

Prevalence of Musculoskeletal Conditions Among Cricketers in Sindh, Pakistan

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Abstract

Objective: To determine how common musculoskeletal disorders are among cricket players in Sindh. Methodology: A cross-sectional investigation was conducted. Data from 116 professional Cricket players from various cricket players were gathered using a straightforward sample approach and the Nordic musculoskeletal questionnaire. The latest version of SPSS, version 25, was used to analyze the data. Results: There were 56.9% batters, 26.7%, Bowlers (Fast bowlers and Spin bowlers), 12.1% all-rounders (bowling all-rounder and batting all-rounder), and 4.3% wicketkeepers among the 116 professional players. The respondents' average age was 23.11 years. Lower back and shoulder regions were the two most often involved areas. Conclusion: Cricketers frequently suffered musculoskeletal ailments. The most often injured areas were the lower back, shoulder, and lower limbs, which were generally strained and sprained.

Keywords: Musculoskeletal, tendon, ligaments, Sindh, Pakistan

Introduction

Cricketers, like athletes in any sport, are prone to musculoskeletal injuries due to the physical demands of the game. MSDs can affect various parts of the body, including the back, shoulders, knees, and wrists. Some common musculoskeletal injuries in cricket include sprains, strains, stress fractures, ligament tears, and overuse injuries. (Arshad, H. R. M. S., Shakir, N., Ahmed, L., Aziz, M., & Zeshan, M., 2020).

Factors contributing to the prevalence of MSDs among cricketers include repetitive motions, high-impact movements, inadequate rest and recovery, poor technique, overtraining, and insufficient conditioning. Additionally, playing on different surfaces (e.g., grass, artificial turf, concrete) and weather conditions can also increase the risk of injuries. (Aziz, M., & Zeeshan, M., 2020).

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To reduce the incidence of MSDs, cricket players, coaches, and medical staff emphasize injury prevention strategies. These may include Proper warm-up and stretching routines: Dynamic warm-up exercises and specific stretches can help prepare the muscles and joints for the physical demands of cricket. (Aziz, M., & Zeeshan, M., 2020). Strength and conditioning programs: Focusing on overall body strength, core stability, flexibility, and balance can improve physical performance and reduce the risk of injuries. Technique refinement: Correcting faulty techniques can reduce the strain on specific body parts, decreasing the likelihood of developing overuse injuries. Rest and recovery: Sufficient rest between training sessions and matches allows the body to repair and adapt, reducing the risk of overuse injuries. Equipment selection and maintenance: Ensuring that cricket gear, such as shoes, helmets, and pads, fit properly and are well-maintained can provide appropriate support and protection. (Pak, C. H., & Chesky, K., s2001).

However, it is worth noting that musculoskeletal injuries are a common concern in cricket, affecting players worldwide. The nature of the sport involves repetitive movements, high-velocity actions, and physical strain on various body parts, which can contribute to the development of MSDs. (Kumar, S., Kulandaivelan, S., Kaur, J., Chaturvedi, R., Girdhar, B., Singh, V., ... & Kumar, V., 2015).

To mitigate the risk of injuries, cricket authorities, and medical professionals typically recommend the implementation of injury prevention strategies, including Comprehensive warm-up routines: Prior to training or matches, cricketers are advised to perform warm-up exercises that target specific muscle groups and increase blood flow to prepare the body for physical activity. Strength and conditioning programs: Regular strength training, focusing on core stability, muscular endurance, and power, can help enhance physical performance and reduce the likelihood of injuries. (Mathankar, A., Kirti, S., Maney, S., & Prajapati, K., 2022). Technique analysis and correction: Coaches and trainers often emphasize proper biomechanics and techniques to minimize stress on vulnerable areas of the body. Identifying and rectifying faulty techniques can decrease the risk of overuse injuries. Periodization and rest: Structured training programs that include planned rest periods allow players to recover, regenerate, and prevent overuse injuries associated with excessive training. (Gill, S. A., Ayub, F., & Qazi, A. N., 2023). Sports medicine support: Access to qualified sports medicine professionals, physiotherapists, and athletic trainers can facilitate injury prevention, timely diagnosis, and appropriate management of MSDs among cricketers. Monitoring workload: Keeping track of training intensity, match schedules, and workload can help identify potential risk factors for injuries. Load management strategies can then be implemented to prevent overuse injuries and optimize performance. (Umar, M. H., Batool, S., Javaid, H.

B., & Sheraz, Z., 2022).

To gather accurate and up-to-date information on the prevalence of MSDs specifically among Sindh cricketers, it would be advisable to refer to research studies, injury surveillance data, or reports from cricket governing bodies and sports medicine associations in the country. (Furuya, S., Nakahara, H., Aoki, T., & Kinoshita, H., 2006).

