KNOWLEDGE AND ATTITUDE TOWARDS INJURY PREVENTION AMONG AMATEUR FOOTBALLERS IN BASIC MEDICAL SCIENCE

BY

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DEPARTMENT OF PHYSIOTHERAPY

SCHOOL OF BASIC MEDICAL SCIENCES

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A PROJECT SUBMITTED TO THE DEPARTMENT OF PHYSIOTHERAPY, SCHOOL OF BASIC MEDICAL SCIENCES, COLLEGE OF MEDICAL SCIENCES, UNIVERSITY OF BENIN

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CERTIFICATION

This dissertation by **Erhunmwunsee, Emmanuella Osayi** is accepted in its present form as satisfying the dissertation requirement of the degree of Bachelor of Physiotherapy of the School of Basic Medical Sciences, College of Medical Sciences of the University of Benin.

SUPERVISOR **SIGNATURE AND DATE**

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EXTERNAL EXAMINER

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DEDICATION

This dissertation is dedicated to God Almighty, my parents, Barr. and Mrs. Pippa, and to my dear friends and family who made this work a reality through their constant and unrelenting support.

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First and foremost, I give all glory, honour, and adoration to the Almighty God for His unfailing love, grace, and strength that sustained me throughout the course of this academic journey. Without His divine guidance, this work would not have been possible.

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ABSTRACT

Background: Sports injuries were a major concern among amateur footballers, often leading to reduced performance, loss of participation time, and long-term complications. Effective injury prevention depended largely on athletes' knowledge and attitudes toward preventive measures. However, limited research existed on these variables among amateur footballers in Nigerian universities, particularly within the University of Benin (UNIBEN).

Aim: This study aimed to determine the knowledge and attitudes towards injury prevention among amateur footballers in the Faculty of Basic Medical Science, University of Benin.

Methods: A cross-sectional descriptive design was employed involving 92 male and female amateur footballers aged 18 years and above from the Faculty of Basic Medical Science, UNIBEN. Participants were selected using a stratified random sampling technique. Data were collected using an adapted self-administered questionnaire assessing sociodemographic characteristics, knowledge, and attitudes towards injury prevention. Descriptive statistics summarized participants' characteristics, while Chi-square tests and independent t-tests determined associations between sociodemographic variables, knowledge, and attitude levels at a significance level of $p < 0.05$.

Results: Participants were predominantly male (63%) and aged 18–25 years (78.3%). The majority (58.7%) demonstrated fair knowledge of injury prevention, while 28.3% had good knowledge and 13.0% had poor knowledge. Most participants (71.7%) displayed positive attitudes towards injury prevention. There was no significant association between gender, department, or BMI and knowledge or attitude levels ($p > 0.05$), but years of experience showed a weak positive relationship with knowledge scores.

Conclusion: Amateur footballers in UNIBEN generally exhibited fair knowledge and positive attitudes towards injury prevention, although certain misconceptions persisted. Targeted educational interventions and physiotherapist-led prevention programs are recommended to enhance injury prevention awareness and promote safer sporting practices among university footballers.

Keywords: Amateur Footballers; Injury Prevention; Knowledge; Attitude; Physiotherapy; University of Benin.

TABLE OF CONTENT

LIST OF TABLES

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

About half of the amateur athletes in universities report at least one injury during their athletic career, with similar rates recorded in men and women. Injury rates are significantly higher during games/competitions than practice and at the beginning of the sports season (Asperti *et al.,* 2017; Jorge *et al.,* 2022). The majority of these sport injuries affect the lower limbs, particularly the ankle and knee. Ankle sprains are the most common, followed by anterior cruciate ligament (ACL) injuries and (Machado *et al.,* 2025). Sprains, strains, concussions and fractures are also frequently diagnosed in both contact and non-contact sports including football, basketball, handball, volleyball. However, the prevalence of concussions is highest in contact sports like football, ice hockey, and women's soccer. New concussions are more common than recurrent concussions and prevalence rates are higher during competitive games/tournament (Chandran *et al.,* 2022; Putukian *et al.,* 2019). Acute injuries have been found to be more common than overuse injuries except in female amateur athletes where overuse injuries are more frequently reported. (Nayar *et al.,* 2012).

Injury prevention is important for amateur athletes in universities because it reduces the frequency, severity, and long-term impact of sports injuries, helping athletes maintain participation, performance, and overall health. Strategies involving proper body posture and high-quality movement patterns are linked to fewer injuries among amateur athletes. (Kochan-Jacheć & Koźlenia, 2024). Other prevention programs, such as structured exercise routines, can significantly reduce injury-related costs even if the total number of

injuries does not change. This is achieved by preventing severe injuries that require expensive treatment and prolonged rehabilitation (Krist *et al.,* 2013). Athletes who train appropriately and develop strong physical qualities are less likely to be injured, allowing for more consistent participation and better performance over time (Gabbett, 2016; Dvořák *et al.,* 2019).

University amateur athletes generally recognize the importance of injury prevention and have positive attitudes toward it, but their actual knowledge and consistent use of evidence-based prevention strategies are often limited (Teahan *et al.,* 2023). Common obstacles to the adoption of these strategies include lack of detailed knowledge on how to implement prevention programs, limited resources, and insufficient support from coaches or clubs (Gabriel & White, 2024). Female athletes and minority groups may face additional barriers related to resources and self-efficacy (Martinez *et al.,* 2017).

1.2 Statement of the Problem

Sport participation prevalence in the University of Lagos was found to be 64.2% among undergraduate students, with a considerably high overall injury rate of 52.5 injuries per 100 students per year (Owoeye *et al.,* 2016). Football was identified as the most popular sport among undergraduate, with 53.2% of students participating, and also the sport responsible for the highest prevalence of injury, accounting for 73.8% of all reported cases. Consistent with global epidemiological trends, the lower extremities, specifically the leg and ankle, were found to be the most frequently injured body parts (Owoeye *et al.,* 2016). These findings are corroborated by other localized Nigerian studies. Among basketball players in Benin City, including amateurs, there is a high prevalence of orofacial injuries (62.8%), with common causes being contact with opponents' elbows, falls, and collisions (Azodo *et*

al., 2011). Another study involving Nigerian medical students participating in university games similarly found football to be the dominant sport and body contact to be the primary mechanism of injury (Mbada *et al.,* 2022). These studies confirm that sports participation in Nigerian universities carries a significant risk of injury.

While some studies have examined the prevalence of sport injuries among amateur athletes in universities in Nigeria, there is a paucity of research assessing the knowledge and attitudes of injury prevention among amateur athletes in the University of Benin (UNIBEN).

1.3 Research Questions

This study seeks to answer the following questions:

i. What is the knowledge of injury prevention among amateur footballers in UNIBEN
ii. What are the attitudes towards injury prevention among amateur footballers in UNIBEN
iii. What is the association between sociodemographic (age, gender, department, level, sport, years of experience and BMI) characteristics and knowledge of injury prevention among amateur footballers in UNIBEN
iv. What is the association between sociodemographic (age, gender, department, level, sport, years of experience and BMI) characteristics and attitudes towards injury prevention among amateur footballers in UNIBEN

1.4 Aim of the Study

This study aimed to determine the knowledge and attitudes towards injury prevention among amateur footballers in UNIBEN

1.4.1 Specific Objectives

i. To determine the knowledge of injury prevention among amateur footballers in UNIBEN

ii. To determine the attitudes towards injury prevention among amateur footballers in UNIBEN

iii. To determine the association between sociodemographic (age, gender, department, level, sport, years of experience and BMI) characteristics and knowledge of injury prevention among amateur footballers in UNIBEN

iv. To determine the association between sociodemographic (age, gender, department, level, sport, years of experience and BMI) characteristics and attitudes towards injury prevention among amateur footballers in UNIBEN

1.5 Hypothesis

1.5.1 Main Hypothesis

There was no significant association between sociodemographic characteristics and knowledge and attitudes towards injury prevention among amateur footballers in UNIBEN

1.5.2 Sub Hypotheses

1. There was no significant association between age and knowledge of injury prevention among amateur footballers in UNIBEN
2. There was no significant association between age and attitudes towards injury prevention among amateur footballers in UNIBEN
3. There was no significant association between gender and knowledge of injury prevention among amateur footballers in UNIBEN

4. There was no significant association between gender and attitudes towards injury prevention among amateur footballers in UNIBEN
5. There was no significant association between department and knowledge of injury prevention among amateur footballers in UNIBEN
6. There was no significant association between department and attitudes towards injury prevention among amateur footballers in UNIBEN
7. There was no significant association between level and knowledge of injury prevention among amateur footballers in UNIBEN
8. There was no significant association between level and attitudes towards injury prevention among amateur footballers in UNIBEN
9. There was no significant association between sport and knowledge of injury prevention among amateur footballers in UNIBEN
10. There was no significant association between sport and attitudes towards injury prevention among amateur footballers in UNIBEN
11. There was be no significant association between years of experience and knowledge of injury prevention among amateur footballers in UNIBEN
12. There was no significant association between years of experience and attitudes towards injury prevention among amateur footballers in UNIBEN
13. There was no significant association between BMI and knowledge of injury prevention among amateur footballers in UNIBEN
14. There was no significant association between BMI and attitudes towards injury prevention among amateur footballers in UNIBEN

1.6 Significance/Justification of the Study

For Physiotherapy Educators

The findings from this study could be used to design and update physiotherapy curricula to directly address the most common areas of misunderstanding among amateur footballers. Educators can create targeted modules on evidence-based injury prevention programs (IPPs). These findings would also empower educators to train the next generation of physiotherapists with the skills to deliver effective and relevant education to amateur footballers rather than generic advice.

