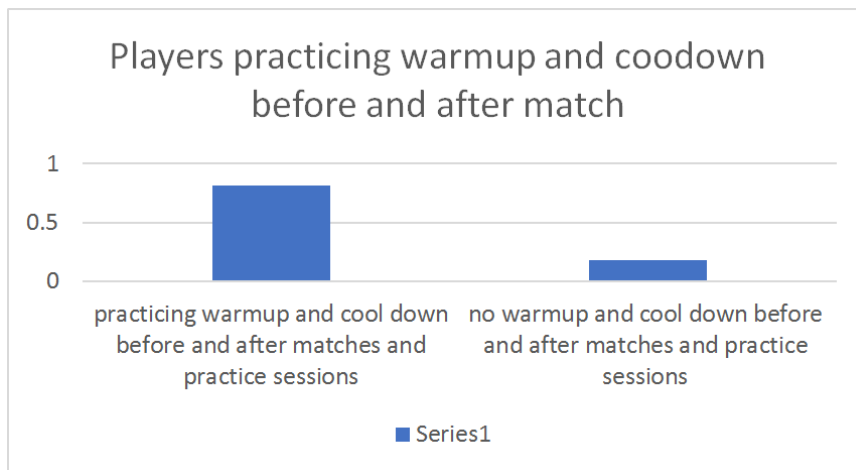


Table 1: Descriptive statistics Values represent mean (SD), unless indicated otherwise.

Description	Mean	Standard Deviation (SD)
Age(Years)	26.4 Years	8.70
Weight(kgs)	66.15 kgs	11.15
Height(cms)	161.15 cms	31.16

DISCUSSION

Lower back pain was the most prevalent pain and injury site counting to about 40%. This might be because of the sustained crouch position a wicketkeeper has to adapt and go into full squats for example in a one day match keeper has to squat 300 times counting the legal deliveries in a test match of 5 days in a single day 480 times minimum (considering minimum 80 overs are to be bowled in a single day). This could lead to an overuse injury over the time or injure due to muscle inability to cope with the stresses. Adding to the crouching position is that Wicketkeepers have to be alert every ball dive around to grab balls and take catches and all the activities are dynamic causing back muscles to be imposed with greater stress.

Lower limb injuries are recorded the second highest having 33% and they maybe due to squatting the whole day and causing hip knee and ankle muscles to overwork. Standing the whole day with no rest adds upto the stress and while diving the velocity required to throw the body around causes these muscles to injure. Hand and finger injuries are reported third highest with 27%. These are mainly due to repeatedly taking catches. Even if the Wicketkeepers wear gloves hands and fingers are prone to injuries due to the season ball being so hard and faulty techniques in catching the ball. The stresses on the hand and fingers are immense hence the incidence.

Limitations and future scope of study

Then main limitation of the study was that the population size was small and maybe a bigger population size would give us better insight into the study.

Lack of Women Wicketkeepers as the population of women participating in cricket are very less and more of them would help us in finding the incidences of injury in that population too.

Lack of researcher experience

Getting better knowledge about players history, exact structure injured, mechanism of injury and previous injuries to the same site or location of the current injury

CONCLUSION

Low back pain and injuries are recorded the highest, second highest are lower limb injuries and third highest are upper limb injuries.

Clinical Implications

Through this study it was found out that lower back injuries are the highest among wicketkeepers.

This study will help all the wicketkeepers, coaches and

physiotherapist to make sure they go through proper lower back training for wicketkeepers as it is most prone to get injured. It'll not only help to reduce injuries in the future but make sure that the players injured get a proper rehab done so that they recover in time and stay fit for the longest time. Basic treatment protocols would include proper stretching, strengthening and have sport specific fitness and drills.

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