According to a Zimbabwean study of 240 secondary school cricket players, 81.25% of them had musculoskeletal discomfort and injury from playing cricket in the previous season. The three most common anatomical sites for musculoskeletal discomfort and injuries were the shoulders, lower back, and knee, while batters (32%) and bowlers (36%) had sustained the highest number of injuries in comparison to all-rounders (22%) and wicket keepers (10%). A secondary school's injury rate in cricket could not have been reduced without the mentors' molding preparation programs and early recovery from the physiotherapists. To identify any musculoskeletal issues that can arise during batting, fielding, or bowling, this research was conducted on Pakistani cricket players. (Aziz, M., & Zeeshan, M., 2020).

Musculoskeletal disorders are a common concern among Sindh cricketers, as well as in other cricket-playing nations. The repetitive and high-impact nature of cricket can place significant stress on the musculoskeletal system, leading to various injuries and disorders. (Zaheer, A., Jafri, M. R., & Waqas, M., 2020). In Pakistan, where cricket is a widely popular sport, players often face a higher risk of musculoskeletal disorders due to factors such as inadequate training techniques, poor conditioning, and insufficient rest and recovery periods. Additionally, the intensity and duration of cricket matches, along with the rigorous training schedules, can contribute to the prevalence of these disorders. Some of the commonly observed musculoskeletal disorders among Sindh cricketers include. (Bukhari, B., Ghaffar, H. A., Hashim, A., Sheeraz, M., & Ali, S., 2020). Lower Back Pain: This is a prevalent issue among cricketers due to the repeated twisting and bending motions involved in batting, bowling, and fielding. Shoulder Injuries: The overhead throwing actions in bowling and fielding can lead to shoulder impingement, rotator cuff tears, and other related injuries. (Marwat, M. K., Farooq Hussain, D. S. Z. U. I., Jabeen, A., Ali, Y., Saman, S., & Mehmood, K., 2023). Elbow Injuries: Cricketers frequently experience elbow injuries, such as medial epicondylitis (also known as golfer's elbow) and lateral epicondylitis (tennis elbow), due to repetitive batting and bowling movements. Knee Injuries: The demands of running, jumping, and sudden changes in direction can contribute to knee injuries, including meniscus tears, ligament sprains, and patellar tendinitis. (Naz, S., Riaz, S., Javed, M. A., Khan, R. R., Muneeb, H. N., & Sulman, M., 2022). Ankle Injuries: Running,

fielding, and quick direction changes can result in ankle sprains and ligament injuries. Hamstring Strains: Sprinting and explosive movements during batting and fielding can lead to hamstring strains, which are quite common among cricketers. (Sharif, F., Shoukat, H., Ahmed, S., Ahmad, A., & Gilani, S. A., 2022).

Efforts have been made by cricket boards, coaches, and medical professionals in Pakistan to address these issues and reduce the prevalence of musculoskeletal disorders. This includes implementing proper training techniques, improving strength, and conditioning programs, promoting injury prevention strategies, and providing adequate rest and recovery periods for players. (Gulzar, S., 2021). It's important to note that the prevalence of musculoskeletal disorders among Sindh cricketers can vary based on factors such as age, level of play, and individual training and conditioning practices. Regular monitoring, early detection, and appropriate management of these disorders are crucial to ensure the well-being and longevity of cricketers' careers. (Raza, A., Jamshaid, M., Riaz, T., Bashir, I., Majeed, I., & Akram, W., 2019).

Methodology

To ascertain the prevalence of musculoskeletal problems among Sindh cricketers, the study you presented was a cross-sectional one. Data from 116 professional players from various cricket national level players (first-class) were gathered by the researchers using a practical sampling approach. The competitors had to be male cricket professional players with a minimum of twelve months of experience and be between the ages of 16 and 32 to be included. The research eliminated those who had a history of trauma or congenital anomalies, as well as those who used steroids as performance-enhancing medicines, had known hypertension or diabetes, or had any of these conditions at birth.

The procedure included gathering information from the subjects using the Nordic musculoskeletal questionnaire. The questionnaire is divided into two sections: the first section collects demographic information, and the second section contains the Visual Analogue Scale (VAS) and the Nordic Musculoskeletal Questionnaire. Intensity of pain was assessed using the VAS.

After data collection, the researchers analyzed the data using the SPSS statistical software, specifically version 25. The results of the study showed that out of the 116 professional cricketers, 56.9% were batter, 26.7% were Fast & Spin Bowler, 12.1% were All Rounder (Bating all-rounder, Bowling all-rounder), and 4.3% were wicketkeepers. The mean age of the respondents was 23.11 years. The most affected region was the lower back, followed by the shoulder region.