For Physiotherapy Clinicians

By understanding the pre-existing beliefs and knowledge level of the amateur athletes they treat, physiotherapists will be able to tailor their educational approach more effectively. In this way, physiotherapists can anticipate and proactively address common misconceptions on injury prevention. Similarly, by understanding amateur athletes' attitudes and perceived barriers to injury prevention, clinicians can design rehabilitation and prevention programs that are more likely to be followed.

For Amateur Athletes in UNIBEN

The findings of this study will provide evidence for the university's sports department and physiotherapy services to develop targeted injury prevention programs (IPPs) that address the specific needs and knowledge gaps of amateur athletes in UNIBEN. By reducing injury rates through effective, evidence-based programs, this study will also help athletes perform

better, miss less time from both sports and academics, and foster a safer sporting environment on campus.

For the General Population

The findings of this study will inform amateur coaches, parents of young athletes, and recreational sports leagues about common misconceptions and the importance of evidence-based practices, potentially reducing injuries in amateur sports outside the university. By promoting effective injury prevention, this study will contribute to a healthier, more active population with fewer sports-related injuries. This, in turn, can help reduce the strain and associated costs of sport injuries on the public healthcare system.

1.7 Scope and Delimitation

This study was delimited to male and female amateur footballers aged 18 years and older in the faculty of Basic Medical Science (BMS), UNIBEN.

1.8 Definition of Terms

i. **Knowledge**: Knowledge refers to the information and understanding that athletes have about sports injuries, their causes, and effective methods for preventing them. This includes awareness of risk factors, injury mechanisms, and evidence-based prevention strategies. For example, knowledge can be measured by how well athletes understand the causes of injuries and the effectiveness of prevention techniques like warm-up exercises or taping (Chesno, 2021; Som *et al.,* 2022; Zhang *et al.,* 2023).

ii. **Attitudes**: Attitudes describe athletes' beliefs, feelings, and perceptions regarding injury prevention. This includes how important they believe injury prevention is, their willingness to adopt preventive measures, and their seriousness about reporting or managing injuries.

Positive attitudes are reflected when athletes agree that injury prevention is crucial and express a desire to learn more or participate in prevention programs (Farrington *et al.,* 2020; Som *et al.,* 2022; Boreham *et al.,* 2022; Zhang *et al.,* 2023).

iii. **Injury Prevention**: Injury prevention encompasses strategies, programs, and actions designed to reduce the risk, frequency, and severity of sports injuries. This can include primary prevention (preventing initial injuries), secondary prevention (preventing recurrences or worsening of injuries), and tertiary prevention (restoring function and preventing long-term consequences) (Som *et al.,* 2022; Holm-Jensen *et al.,* 2025). Common methods include warm-up routines, stretching, taping, and education on safe practices (Chesno, 2021; Som *et al.,* 2022).

iv. **Amateur Athletes**: Amateur athletes are individuals who participate in sports for recreation, health, or competition without receiving professional compensation. They may compete at various levels, such as university, community, or club sports, and often have less access to resources and formal training compared to professional athletes (Farrington *et al.,* 2020; Chesno, 2021; Som *et al.,* 2022; Boreham *et al.,* 2022; Zhang *et al.,* 2023).

1.9 List of Abbreviations

BMI – Body Mass Index

UNIBEN – University of Benin

BMS – Basic Medical Science

ACL – Anterior Cruciate Ligament

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview of Amateur Football

Football stands as the world's most dominant sport, with an estimated 500 million individuals participating globally (Fernandez-Rio *et al.,* 2020). Within this vast population, players are organized across a spectrum of engagement levels, from recreational play to elite professional careers. A significant, yet historically under-researched, segment of this population is the amateur footballer (Fernandez-Rio *et al.,* 2020). Amateur football occupies a distinct space, differentiated from both professional and purely recreational football. It is characterized by a high degree of organizational structure, mirroring that of the professional game, but is critically defined by the absence of financial remuneration for its players (Fernandez-Rio *et al.,* 2020). An academic definition describes amateur football as a type of football governed by professional organizations, structured into official divisions with long-lasting leagues and demanding training schedules, where the outcomes of matches are highly important, yet players do not receive a salary (Fernandez-Rio *et al.,* 2020). This structure distinguishes it from recreational football, where competitive stakes are lower and participation is more casual, and from professional football, which is a salaried occupation (Fernandez-Rio *et al.,* 2020).

Nigeria boasts the largest population of registered footballers in Africa, with over 6.5 million players participating across all categories of the sport (Bello *et al.,* 2020). The governance of this vast footballing ecosystem falls to the Nigeria Football Federation (NFF), which oversees a hierarchical league system (Adebisi & Alabi, 2021). This system

is structured as a pyramid, with the Nigeria Premier Football League (NPFL) at the apex, followed by the second-tier Nigeria National League (NNL). Beneath these professional tiers lies the heart of grassroots and amateur competition: the Nationwide League One (NLO) (Adebisi & Alabi, 2021).

The NLO, formerly known as the Nigerian Amateur League, is the third tier of the Nigerian football league system and is recognized as the country's largest grassroots league, featuring over 300 clubs (Adebisi & Alabi, 2021). It is further subdivided into three hierarchical divisions: NLO Division One, NLO Division Two, and NLO Division Three, with a system of promotion and relegation connecting them to the NNL above and to local state-level amateur leagues below (Adebisi & Alabi, 2021). Despite its structural importance, the NLO operates in a challenging environment. Funding is minimal, and the majority of teams are sponsored by private individuals or local government areas, making their existence precarious (Makinde *et al.,* 2018).

The amateur and semi-professional tiers in Nigeria are the primary arenas where young players enact their pursuit of a professional career, often with aspirations of moving to leagues in Europe or Asia (Ejekwumadu, 2024). This makes these levels a critical, yet highly risky, field for youth talent development (Ejekwumadu, 2024). The formal league structure overseen by the NFF suggests a degree of organized governance. However, the on-the-ground reality for players is often one of significant hardship and systemic failure. Research reveals a landscape rife with institutional deficiencies, including a lack of qualified coaches, poor-quality training facilities, and the frequent non-payment of salaries or allowances at the semi-professional level (Ejekwumadu, 2024). Furthermore, players are exposed to inadequate healthcare frameworks and widespread corrupt practices, such

as demands for bribes for contracts or trials (Ejekwumadu, 2024). These conditions combine to produce a state of profound precarity, where the dream of social mobility through football remains unrealized for the vast majority, and the pursuit itself exposes them to significant risks to their health and well-being (Ejekwumadu, 2024). This disconnect between the formal structure of the league system and the precarious reality of the players within it is a defining characteristic of amateur football in Nigeria.

2.1.1 Epidemiology Injuries in Amateur Football

Football is associated with one of the highest injury rates among all major sports, a risk that extends across all levels of participation from amateur to professional (Gurau *et al.*, 2023b). While the epidemiology of injuries in professional football is extensively documented, amateur football has remained a comparatively under-researched domain, a significant oversight given its vast global participation number (Gurau *et al.*, 2023a). Recent systematic reviews and meta-analyses have begun to address this gap, revealing a complex and often counterintuitive epidemiological profile for the amateur player. The overall injury incidence in amateur male footballers has been reported at approximately 7.98 injuries per 1000 hours of exposure, a rate that is negligibly higher than the 7.75 injuries per 1000 hours observed in their professional counterparts (Gurau *et al.*, 2023a). For both groups, the risk of injury is substantially elevated during matches compared to training. However, the magnitude of this difference varies, with match injury incidence being 7.71 times higher than training incidence for professionals, compared to 5.45 times higher for amateurs (Gurau *et al.*, 2023a).

