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Original Article



Prevalence of Sport Injuries among Football Players

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ABSTRACT

Football is a physically demanding sport that exposes players to a high risk of various injuries due to frequent physical contact, intense physical exertion, and high-speed movements. **Objective:** To find out the prevalence of sports injuries among football players. **Methods:** The study was cross-sectional, and participants were selected by a convenience non-probability sampling technique. To determine the prevalence of sports injuries, a self-adopted and validated questionnaire was used. 100 footballers were selected. Before data collection, informed consent was obtained before distributing the questionnaire. After filling out the questionnaire, the data were collected on the same day. SPSS version 22. was used for data analysis. **Results:** 100 participants were included in this study; the mean age ranged from 21 to 25 years old. The findings of the study showed that 40% participants had sprains, while 36% participants had muscle pain, 8% participants had fractures, 7% participants had wounds, 5% participants had tendon injury, 2% participants had bruises, and 2% participants had no injury. **Conclusions:** It was concluded that sports injuries are more prevalent among footballers. In this study, sprains and muscle pain were found to be more prevalent among footballers.

INTRODUCTION

Sport is a human activity involving physical exertion and skill, characterized by elements of competition and governed by a set of rules or patterns of behavior within an organizational structure [1]. Participation in sports, while beneficial for health, inherently carries a risk of injury. Sports injuries are typically defined as those occurring during exercise or athletic activities, affecting both competitive athletes and recreational participants. These injuries are broadly classified as either acute (resulting from a sudden traumatic event) or chronic (developing from prolonged overuse) [2]. Football, as a high-intensity sport demanding running, sprinting, jumping, and kicking, places significant stress on the neuromuscular system, leading to a high risk of injury [3]. The physical demands of

the game often result in post-match fatigue due to factors such as dehydration, glycogen depletion, and muscle damage. Recovery from this fatigue and the associated injury risk is influenced by a complex interaction of intrinsic factors (e.g., training status, age, muscle strength) and extrinsic factors (e.g., match conditions, playing surface, fixture density) [3, 4]. Common football-related injuries include sprains, strains, fractures, and contusions, with the lower extremities, particularly the ankle and knee, being most vulnerable [5]. The impact of sports injuries extends beyond physical impairment, affecting an athlete's psychological well-being, confidence, and athletic identity [6]. Therefore, understanding injury prevalence, the proportion of athletes injured at a specific point in time, is

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crucial for developing effective prevention strategies [7]. Key risk factors identified in the literature include inadequate warm-up, fatigue, improper conditioning, and poor playing surfaces [8, 9]. Consequently, injury prevention, encompassing strength training, load monitoring, and education, is recognized as a fundamental component of athletic training programs to safeguard athlete health and optimize performance [10, 11]. Despite global research on football injuries, there is a need for more localized epidemiological data to inform context-specific prevention protocols. The findings will contribute valuable insights to the existing body of knowledge and help inform targeted injury prevention strategies for athletes in this region. Limited data exist on football-related injuries in Pakistan, creating a knowledge gap in understanding local injury patterns. This study provides region-specific insights, which can help coaches and sports physicians implement targeted prevention strategies to enhance player safety and performance.

This study aims to determine the prevalence and patterns of sports injuries among football players in Karachi, Pakistan.

METHODS

This study employed a cross-sectional design to determine the prevalence of sports injuries among football players in Karachi. The study duration was from October to December 2024. A sample of 100 male professional footballers aged 20 to 40 years was recruited from three different academies using a convenience non-probability sampling technique. Male football players aged 20-40 years, actively participating in training or competitions, and medically fit were included. Players with chronic illnesses, recent major injuries or surgery, irregular participation, or who did not consent were excluded. Data were collected using an adopted and validated questionnaire, after obtaining informed consent from the participants. The self-adopted questionnaire was validated through expert review for content relevance and clarity, and pilot-tested on a small group of football players to ensure comprehension and accuracy. The collected data were coded to compute descriptive statistics. Ethical approval for the study was granted by Isra University, Karachi Campus.

RESULTS

Findings show the age of participants. Results show that 1% participants are in the 16-20 years old, 79% of participants are in the 21-25 years of age, 19% of participants are in the 26-30 years of age, and 1% participants are in the 31-35 years of age (Table 1).

Table 1: Age of the Participant

Variables	Frequency (%)
16-20	1(1.0%)
21-25	79 (79.0%)
26-30	19 (19.0%)
31-35	1(1.0%)
Total	100 (100.0%)

Results show that you have not sustained any injury due to football since playing. The result shows that 98% of participants sustained injury, while 2% of participants didn't sustain any injury (Table 2).