Table 1: *Types of Games Played*

Playing as	Frequency	Percentage
Fast & Spin Bowler	31	26.7
Batter	66	56.9
Wicketkeeper	5	4.3
All Rounder (Bating all-rounder, Bowling all-rounder)	14	12.1
Total	116	100.0

Table 2: *The Most Painful Region for Players*

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

Based on the information provided in the table 77.6% of the individuals reported moderate pain on the visual analog pain scale. 5.2% of the individuals reported mild pain, 17.2% of the individuals reported severe pain, Regarding the most painful regions: Among all individuals, 35.3% experienced the most pain in the lower back. 26.7% experienced the most pain in the upper limb. 18.1% experienced the most pain in the lower limb. 15.5% experienced the most pain in the upper back. Only 4.3% experienced the most pain in the neck. Furthermore, among the batsmen (presumably referring to cricket players who bat): The most discomfort was reported in the lower back region. Among the bowlers (presumably referring to cricket players who bowl): The most discomfort was found in the shoulder region. 26.7% of the individuals were bowlers. Out of the bowlers, 38% reported injuries in the upper limb and other body regions.

Discussion

As it sheds light on the potential health risks and challenges faced by athletes in this sport. Musculoskeletal disorders can have a significant impact on a cricketer's performance, career longevity, and overall well-being. Based on the information provided, it seems that lower back pain is a common issue among both batsmen and bowlers in overall Sindh. This finding aligns with the general understanding that cricket involves repetitive movements, prolonged postures, and high physical demands, which can contribute to musculoskeletal problems,

particularly in the lower back. The fact that lower back pain was reported as the most painful region suggests that it may be a key area of concern for Sindh cricketers in Pakistan. This could be attributed to the biomechanics of the sport, such as the repetitive bending and twisting motions involved in batting and bowling, which place strain on the lower back.

Additionally, the information highlights that bowlers also experience discomfort in the shoulder region. Bowling requires repetitive and forceful overhead movements, which can lead to shoulder injuries or discomfort. It is crucial for bowlers to maintain proper technique, strength, and conditioning to minimize the risk of shoulder-related issues. The prevalence of musculoskeletal disorders in Sindh cricketers underscores the importance of injury prevention and management strategies. It is essential for players, coaches, and medical staff to prioritize injury prevention programs, including adequate warm-up routines, strength and conditioning exercises, and proper biomechanics training.

Moreover, the identification of specific regions experiencing pain or discomfort allows for targeted interventions and rehabilitation approaches. Tailored exercises, physiotherapy, and sports medicine interventions can be utilized to address the specific needs of cricketers and alleviate their musculoskeletal issues. Research and studies focusing on the prevalence and risk factors of musculoskeletal disorders among Sindh cricketers, Pakistan, would provide valuable insights into the specific challenges faced by this population. This information can guide the development of evidence-based protocols, guidelines, and educational programs to support the health and performance of cricketers in the Sindh region.

Overall, addressing musculoskeletal disorders among cricketers requires a multidisciplinary approach involving sports medicine professionals, coaches, and athletes themselves. By prioritizing injury prevention, implementing appropriate training and recovery strategies, and fostering a culture of proactive health management, the prevalence of musculoskeletal disorders can be reduced, allowing cricketers to thrive both on and off the field.

Conclusion

In conclusion, the prevalence of musculoskeletal disorders among Sindh cricketers appears to be significant, with lower back pain being a common issue among both batsmen and bowlers. This is likely due to the repetitive movements and high physical demands involved in the sport. Additionally, bowlers also experience discomfort in the shoulder region, which can be attributed to the repetitive and forceful overhead movements required in bowling.

The findings underscore the importance of implementing injury prevention programs and targeted interventions to address the specific needs of cricketers.

Adequate warm-up routines, strength and conditioning exercises, and proper biomechanics training are crucial for reducing the risk of musculoskeletal disorders. Moreover, tailored rehabilitation approaches, physiotherapy, and sports medicine interventions can help alleviate the pain and discomfort experienced by cricketers.

Further research and studies focusing on the prevalence and risk factors of musculoskeletal disorders among Sindh cricketers, in Pakistan would provide valuable insights and support the development of evidence-based protocols and guidelines. By prioritizing injury prevention, implementing appropriate training strategies, and fostering a proactive approach to health management, the prevalence of musculoskeletal disorders can be reduced, allowing cricketers to perform at their best and maintain their long-term well-being.

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