A critical finding emerging from comparative epidemiological studies is that amateur footballers bear a disproportionately higher burden of severe injuries. A comprehensive 2023 systematic review concluded that the prevalence of severe injuries was 9.60% higher among amateur footballers than among professionals (Gurau *et al.,* 2023b). This is compounded by a higher frequency of traumatic injuries (76.88% in amateurs vs. 64.16% in professionals) and a higher rate of injury recurrence (16.66% vs. 15.25%) (Gurau *et al.,* 2023b). Conversely, professional players tend to experience a higher proportion of overuse injuries (27.62% vs. 21.13%), likely attributable to their greater overall training volume (Gurau *et al.,* 2023b). This phenomenon, where amateur players sustain more severe and traumatic injuries despite a lower overall intensity of play, can be described as the "amateur's paradox." The underlying factors contributing to this paradox are likely multifactorial, including reduced access to high-quality medical care, leading to delayed diagnosis and suboptimal rehabilitation; smaller squad sizes, which may increase individual match exposure; and a potential underreporting of minor injuries in amateur cohorts, which can mask the true injury burden until a more severe event occurs (Gurau *et al.,* 2023b).

Epidemiological research on football injuries across the African continent is notably sparse in comparison to the extensive body of literature from Europe (Nuhu & Kutz, 2017). The available data, however, consistently point towards a significantly higher injury burden among African players. Studies have documented injury incidence rates for adult players in Africa ranging from 13 to as high as 82 injuries per 1000 hours of exposure, a stark contrast to the 3.7 to 7.9 injuries per 1000 hours typically reported for European academy players (Kwakye *et al.,* 2024). This suggests that players in African settings face a

substantially elevated risk environment.

Specific studies from various regions of the continent corroborate this trend. Research on a South African university football team revealed an overall injury rate of 13.4 injuries per 1000 player-hours, with the match injury rate reaching a remarkable 88.9 per 1000 player-hours (Calligeris & Burgess, 2015). Similarly, a study conducted during a tournament involving national teams from the Council of East and Central Africa Football Association (CECAFA) recorded a match injury rate of 82.25 per 1000 hours (Nuhu & Kutz, 2017). These exceptionally high match injury rates may be influenced by the high intensity and congested schedules of tournament play, but they also reflect the minimal medical resources and economic challenges that can lead to longer recovery times and premature career terminations for players (Nuhu & Kutz, 2017). In a Ghanaian football academy, the overall injury incidence was found to be 4.5 per 1000 hours, which is more aligned with European academy levels but still lower than rates reported for adult African players (Kwakye *et al.,* 2024). Within this academy, younger players (U14 and U18) exhibited a higher injury incidence than senior players, and the match injury rate was 13 times that of training, highlighting the vulnerability of youth players in this context (Kwakye *et al.,* 2024). Furthermore, a retrospective study of trauma cases at a hospital in Cameroon found that football was responsible for two-thirds (66.7%) of all sports-related injuries, and a concerning 73.7% of these were classified as severe (Tankeng *et al.,* 2024). This finding suggests that in low- and middle-income countries (LMICs), the injuries that are formally treated in hospital settings are often of high severity, implying that a large number of minor-to-moderate injuries may go unreported and untreated within the community (Tankeng *et al.,* 2024).

The epidemiological data from Nigeria align with, and in some cases exceed, the broader African trend of high football injury rates. A prospective cohort study tracking semi-professional player during a Nigerian national tournament reported an overall injury incidence of 113.4 injuries per 1000 hours for male players and 65.9 per 1000 hours for female players (Owoeye *et al.,* 2017). This male incidence rate is among the highest ever documented in football epidemiology literature. The vast discrepancy between this figure and the global average of approximately 8 injuries per 1000 hours highlights the potential for significant methodological differences and reporting biases between studies. The Nigerian tournament study likely employed a "medical attention" definition of injury, capturing every minor knock that required assessment, whereas many international studies use a more stringent "time-loss" definition. This suggests that while many incidents may be minor, the sheer volume of events requiring medical attention points to an extremely high-risk playing environment.

Indeed, the same study provided data on time-loss injuries, which offers a more comparable metric. The time-loss incidence was 15.6 per 1000 hours for males and 7.9 per 1000 hours for females (Owoeye *et al.,* 2017). While much lower than the overall incidence, the male time-loss rate is still double the global average for amateurs, reinforcing the high-risk nature of the Nigerian amateur football setting. Other local studies provide further context. A cross-sectional survey of amateur players in Benin City, Nigeria, found a very high injury prevalence of 81.6%, with nearly half of all injuries (46.1%) occurring during matches (Azubuike & Okojie, 2008). A similar study conducted in Kano, North West Nigeria, found that the lower extremity was the site of 78.3% of all injuries sustained by amateur players (Bello *et al.,* 2020). The consistency of these findings across different

regions of Nigeria paints a clear picture of a high-burden, high-risk environment for amateur footballers, justifying an urgent focus on injury prevention research and interventions. The high reported incidence in tournament settings, where medical staff are present, may suggest that the true underlying injury rate in day-to-day amateur football in Nigeria, where medical access is scarce, is chronically and significantly underestimated.

2.2 Types and Risk Factors of Injuries in Amateur Football

The overwhelming majority of football-related injuries, irrespective of playing level, affect the lower extremities. Global data indicate that injuries to the lower limbs constitute over 80% of all reported cases (Gurau *et al.,* 2023a). The anatomical locations most susceptible are the thigh, ankle, and knee, which are subjected to the high-impact, dynamic movements inherent to the sport (Gurau *et al.,* 2023a). This global trend is consistently corroborated by injury surveillance in African football. Studies have identified the thigh and ankle in South Africa (21% each) (Calligeris & Burgess, 2015), the knee in Ghana (23.8%) (Kwakye *et al.*, 2024), and the ankle in a CECAFA tournament (23%) as the most common injury sites (Nuhu & Kutz, 2017). Similarly, research within Nigeria confirms this pattern, with studies highlighting the knee (28.3%) and ankle (21.7%) in one region (Bello *et al.,* 2020) and the ankle (25%) and knee (20.1%) in another as the most frequently injured areas (Azubuike & Okojie, 2008).

2.2.1 Types of Injuries among Amateur Footballers

The most common types of injuries sustained by amateur footballers include:

i. Muscle and Tendon Injuries

When categorized by tissue type, injuries like strains, tears, and ruptures to muscles and tendons are the most frequent diagnosis, accounting for approximately 44-57% of all injuries in amateurs. Thigh strains, particularly affecting the posterior and inner thigh, are especially common (Onu *et al.*, 2023; Sonesson *et al.*, 2023; Kasiotis *et al.*, 2024). These injuries are also significantly more common among amateur players (44.56%) compared to their professional counterparts (39.78%) (Gurau *et al.*, 2023b).

ii. Joint and Ligament Injuries

Making up 22-32% of all injuries, this category is the second most common. The knee and ankle are the most affected joints, with knee ligament sprains and ruptures being particularly prevalent (Onu *et al.*, 2023; Sa'ad *et al.*, 2020; Sonesson *et al.*, 2023; Herrero *et al.*, 2014). A study in Benin City, Nigeria, found that sprains were the single most frequent specific diagnosis, making up one-third of all injuries (33.3%) (Azubuike & Okojie, 2008).

iii. Contusions and Fractures

Contusions (bruises) are a common traumatic injury, accounting for 13–17% of injuries among amateurs. Fractures are less common, representing about 3% of all injuries (Onu *et al.*, 2023; Herrero *et al.*, 2014).

iv. Head Injuries

While less frequent than lower limb injuries, concussions and other forms of head trauma are a notable injury type, especially resulting from direct contact situations during play (Rodrigues & Siqueira, 2020; Brukner & Shawdon, 1994; Krutsch *et al.*, 2021).

v. Contact (Traumatic) Injuries

Traumatic injuries are significantly more prevalent than overuse injuries in the amateur game, accounting for approximately 77% of cases (Onu *et al.,* 2023). They are more common among professional players globally (about 50.7%) (Gurau *et al.,* 2023b), but data from Africa and Nigeria show exceptionally high rates. Rough tackles and direct player-on-player contact are the leading causes, responsible for 62% of injuries in a South African study, 81% in a CECAFA tournament (Nuhu & Kutz, 2017), and over two-thirds (67.2%) in a study from Kano, Nigeria (Bello *et al.,* 2020; Sa'ad *et al.,* 2020).

vi. Non-Contact Injuries

These injuries, occurring without external impact, are the predominant mechanism for amateur footballers globally (54-55%) (Gurau *et al.,* 2023b). They remain significant even in contexts with high rates of contact injury and are particularly associated with muscle strains and ACL injuries resulting from movements like running, sprinting, or twisting (Onu *et al.,* 2023; Sonesson *et al.,* 2023; Ndubuisi *et al.,* 2020).