Table 2: Have You Sustained Any Injury Due to Football Since Playing

Have Sustained Any Injury	Frequency (%)
Yes	98 (98.0%)
No	2(2.0%)
Total	100 (100.0%)

The findings show location of injury, result shows that 42% of participants sustained lower leg injuries while 38% of participants sustained ankle injuries, 12% of participants sustained knee injuries while 3% of participants sustained hand injuries while 2% of participants were not sustained with injuries while back, hand and elbow injuries are sustained 1% each (Table 3).

Table 3: Location of Injury

Variables	Frequency (%)
Ankle	38 (38.0%)
Not Applicable	2(2.0%)
Back	1(1.0%)
Elbow	1(1.0%)
Head	1(1.0%)
Knee	12 (12.0%)
Hand	3(3.0%)
Lower Leg	42 (42.0%)
Total	100 (100.0%)

This study shows the type of injury. 40% of injuries were sprains, 36% of injuries were muscle pain, 8% of injuries were fractures, 7% of injuries were wounds, 5% of injuries was tendon injuries while 2% of injuries were bruises while 2% of participants did not report any injury (Table 4).

Table 4: Type of Injury

Variables	Frequency (%)
Bruise	2(2.0%)
Fracture	8 (8.0%)
Muscle Pain	36 (36.0%)
Sprain	40 (40.0%)
Tendon Injury	5 (5.0%)
Wound	7(7.0%)

Not Applicable	2(2.0%)
Total	100 (100.0%)

40% of injuries were due to kicking. The ball, while 22% of injuries were due to foul play, 20% of injuries were due to running, 14% of injuries were due to tackling, 3% of injuries were due to a fall, and 1% of injuries were not applicable (Table 5).

Table 5: Cause of Injury

Variables	Frequency (%)
Fall	3(3.0%)
Foul Play	22 (22.0%)
Kicking the Ball	40 (40.0%)
Running	20(20.0%)
Tackle	14 (14.0%)
Not Applicable	1(1.0%)
Total	100 (100.0%)

DISCUSSION

The primary objective of this study was to determine the prevalence and patterns of sports injuries among footballers in Karachi. The findings revealed a high prevalence of injuries, with 98% of participants reporting at least one injury, underscoring the significant risk associated with football participation. This aligns with the established understanding that football is a high-risk sport for musculoskeletal injuries [11]. Consistent with the global literature, the results confirm that the lower extremities are the most vulnerable region for football-related injuries [12, 13]. In the present study, lower leg (42%) and ankle (38%) injuries were the most prevalent, followed by knee injuries (12%). This distribution is supported by a large body of evidence. For instance, a study on amateur football players in Kano City, Nigeria, also reported that the majority of injuries (78.3%) occurred in the lower extremities [14]. Similarly, research conducted at Islamia University Peshawar found a high proportion of ankle and muscle injuries [15]. The predominance of lower limb injuries can be attributed to the sport's biomechanical demands, which involve frequent cutting, jumping, and kicking motions that place substantial stress on the ankles, knees, and surrounding musculature [11, 16]. However, the primary causes of injury identified in this study present an interesting point of discussion. While previous research, such as the study in Kano City, identified rough tackles as the major cause (67.2%)[14], the current findings indicate that "kicking the ball" was the most frequently cited cause (40%), followed by foul play (22%) and running (20%). This discrepancy may be explained by contextual factors specific to the sampled academies in Karachi, such as training emphasis, technique, or pitch conditions. The high percentage attributed to kicking suggests potential issues with improper technique, muscle fatigue, or inadequate conditioning of the kinetic chain during this fundamental activity [17]. Furthermore, the significant proportion of injuries linked to running highlights the role of overuse and fatigue, which are well-documented risk factors in football [18]. The study has several limitations that must be considered when interpreting the results. The crosssectional design and the use of a convenient sample from only three academies in Karachi limit the generalizability of the findings to a broader population of football players in Pakistan. A larger, multi-center study with a probabilistic sampling method would provide more robust epidemiological data. Additionally, the reliance on selfreported data via questionnaire may be subject to recall bias. Despite these limitations, the findings contribute valuable localized data to the field of sports medicine in Pakistan. The high prevalence of injuries, particularly those linked to fundamental skills like kicking, underscores the critical need for targeted injury prevention programs in local football academies. These programs should emphasize proper technique training, core and lower limb strengthening, and load management to mitigate overuse injuries [19, 20]. Future research should investigate the specific biomechanical and contextual factors behind the high rate of kicking-related injuries in this population to inform more effective preventive strategies.

CONCLUSIONS

The study revealed a high prevalence of sports injuries among football players, with ankle sprains and muscle pain being the most common. Injuries predominantly occurred during the second half of matches, with kicking the ball, foul play, and running identified as the primary causes. These findings highlight the need for targeted injury prevention strategies, proper training, and adherence to safety measures to reduce the risk of football-related injuries.

Authors Contribution

Conceptualization: UT Methodology: IS, SAHK Formal analysis: AW

Writing review and editing: MYM

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

All the authors declare no conflict of interest.

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