

## Prevalence of musculoskeletal disorders among cricketers in Lahore, Pakistan

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**Objective:** To find the prevalence of musculoskeletal disorders among cricketers in Lahore.

**Methodology:** It was a cross-sectional study. Nordic musculoskeletal questionnaire was used and convenient sampling technique was used to collect data from 116 professional cricketers of different cricket academies. Data were analyzed with SPSS version 25.

**Results:** Out of 116 professional cricketers, there were 56.9% batsmen, 26.7% bowlers, 12.1% all-

rounder and 4.3% wicketkeepers. The mean age of respondents was 23.11. Most common region involve was lower back followed by shoulder region.

**Conclusion:** Musculoskeletal injuries were common among cricketers. Lower back was the most common injured area followed by shoulder and lower limb, mostly strains and sprains. (Rawal Med J 202;45:967-969).

**Keywords:** Musculoskeletal, tendon, ligaments.

### INTRODUCTION

In the recent decades Pakistan has become popular in professional cricket. This game is dynamic and includes logical learning, many conceptual abilities and developments which should be improved with the goal that participants continue to be fit.<sup>1</sup> In cricket, the risk of injuries is more during fast bowling, fielding and batting.<sup>2-4</sup> Cricket is played in more than sixty countries around the world.<sup>5,6</sup> Mental characteristics related with a fruitful cricket are mental durability, positive thinking, adapting to difficulty and certainty.<sup>7</sup> The mental characteristics can possibly profit different parts of life and lessen the effect of musculoskeletal issues following retirement from cricket.<sup>8</sup>

In cricket, there are three exclusive features including bating, bowling and fielding and injury associated by repeated nature and played for long period.<sup>9</sup> Musculoskeletal disorders can occur when fast rotation and when players crash when ball slides and jumps and struck from the bat and ball, and when ball handle leading to micro trauma and injury occur on body by large scale.<sup>10</sup> A solitary high power and effect occurrence results in a full scale injury.<sup>11</sup> Importantly, improper diet, gym work and mental health of players have much positive effects on muscle power, perseverance, adaptability, agility and wellness in the field.<sup>12</sup>

A study from Zimbabwe on 240 young people's secondary cricketers of school found that 81.25% experienced cricket-related musculoskeletal pain and damage in the past season.<sup>13</sup> The shoulder, lower back and knee were the three most anatomical destinations of musculoskeletal pain and wounds and batsmen (32%) and bowler (36%) had continued most a stunning level of wounds and contrasted with all-rounder's (22%) and wicket keepers (10%).<sup>13</sup> Mentors' molding preparing programs and early restoration from the physiotherapists were irreplaceable to consolidate the rate of injury in cricket of secondary school.<sup>13</sup> This study was performed on cricketers of Lahore to see the musculoskeletal disorders during batting, fielding and bowling.

### METHODOLOGY

It was a cross sectional study. Data were collected from 116 professional cricketers of different cricket academies using convenient sampling technique. Those who were only male professional cricket players having experience of at least one year and age between 15 to 30 years were included in the study, while those who had congenital abnormality, using steroids for performance enhancing drugs, with known hypertension and diabetes and any history of trauma or congenital abnormality were

excluded from the study.

The data were collected through Nordic Musculoskeletal Questionnaire which consists of two parts. First part was of demographic data and second part was of VAS and Nordic Musculoskeletal Questionnaire. VAS was used to measure the pain intensity.

**Statistical Analysis:** Data were analyzed with SPSS version 25. Appropriate statistical test was used after checking normality of data.

## RESULTS

Out of 116 participants, there were 56.9% batsmen while 26.7% bowlers, 12.1% as all-rounder and 4.3% playing as a wicket keeper (Table 1). The mean age was 23.1 and total playing experience of participants was 18.97% has 1-3 years while 52.59% has 4-6 years and 28.45% has 7-10 years of experience. All the participants who had musculoskeletal issue.

**Table 1. Types of games played.**

Playing as	Frequency	Percent
Batsmen	66	56.9
Bowler	31	26.7
All Rounder	14	12.1
Wicket Keeper	5	4.3
Total	116	100.0

**Table 2. Most painful region in players.**

Most Painful Region	Frequency	Percent
Neck	5	4.3
Upper Back	18	15.5
Upper Limb(shoulder, Elbow and Wrist)	31	26.7
Lower Back	41	35.3
Lower Limb(Hip, Knee and Ankle)	21	18.1
Total	116	100.0

On visual analog pain scale, their pain rating showed that 77.6% had moderate, 5.2% had mild and 17.2% had severe pain. Among them, the most painful region was lower back with 35.3% followed by upper limb in 26.7%, lower limb in 18.1%, upper back in 15.5% and neck is only 4.3%. Among

batsmen, the most discomfort was in lower back while among bowlers it was found in shoulder region. The bowlers were 26.7% and out of them 38% reported injuries in upper limb and other body regions.

## DISCUSSION

This study was performed on cricketers to see the musculoskeletal disorders during play. There was much chances of getting injured during game while batting fielding and bowling. Bowlers caused many injuries in their shoulders and hamstring muscle while in batting most of the batsmen complains of back pain and hamstring also. A study of Ratzon and Mizrahi among bowlers showed that sixty two percent bowlers complained about injuries among more than one region of body.<sup>14</sup> In another study, among cricket players showed that 39% overall prevalence of injuries among cricketers.<sup>15</sup>

Lower back, shoulders and ankles were the three most common areas of injuries.<sup>16</sup> Our results were similar as we found lower back was most commonly affected followed by shoulder region. There was much chances of getting injured during game while batting fielding and bowling. Bowlers faced many injuries in their shoulders and hamstring muscle while in batting most of the batsmen complains of back pain and hamstring also.

In the study by Kumar et al on prevalence of musculoskeletal injuries among cricket players showed that 39% overall prevalence of injuries among cricketers and lower back, shoulders and ankles were the three most common areas of injuries.<sup>16</sup> The results were also supporting the results of current study in which the lower back was most commonly affected followed by shoulder region.

## CONCLUSION

Musculoskeletal injuries were much common among cricketers. Lower back was the most common injured area among cricketers followed by shoulder and lower limb. Based on type of injury, it was also concluded that strain and sprain were the most common type of injuries among cricket players.

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**Conflict of Interest:** None declared  
 Rec. Date: Dec 24, 2019 Revision Rec. Date: Jul 22, 2020 Accept Date: Oct 3, 2020

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