2.2.2 Risk Factors of Amateur Football Injuries

i. Player Level (Amateur vs. Professional)

Amateurs appear more susceptible to soft tissue damage, potentially due to differences in conditioning, preparation, and recovery (Gurau *et al.,* 2023b). Furthermore, moderate injuries are the most common severity, but severe injuries are more frequent in amateurs than in professionals. Recurring injuries are also slightly more common in amateurs (16.7%) (Onu *et al.,* 2023; Herrero *et al.,* 2014).

ii. Intrinsic Risk Factors

These factors, internal to the athlete, include older age, inadequate physical conditioning, poor neuromuscular control, and biomechanical inefficiencies (Gurau *et al.,* 2023b; Sonesson *et al.,* 2023; Herrero *et al.,* 2014). Specific studies in African football have also identified younger age, lower Body Mass Index (BMI), and self-reported functional ankle instability as being associated with higher injury rates (Kwakye *et al.,* 2024). A high prevalence (75%) of limb length discrepancy (LLD) among amateur players represents another potential underlying biomechanical risk (Akodu & Akindele, 2020).

iii. History of Previous Injury

This is a critical risk factor. Studies confirm that having a pre-existing injury significantly increases the risk of sustaining a new injury during the season (Sonesson *et al.,* 2023; Herrero *et al.,* 2014). This has been demonstrated as a significant predictor for subsequent training injuries in Ghana, especially for players under 18 (Kwakye *et al.,* 2023), and is linked to new thigh and knee injuries in Nigeria (Bello *et al.,* 2020).

iv. Systemic Failures in Player Care

The high risk associated with previous injuries is exacerbated by systemic failures in player care, leading to high recurrence rates. The data points to a "vicious cycle of re-injury" where players receive inadequate rehabilitation and return to play prematurely. This is supported by findings that a large percentage of Nigerian players (42.6%) use self-treatment and that most amateur teams lack formal medical support (Bello *et al.,* 2020).

v. Extrinsic Risk Factors

These are factors external to the athlete. A crucial factor is that matches pose a significantly higher injury risk than training sessions (Musat *et al.*, 2023; Kasiotis *et al.*, 2024; Herrero *et al.*, 2014). The high rate of traumatic injuries also points to a physical style of play and potential differences in officiating standards (Nuhu & Kutz, 2017; Onu *et al.*, 2023). This highlights that prevention strategies must address fair play and player behavior (Bello *et al.*, 2020). Finally, poor quality of playing surfaces is a commonly cited extrinsic risk factor in the African region (Sedegah, 2020).

2.3 Overview of Injury Prevention Strategies in Amateur Football

The fundamental goal of injury prevention in football is to safeguard player health, reduce the incidence of injuries that can curtail participation, and prevent premature retirement from the sport (Rahnama, 2011). The development of effective preventive strategies is predicated on a robust understanding of injury epidemiology, including detailed information on incidence rates, common patterns, and specific risk factors (Rahnama, 2011). Historically, the field of sports injury prevention, particularly research based on rigorous methodologies like randomized controlled trials (RCTs), was relatively limited. However, the evidence base has grown substantially over the past few decades, with seminal work by researchers such as Ekstrand and colleagues demonstrating that comprehensive, multifactorial prevention programs can lead to significant reductions in injury rates (Rahnama, 2011).

A modern understanding of injury prevention extends beyond mere physical exercises to encompass the behavioral science of implementation. The success of any injury prevention exercise programme (IPEP) is critically dependent on its adoption and consistent use by the intended end-users, who are primarily the players and their coaches (Lindblom *et al.*, 2024). Theoretical frameworks like the Health Action Process Approach (HAPA) model are used to understand the process of behavior change. According to this model, an individual's intention to adopt a new health behavior (like performing an IPEP) is influenced by their perception of the risk, their expectation of the outcome (i.e., will the program actually work?), and their self-efficacy (i.e., belief in their own ability to perform the program correctly) (Lindblom *et al.*, 2024).

Central to this process is the player's own perspective, a factor that has often been overlooked in the top-down dissemination of prevention programs. To design and implement interventions that are both effective and meaningful, it is essential to acknowledge and understand the players' beliefs, attitudes, and perceptions regarding injury risk and prevention (Cardoso-Marinho *et al.*, 2022). Systematic reviews have shown a common paradox: while the majority of football players perceive their risk of injury as high and agree that prevention is important, this awareness does not automatically translate into a strong intention to use or adhere to specific prevention strategies (Cardoso-Marinho *et al.*, 2022). This gap between knowledge, attitude, and practice is a central challenge that injury prevention science seeks to address.

2.3.1 The Challenges of Implementing Injury Prevention Strategies in Resource-Limited African Settings

The imperative for effective injury prevention is arguably most acute in the footballing contexts of Africa. In many parts of the continent, the possibilities for treating injuries are severely restricted by economic constraints, limited medical infrastructure, and a scarcity of qualified healthcare professionals (Owoeye *et al.*, 2013). Players at the youth and grassroots levels, in particular, face formidable challenges, including low levels of funding for their teams and poor or non-existent medical support systems (Owoeye *et al.*, 2014). This reality means that preventing an injury from occurring in the first place is of paramount importance, as the consequences of an injury can be far more severe when adequate treatment and rehabilitation are unavailable (Owoeye *et al.*, 2013).

In these resource-limited settings, the team coach often assumes a multifaceted role that extends far beyond tactical instruction. Due to the frequent absence of dedicated medical staff, the coach becomes the primary figure responsible for injury prevention, initial assessment, and management decisions (Sonesson *et al.*, 2024). This places an immense burden on coaches, who may themselves have limited formal education in sports medicine and evidence-based prevention methods (Sonesson *et al.*, 2024). Studies show that while coaches recognize their role, they face significant barriers, including a lack of access to proper training facilities and equipment, and difficulty in motivating players to adhere to prevention routines (Lindblom *et al.*, 2024). These logistical challenges are further exacerbated by systemic issues. The widespread problems of mismanagement and corruption within some football administrations can divert crucial funds away from grassroots development, medical support, and coach education, thereby undermining the

very foundation upon which a culture of safety could be built (Pannenborg, 2010). Consequently, injury prevention efforts must be tailored to this specific context, as demonstrated by research in a Ghanaian academy which highlighted the need for programs focusing on the knee and ankle, identified as high-risk areas for their youth players (Kwakye *et al.,* 2024).

2.3.2 Injury Prevention Strategies among Amateur Footballers in Nigeria

In Nigeria, the combination of a documented high incidence of football injuries and the inadequacy of routine injury surveillance data creates an urgent imperative for proactive prevention initiatives (Owoeye *et al.,* 2017). A critical and pervasive barrier is the severe lack of qualified medical personnel at the amateur level. Research conducted in Lagos revealed the stark reality that the majority of male youth football teams operated without any medical attendants present during either training or matches (Owoeye *et al.,* 2013). In the few instances where some form of care was available, it was often provided by masseurs rather than trained physiotherapists or medical doctors, highlighting a profound gap in the provision of appropriate medical care (Owoeye *et al.,* 2013).

This implementation chasm, between the evidence-based principles of injury prevention and the on-the-ground reality in Nigeria, is vast. The barriers are not merely logistical, such as a lack of funds or facilities, but are deeply rooted in the socio-economic fabric of the sport. The state of precarity in which many amateur players exist is a powerful and unique barrier to safe practice (Ejekwumadu, 2024). For a young player whose entire future prospect is pinned on securing a professional contract, the drive to succeed can lead to the

development of an overbearing athletic identity that subordinates long-term health to short-term opportunity. This can manifest in dangerous behaviors, such as hiding injuries or returning to play prematurely to impress scouts, thereby dramatically increasing the risk of severe or career-ending injury (Ejekwumadu, 2024).

This reality suggests that in the Nigerian context, injury prevention cannot be viewed solely through a medical or biomechanical lens. It must also be understood as a socio-economic intervention that addresses the welfare and vulnerability of the players. The institutional failures that characterize the amateur football system—including the lack of qualified coaches, poor infrastructure, and the absence of regulatory frameworks for player healthcare and insurance—create an environment where injury prevention is neither prioritized nor systematically implemented (Ejekwumadu, 2024). Therefore, any attempt to introduce prevention strategies must contend with these foundational issues. To prevent injuries in this population, one must also address the economic and social vulnerabilities that fuel risk-taking behaviors, making the study of player knowledge and attitudes not just a matter of academic interest, but a critical component of designing realistic and effective interventions.

2.5 Types of Injury Prevention Strategies in Amateur Football

The types of injury prevention programs utilized in amateur football include:

i. FIFA 11+

The FIFA 11+ is the most extensively researched and globally disseminated Injury Prevention Exercise Programme (IPEP) (Bizzini & Dvorak, 2015). It is a comprehensive warm-up protocol designed to be completed in 20 minutes. Its core components include

running drills, balance, core stability, neuromuscular control, plyometrics, and strength exercises (Bizzini & Dvorak, 2015). The program is intended for football players aged 14 and older and is highly accessible as it requires no specialized equipment (Bizzini & Dvorak, 2015). A substantial body of evidence from randomized controlled trials and systematic reviews confirms that consistent use of the FIFA 11+ can lower overall injury rates by 30-70% (Bizzini & Dvorak, 2015). The effectiveness of the program is strongly linked to adherence, with studies demonstrating that higher compliance from teams and players leads to greater preventive outcomes (Barengo *et al.,* 2014). In addition to preventing injuries, the FIFA 11+ has been found to improve performance metrics such as balance, agility, and eccentric hamstring strength (Vlachas & Paraskevopoulos, 2022).

Despite strong evidence of its effectiveness, particularly from a landmark study in Nigeria that showed a 41% reduction in overall injuries among male youth players (Owoeye *et al.,* 2014), the adoption of the FIFA 11+ remains low in many regions, including Africa (Owoeye *et al.,* 2014; Bakare *et al.,* 2021). A follow-up study in Lagos revealed that a staggering 79.3% of male youth players were unaware of the program, highlighting a significant gap between proven scientific interventions and their practical application in grassroots football (Owoeye *et al.,* 2013).

ii. Prevent Injury and Enhance Performance (PEP) Program

The Prevent Injury and Enhance Performance (PEP) program is a multicomponent, evidence-based IPEP, often cited alongside FIFA 11+ and Knäkontroll for its efficacy (Lindblom *et al.,* 2024; Lemes *et al.,* 2021). It is particularly noted for its use with female athletes to prevent ACL injuries. The core components of the PEP program are stretching, strengthening, plyometrics, and agility drills. These types of general programs have

demonstrated the ability to significantly lower the incidence of both overall and specific high-risk injuries, such as those affecting the anterior cruciate ligament (ACL) (Crossley *et al.,* 2020).

iii. Knäkontroll (Knee Control)

Knäkontroll, which translates to "Knee Control," is a Swedish multicomponent IPEP designed to prevent football injuries, especially in youth players (Lindblom *et al.,* 2024). The program's effectiveness is attributed to its core components, which focus on balance, core stability, jump-landing technique, and promoting correct knee alignment. Studies have shown that such multicomponent programs can reduce injury rates by 27-45% in female players and up to 75% in certain male groups (Crossley *et al.,* 2020).

iv. Nordic Hamstring Exercise (NHE)

The Nordic Hamstring Exercise (NHE) is a focused intervention specifically designed to target and prevent hamstring strain injuries (Lemes *et al.,* 2021). Its single core component is eccentric hamstring strengthening. Its high effectiveness has been well-documented through research (Lemes *et al.,* 2021). An intervention study at an elite football academy in West Africa highlighted the practical application of the NHE, where its implementation resulted in significant hamstring strength gains and demonstrated that such focused exercises can be successfully adopted with high compliance within African football settings (DeLang *et al.,* 2024).

v. Copenhagen Adductor Exercises (CAE)

The Copenhagen Adductor Exercise (CAE) is a focused intervention proven effective in the prevention of groin injuries (DeLang *et al.,* 2024). Its primary component is eccentric adductor strengthening. Its strategic value was demonstrated in a West African elite

football academy where general prevention programs had failed to significantly reduce groin and thigh injuries. Introducing the CAE as a targeted measure led to notable gains in adductor strength, confirming it can be implemented with high compliance as a focused strategy (DeLang *et al.,* 2024).

vi. FUNBALL

The FUNBALL program is a new, multicomponent injury prevention intervention designed specifically for young male football players. Its core components include balance, core stability, hamstring eccentrics, gluteal activation, plyometrics, and sprinting exercises. Implemented at least twice a week after a standard warm-up, it has been shown to significantly reduce overall football-related injuries (Shabani *et al.,* 2024; Alahmadi *et al.,* 2025). The program is designed to be engaging for youth by incorporating competitive exercises that often involve pairs and ball use, with flexibility for coaches to adapt to players' developmental levels (Obërtinca *et al.,* 2024; Alahmadi *et al.,* 2025). Beyond injury prevention, FUNBALL has also been found to improve cognitive functions like working memory and executive function in young players (Fünten *et al.,* 2024). A study by Obërtinca et al. (2024) found that there was approximately a 33% reduction in overall injuries among youth footballers implementing FUNBALL.

vii. Protective Equipment

Protective equipment is a key strategy for reducing injuries in amateur football, especially among youth players. However, the use and awareness of such equipment, as well as broader injury prevention behaviors, remain inconsistent. While 69.7% of secondary school footballers in Ibadan, Nigeria, were aware of mouthguards, actual usage during games was much lower. Boys reported higher usage and agreement on the effectiveness of

mouthguards in preventing oro-facial injuries compared to girls. Despite this, a significant portion of players had experienced oro-facial trauma, indicating underuse of this protective equipment (Onyeaso, 2004). Similarly, among male youth football players in Lagos, Nigeria, only 40.5% wore shin guards during training, and 52.5% wore them during matches. This suggests that even basic protective gear is not consistently used in amateur football settings (Olawale *et al.,* 2013). Headgear and masks are also important protective equipment worn to prevent head injuries during play (Bugaev *et al.,* 2018).

2.6 Knowledge of Injury Prevention Strategies among Amateur Footballers

There is a broad consensus among amateur football players regarding the importance of injury prevention, yet this general awareness does not translate into specific, evidence-based knowledge. Globally, a large majority of players, often between 82% and 90%, acknowledge that preventing injuries is crucial and express a high level of interest in the topic (Som *et al.,* 2022). This positive perception, however, is frequently undermined by significant knowledge deficits. A systematic review concluded that while players are aware of their high injury risk, their detailed knowledge of prevention strategies and their actual on-field practices are often low (Cardoso-Marinho *et al.,* 2022). This gap is evident across different regions. For instance, a landmark study of male youth players in a Lagos, Nigeria league found an exceptionally low mean knowledge score of 4.40 on a 9-point scale, with a staggering 83% of players falling into the "poor" or "fair" knowledge categories (Ejekwumadu, 2024). Similarly, research with female university football teams in South Africa found that only 36% of participants, including players and support staff, perceived their own knowledge of injury prevention exercise programmes (IPEPs) to be adequate

(Mtshali *et al.*, 2015). This self-awareness of a knowledge gap is further highlighted by qualitative research where a primary theme among female players in South Africa was summarized by the statement, "we don't have enough knowledge about injury prevention" (Alahmad *et al.*, 2024).

The deficit in specific knowledge leads to a reliance on traditional but ineffective methods and fundamental misconceptions about risk factors. While players often correctly perceive common risks like inadequate warm-up and fatigue (Cardoso-Marinho *et al.*, 2022), their understanding of effective countermeasures is frequently flawed. A study in Brunei found that 81.4% of amateur players used static stretching as a primary injury prevention method, a practice with little supporting evidence in scientific literature (Som *et al.*, 2022). Research from Nigeria reveals even more profound misconceptions; nearly 70% of youth players wrongly believed that adequate hydration was not important for injury prevention, and almost half (48%) did not think strong muscles were important (Owoeye *et al.*, 2013). This lack of understanding extends to a near-total lack of awareness of proven, evidence-based prevention programs. In one study, 79.3% of players in Lagos had never heard of the FIFA 11+ programme, despite its proven local effectiveness (Ejekwumadu, 2024).

Players' knowledge base appears to be fragmented, inconsistent, and likely acquired through passive experience rather than structured education. This is demonstrated by high awareness of certain visible or mandated safety measures alongside ignorance of crucial physiological principles. One study showed high awareness of the role of shin guards (97.3%) while revealing widespread ignorance about the importance of hydration (Owoeye *et al.*, 2013). Similarly, another study found that while 91.6% of Nigerian athletes had adequate knowledge of physiotherapy's role in treating injuries, knowledge of proactive

prevention strategies was much lower (Odole *et al.,* 2021). Compounding this issue is a significant "illusion of knowledge." In the Lagos study, while 83% of players scored poorly on an objective knowledge test, 69.7% of the same group claimed to be knowledgeable about injury prevention (Owoeye *et al.,* 2013). This disconnect between perceived and actual knowledge presents a major barrier, as players who believe they are already informed may be less receptive to educational interventions.

Coaches are the primary conduits of information in the amateur setting and are central to the issue of player knowledge (Sonesson *et al.,* 2024). Despite a recognized lack of knowledge within team environments, players often place significant trust in their coaches, with studies showing that over 90% of participants believed their coaches' prevention practices were sufficient (Bakare *et al.,* 2021; Mtshali *et al.,* 2015). However, coaches themselves face challenges with their own knowledge and competence, often feeling a need for more education and support, particularly regarding pain management and the correct implementation of IPEPs (Lindblom *et al.,* 2024). Furthermore, their ability to implement best practices can be impeded by external factors such as limited facilities and low player buy-in (Lindblom *et al.,* 2024). The importance of the organizational setting is critical, as research in Ghana highlights the stark contrast in knowledge access between an elite academy with on-site physiotherapists and the resource-poor environment of most grassroots clubs (Kwakye *et al.,* 2023). This underscores that the dearth of research and resources on the African continent leaves a significant gap in understanding the educational needs of its vast footballing population (Bakare *et al.,* 2021).

2.7 Attitudes towards Injury Prevention Strategies among Amateur Footballers

A prevailing theme across different football environments is the generally positive attitude that amateur players and coaches have towards injury prevention. Research indicates a widespread belief that preventive measures are an important and beneficial component of the sport (Som *et al.,* 2022). This positive sentiment is not confined to a single region. In South Africa, for instance, a high majority of female university players (87%) affirmed their strong belief in the importance of Injury Prevention and Performance Enhancement Programmes (IPEPs) (Bakare *et al.,* 2021). Similarly, a study on Nigerian footballers concerning concussions found "high" positive attitudes towards safety protocols (Olanrewaju *et al.,* 2023), and another noted that a majority of Nigerian athletes (78.7%) held a positive perception of physiotherapy's role in managing injuries (Odole *et al.,* 2021). This foundational positive outlook is considered a crucial facilitator for introducing and implementing safety measures (Som *et al.,* 2022).

Despite the overwhelmingly positive attitudes, a significant and well-documented challenge is the attitude-behavior gap where positive beliefs do not translate into consistent adherence to preventive practices (Cardoso-Marinho *et al.,* 2022). A study found that while 80% of players believed in the effectiveness of the FIFA 11+ programme, they reported a limited intention to actually use it (Cardoso-Marinho *et al.,* 2022). This gap is also starkly evident in the Nigerian context. While players reported positive attitudes towards concussion safety, a behavioral study found that 10.6% of those who had sustained a concussion deliberately avoided seeking medical help (Olanrewaju *et al.,* 2023). This

reveals a complex series of disconnects: from knowledge to attitude, from attitude to intention, and ultimately from intention to actual behavior (Cardoso-Marinho *et al.,* 2022).

Several factors contribute to the gap between attitude and behavior. Common barriers include practical constraints such as lack of time, the perceived complexity of exercises, insufficient leadership from coaching staff, and poor team support for preventive programmes (Cardoso-Marinho *et al.,* 2022). Conversely, factors that facilitate both positive attitudes and consistent practice include the adaptability of a programme to suit a team's specific needs and the availability of good club facilities and equipment (Cardoso-Marinho *et al.,* 2022).

However, in specific contexts like Nigeria, the barriers are deeply rooted in socio-economic realities. The decision to play while injured, sometimes against medical advice, is a significant behavioral issue (Chaudhuri *et al.,* 2024). This risk-taking is not necessarily due to a poor attitude towards health, but is often a calculated decision driven by the economic and social precarity of an amateur football career (Ejekwumadu, 2024). For players without a salary or insurance, the pressure to seize a potential opportunity by playing in a crucial match can override safety concerns, making the act of hiding an injury a seemingly rational choice born of desperation (Ejekwumadu, 2024). Therefore, interventions in such environments cannot focus solely on education but must also address the foundational issues of player welfare and economic vulnerability (Ejekwumadu, 2024).

Coaches are consistently identified as critical agents in shaping a team's safety culture. Their belief in the effectiveness of IPEPs is a primary driver for the implementation of such programmes (Lindblom *et al.,* 2024). In the South African context, the coach's central role

is underscored by the finding that 65% of players believe their coach is important for achieving prevention goals, and 70% felt their coach's current practices were sufficient (Bakare *et al.,* 2021). This high degree of trust suggests that coach education is a highly effective strategy for influencing player behavior and driving change (Bakare *et al.*, 2021).

However, coaches themselves face significant challenges. Even when motivated, they report being hampered by low player buy-in and motivation (Lindblom *et al.,* 2024). Their attitudes towards pain are also complex; they often view it as an inherent part of a tough sport while also recognizing it as a critical warning sign of injury. This leads to an emphasis on creating an open communication climate for pain reporting, yet they struggle with accurately assessing pain due to individual variations (Sonesson *et al.,* 2024).

2.8 Outcome Measures for Assessing Amateur Footballers' Knowledge and Attitudes towards Injury Prevention

i. Adopted Knowledge Questionnaire (Gbadamosi *et al.*, 2015)

This instrument is a questionnaire designed to evaluate the physiotherapy knowledge of amateur soccer team managers. It was adapted from a questionnaire used by Mortha (2009), with the demographic section modified to fit the study's Nigerian context. The questionnaire contains 23 questions assessing knowledge across four domains: preventive techniques, treatment means, indications, and modalities.

For scoring, each correct response is awarded one point, while incorrect responses receive zero, for a maximum possible score of 23 points. The total point score for each participant is then converted into a percentage. This percentage is used to categorize the respondents' overall knowledge into three levels: poor knowledge (a score below 40%), fair knowledge

(41-60%), and good knowledge (a score of 60% and above). The questionnaire was administered in person by researchers.

ii. Self-Developed Knowledge, Beliefs and Care Availability Questionnaire (Owoeye *et al.,* 2013)

This self-administered questionnaire was developed to assess injury prevention knowledge, behaviour, and medical care availability among male youth football players. The instrument was adapted from previous studies and its face validity was established through a pilot test with 16 players, which helped refine ambiguities and improve clarity. The final version comprised three sections covering player demographics, knowledge of Injury Prevention in Football (IPF) and the FIFA 11+ programme, and injury-prevention behaviours.

The questionnaire uses a 9-point knowledge scale to assess player understanding of IPF. Based on this scale, each player's overall knowledge is categorized as poor (a score of 0–3 points), fair (4–6 points), or good (7–9 points). The behavioural section used a Likert-type frequency scale (e.g., Always, Often, Sometimes, Never) which is analyzed using descriptive statistics rather than a cumulative score. The questionnaire is self-administered on training grounds.

iii. Adapted Knowledge, Beliefs and Practices Questionnaire (Bakare *et al.,* 2021)

This instrument is a self-administered questionnaire adapted from a questionnaire by McKay et al. (2014) to evaluate the knowledge, beliefs, and practices of women's university football teams. Its psychometric properties were established through a formal validation process where it was reviewed for content and face validity by sports medicine experts and then piloted with an amateur male football team. The instrument uses a

combination of dichotomous (Yes/No) questions and a five-point Likert scale.

Data from the questionnaire are analyzed using descriptive statistics, where responses are summarized with frequencies and percentages (e.g., "36% of the participants perceived that they had adequate knowledge"). This approach allows for a detailed breakdown of responses to individual items.

iv. Self-Developed Perceptions and Practices Questionnaire (Weldon *et al.,* 2022)
This questionnaire was designed to investigate the strength and conditioning (S&C) practices and perspectives in injury prevention among soccer coaches and players. It includes both open and close ended questions. Its psychometric properties were established through a comprehensive validation process, including a review for content validity and a three-round pilot test involving the research team, coaches, and players. The survey is divided into six sections covering background information, education, views on S&C, and exercise preferences.

v. Self-Developed Perception and Practice Questionnaire (Puszczałowska-Lizis *et al.,* 2025)
This instrument was a bespoke, 3-part survey questionnaire developed by Puszczałowska-Lizis et al. (2025) to analyze the perceptions and practices of injury prevention among amateur football players. It covers players' personal behaviours, club-level actions, and injury history. The questionnaire uses a point-based scoring system to assess the level of preventive behaviors. For most questions, a correct or positive response is awarded 1 point; however, for the first three questions in part one and the first question in part two, 2 points are awarded. The maximum possible score is 23 points. This total score is then used to classify players into three levels: low (0–7 points), average (8–15 points), and high (16–23 points).

vi. Adapted Knowledge, Attitudes and Practice Questionnaire (Som *et al.,* 2022)

This questionnaire was developed to assess knowledge, attitudes, and practices regarding lateral ankle sprain (LAS) prevention. It was adapted from a validated instrument by Zech & Wellmann (2017). The questionnaire is structured into five segments: demographics, football participation, injury history, beliefs about injury causes, and prevention practices.

vii. Standardized Questionnaire on Injury Perceptions (Zech & Wellmann, 2017)

This questionnaire was developed to assess football players' perceptions of injury risk and prevention. Its content validity was established by basing it on the "injury sequence model of van Mechelen" and expert consultation, while its face validity was confirmed through a pilot test with three non-professional teams. The instrument collects data on player characteristics, injury history, and perceptions of risk factors and prevention strategies. Personal opinions on the importance of injury prevention are rated on a five-point Likert scale.

viii. Self-Developed Questionnaire on Elite Football (Loose *et al.,* 2018)

This self-developed questionnaire was used to investigate the views of elite German players and coaches on injury prevention and return-to-play strategies. The questionnaire covered a wide range of topics, including anthropometrics, knowledge of prevention programs, and decision-making dynamics.

2.9 Summary of Empirical Literature Reviewed

Table 2.1 Summary of Empirical Literature Reviewed

AUTHOR/ YEAR/COUNTRY	TITLE	SAMPLE SIZE	AIM OF STUDY	STUDY TYPE	OUTCOME/MEASURE	FINDINGS
Bakare et al./2021/South Africa	Injury prevention knowledge, beliefs, and practices among women's football teams in South Africa	107 respondents (98 female players and 9 support staff) participated in the study.	To evaluate the injury prevention knowledge, beliefs, and practices among women's university football teams.	Cross-sectional survey	A self-administered questionnaire adapted from McKay et al. covering knowledge, beliefs, and practices of injury prevention.	Participants had limited knowledge of basic injury prevention programmes (IPPs), with only 36% perceiving their knowledge as adequate. However, they employed basic

						practices like warm-ups (95%) and stretching (90%), influenced by the beliefs of their coaches.
Cardoso-Marinho et al./2022/Portugal	The perception of injury risk and prevention among football players: A systematic review	14 studies were included in the systematic review.	To review the literature on the perceptions, beliefs, attitudes, and knowledge of football players regarding injury risk and	Systematic Review	Literature search across multiple databases (PubMed, Scopus, etc.) and risk of bias assessment using the Joanna Briggs Institute (JBI) checklist.	Most players perceive their injury risk as high and believe prevention is important, yet their intention to use prevention strategies is

			prevention strategies.			often limited. Key perceived risk factors included low muscle strength, fatigue, and excessive training.
Gbadamosi et al./2015/Nigeria	Knowledge of Physiotherapy in the Prevention and Treatment of Soccer Injuries Among Managers of	32 amateur soccer team managers were recruited for the study.	To evaluate the knowledge of physiotherapy in preventing and treating soccer injuries among managers of	Descriptive survey design	An adapted questionnaire on physiotherapy knowledge (preventive techniques, means of treatment, indications, and modalities).	A significant proportion of amateur team managers (86.5%) demonstrated good knowledge of using

	Amateur Soccer Teams		amateur soccer teams.			physiotherapy for injury prevention and treatment, though gaps existed in specific areas like strapping and use of electrical currents.
Loose et al./2018/Germany	Injury prevention and return to play strategies in elite football:	486 elite football players and 88 team coaches were	To reveal current opinions on injury prevention and return to play	Retrospective data analysis (cohort)	A standardized questionnaire covering knowledge and opinions on injury prevention, return to	While basic knowledge of prevention was sufficient, there was a disconnect

	no consent between players and team coaches	recruited for the study.	strategies in elite football.		play, screening, and decision-making.	between theoretical knowledge and practical application. A significant lack of consent existed between players and coaches on return-to-play decisions.
Owoeye et al./2013/Nigeria	Injury prevention in football: Knowledge and	182 male youth football players	To assess the knowledge and behaviour of male youth	Cross-sectional study	A self-administered questionnaire assessing knowledge of injury prevention, awareness of the	There was a clear deficiency in injury prevention knowledge, with

	behaviour of players and availability of medical care in a Nigerian youth football league	participated in the study.	football players regarding injury prevention and the availability of medical care.		FIFA 11+ programme, and injury-prevention behaviour.	the majority of players having 'poor' (39.1%) or 'fair' (43.9%) knowledge. Most (79.3%) were unaware of the FIFA 11+ programme, and injury prevention behaviours were inconsistent.
Puszczałowska-Lizis et al./2025/Poland	Perception, attitudes and practices of injury	100 male amateur football players were	To analyze the perception, attitudes, and practices of	Diagnostic survey	An author-devised 3-part survey questionnaire on perceptions, attitudes, and	The level of preventive behaviors was low in 30%,

	prevention among football players	recruited for the study.	injury prevention among amateur football players.		practices of injury prevention.	medium in 41%, and high in 29% of players. Most football players are inadequately informed about proper injury prevention methods. Players who had a re-injury showed a higher level of health-related behaviors.

Som et al./2022/Brunei	Knowledge, attitudes and practices of injury prevention towards lateral ankle sprain among amateur football players in Brunei	140 amateur football players were recruited for the study.	To assess the knowledge, attitudes, and practices on injury prevention towards lateral ankle sprain (LAS) among amateur football players.	Cross-sectional study	An online questionnaire assessing demographic data, injury history, knowledge, attitudes, and practices regarding lateral ankle sprain.	Most players (84.2%) agreed that injury prevention is crucial and identified lack of physical fitness as the primary cause of injury. However, players were under-informed about proper methods, with stretching (81.4%) being

						the most common practice despite conflicting evidence of its effectiveness.
Weldon et al./2022/Hong Kong	The strength and conditioning practices and perspectives of soccer coaches and players	72 participants (42 soccer coaches and 30 players) were recruited for the study.	To investigate the personnel responsible for, and the practices and perspectives of, soccer coaches and players regarding strength and	Online survey (cross-sectional)	An anonymous online survey with sections on S&C education, qualifications, prescription, views, and exercise preferences.	Most coaches and players viewed S&C as 'important' or 'very important' for performance and injury prevention. However, over 60% of S&C

			conditioning (S&C).			sessions were delivered independently or by non-specialist staff, highlighting a gap between perceived importance and expert application.
Zech & Wellmann/2017/Germany	Perceptions of football players regarding injury risk factors and	139 professional and youth football players were	To record football players' perceptions of injury risk factors and	Cross-sectional survey	A standardized questionnaire covering injury history, perceptions of risk factors, and regularly used prevention strategies.	Players' perceptions of risk factors (e.g., physical contact, fatigue) and their

	prevention strategies	recruited for the study.	prevention strategies.			use of preventive strategies (e.g., stretching) were often inconsistent with scientific evidence, highlighting the need to incorporate player beliefs into transfer strategies.

CHAPTER THREE

MATERIALS AND METHODS

3.1 MATERIALS

3.1.1 Population

The participants of this study were male and female amateur footballers aged 18 years and older, enrolled in the Faculty of Basic Medical Science (BMS) at the University of Benin (UNIBEN), Benin City, Edo State, Nigeria. Participants was recruited from university-organized football teams and recreational football groups within the BMS faculty, which includes departments such as Medicine, Medical Biochemistry, Anatomy, Physiology, and Nursing Science.

3.1.2 Selection Criteria

3.1.2.1 Inclusion Criteria

i. Male and female students aged 18 years and older.
ii. Enrolled in the Faculty of Basic Medical Science at UNIBEN.
iii. Actively participating in football as amateur players, either in university-organized teams or recreational leagues.
iv. Willing to provide informed consent to participate in the study.
v. Those who plays football for recreation and does not be paid to participate in competitions and training

3.1.2.2 Exclusion Criteria

i. Individuals with a self-reported history of underlying chronic medical, cardiovascular, or respiratory conditions.

ii. Individuals currently unable to train or compete due to an acute injury.

iii. Incompletely filled questionnaires

3.1.3 List of instruments

Adapted knowledge and attitude questionnaire

3.1.4 Description of instruments

The primary data collection instrument was an adapted self-administered questionnaire, combining elements from the Self-Developed Knowledge, Beliefs and Care Availability Questionnaire (Owoeye *et al.,* 2013) and the Adapted Knowledge, Beliefs and Practices Questionnaire (Bakare *et al.,* 2021). This questionnaire was designed to assess knowledge and attitudes towards injury prevention among amateur footballers, tailored to the Nigerian university context. It consists of four sections:

- Section A: Demographic Information – Collects data on age, gender, department, academic level, years of football experience, height, weight, BMI, and injury history.
- Section B: Knowledge of Injury Prevention – Includes nine multiple-choice and true/false questions to evaluate understanding of injury causes, evidence-based prevention programs (e.g., FIFA 11+), and risk factors.
- Section C: Attitudes Towards Injury Prevention – Uses a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to assess beliefs, willingness, and barriers to injury prevention.

- Section D: Injury History and Prevention Practices – Gathers data on warm-up frequency, use of protective equipment, awareness of FIFA 11+, and sources of injury prevention information.

3.1.5 Validity and Reliability of Instruments

- The questionnaire's face validity was established through adaptation from previously validated instruments (Owoeye *et al.,* 2013; Bakare *et al.,* 2021). The original questionnaires underwent pilot testing and expert review for content and face validity, ensuring relevance and clarity.
- The Owoeye et al. (2013) questionnaire was piloted with 16 players to refine ambiguities, confirming its suitability for the Nigerian context. The Bakare et al. (2021) questionnaire was validated through review by sports medicine experts and piloting with an amateur male football team.
- Reliability was supported by the consistent use of these instruments in similar studies, with structured scoring systems (e.g., 9-point knowledge scale, Likert scales) ensuring reproducible results. The adapted questionnaire was tailored to the UNIBEN context to enhance cultural and contextual relevance.

3.2 METHODS

3.2.1 Study Area

The study was conducted at the University of Benin (UNIBEN), specifically within the Faculty of Basic Medical Science, Benin City, Edo State, Nigeria. Data collection will occur at the following sites.

- UNIBEN Sports Complex, Ugbowo Campus, Benin City, Edo State.
- Faculty of Basic Medical Science recreational grounds, Ugbowo Campus, Benin City, Edo State.
- Designated training fields used by BMS amateur football teams, as coordinated by the UNIBEN Sports Department.

These locations were selected due to their accessibility to BMS students and their use for football training and matches, ensuring a conducive environment for questionnaire administration.

3.2.2 RESEARCH DESIGN

This study employed a cross-sectional survey design to assess the knowledge and attitudes towards injury prevention among amateur footballers in BMS, UNIBEN. This design was suitable for capturing data at a single point in time, enabling the evaluation of associations between sociodemographic characteristics and knowledge/attitudes, as outlined in the study objectives (Owoeye *et al.,* 2013; Som *et al.,* 2022).

3.2.3 Sampling Technique

A stratified random sampling technique was used to ensure representation across key sociodemographic variables (gender, department, academic level). The BMS faculty was divided into strata based on departments (e.g., Medicine, Nursing Science). Within each stratum, simple random sampling was applied using a list of registered footballers obtained from the UNIBEN Sports Department and BMS faculty coordinators. This approach minimizes selection bias and ensures diversity in the sample (Owoeye *et al.,* 2013).

3.2.4 Sample Size

The sample size of this study was calculated using the Slovin's formula:

$$n = \frac{N}{1 + Ne^2}$$

where:

n = sample size

N = total population of amateur footballers

e = margin of error (set at 0.05)

N = 120

e = 5% (0.05)

$$n = \frac{120}{1+120(0.05)^2}$$

$$n = \frac{120}{1.30}$$

n = 92

A minimum sample of 92 will be used in this study

3.2.5 Ethical Considerations

- Ethical Approval: Ethical clearance was obtained from the UNIBEN Research Ethics Committee.

- Informed Consent: Participants was provide written consent after receiving detailed information about the study's purpose, procedures, and risks.
- Confidentiality: No personally identifiable information was collected, and participant IDs will be used to ensure anonymity.
- Right to Withdraw: Participants may withdraw at any time without consequences.
- Beneficence: The study poses minimal risk, and findings will inform targeted injury prevention programs to benefit participants and the UNIBEN sports community.

3.2.6 PROCEDURE FOR DATA COLLECTION

Data was collected using the self-administered questionnaire described in Section 3.3.1. The procedure is as follows:

- Recruitment: The researcher collaborated with the UNIBEN Sports Department and BMS faculty coordinators to identify eligible footballers. Information sessions was conducted to explain the study's purpose and procedures.
- Informed Consent: Participants received an information sheet detailing the study's objectives, voluntary nature, and confidentiality measures. Written consent was obtained before participation.
- Questionnaire Administration: Questionnaires were distributed during training sessions and team meetings at the study sites. Participants completed the questionnaire in approximately 15–20 minutes, with researchers available to clarify questions without influencing responses.

- Data Retrieval: Completed questionnaires was collected on the same day to minimize loss. Data collection occurred over a 4-week period during the university's sports season, avoiding academic examination periods.
- Data Storage: Hard-copy questionnaires was stored in a locked cabinet, and digital data will be encrypted and stored on a password-protected computer to ensure confidentiality.

3.2.7 Data Analysis

Data was analyzed using SPSS version 26.0. The independent variables were sociodemographic characteristics (age, gender, department, level, sport, years of experience, BMI), while the dependent variables was knowledge and attitudes towards injury prevention. The analysis proceed as follows:

Descriptive Statistics: Frequencies, percentages, means, and standard deviations will summarize demographic characteristics, knowledge scores (poor, fair, good), and attitude scores (positive, negative).

Inferential Statistics:

- Chi-square tests was used to assess associations between categorical variables (e.g., gender, department) and knowledge/attitude categories.
- Independent t-tests or ANOVA was used to evaluate differences in knowledge and attitude scores across continuous variables (e.g., age, years of experience, BMI), with post-hoc tests for significant ANOVA results.
- Multiple logistic regression was used to determine the strength of associations between sociodemographic variables and knowledge/attitude outcomes, adjusting for confounders (e.g., injury history).

- Hypothesis Testing: The main hypothesis and sub-hypotheses (no significant associations between sociodemographic characteristics and knowledge/attitudes) was tested at a significance level of $p<0.05p < 0.05p < 0.05$

CHAPTER FOUR

RESULTS

4.1 INTRODUCTION

The primary aim of this study was to assess the knowledge and attitude towards injury prevention among undergraduate amateur footballers in the faculty of Basic Medical Sciences. A total of 92 undergraduate amateur footballers in the faculty of Basic Medical Science participated in this study.

4.1.1 Descriptive Statistics of Respondents' Sociodemographic Characteristics

The sociodemographic characteristics of the respondents are summarized in Table 4.1. The majority of the respondents were male (63.0%). The department with the highest number of participants was Anatomy (26.1%), and the most represented academic level was 200 Level (31.5%). In terms of football experience, the largest group of respondents (34.8%) had been playing for 4–6 years. The mean age of the participants was 21.18 ± 2.17 years, with ages ranging from 18 to 25 years. The mean height was 1.74 ± 0.12 meters, and the mean weight was 67.23 ± 8.69 kilograms. The Body Mass Index (BMI) of the participants ranged from 21.69 to 28.03 kg/m², with a mean of 22.39 ± 2.48 kg/m².

Table 4.1: Descriptive Statistics of Respondents' Sociodemographic Characteristics (N=92)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	58	63.0
	Female	34	37.0
Department	Medical Biochemistry	16	17.4
	Anatomy	24	26.1
	Physiology	15	16.3
	Nursing Science	12	13.0
	Physiotherapy	14	15.2
	Medical Laboratory Science	5	5.4
	Radiography	6	6.5
Academic Level	100 Level	18	19.6
	200 Level	29	31.5
	300 Level	19	20.7

	400 Level	19	20.7
	500 Level	7	7.6
Years of Football Experience	< 1 year	12	13.0
	1–3 years	31	33.7
	4–6 years	32	34.8
	7–10 years	14	15.2
	> 10 years	3	3.3

Continuous Variable	**Mean ± SD**	**Range**
Age (years)	21.18 ± 2.17	18 – 25
Height (m)	1.74 ± 0.12	1.58 – 2.60
Weight (kg)	67.23 ± 8.69	45 – 85
BMI (kg/m²)	22.39 ± 2.48	21.69 – 28.03
Knowledge Score	7.33 ± 1.232	3 - 9
Attitude Score	36.76 ± 3.296	26 - 45

4.1.2 Prevalence and Types of Football-Related Injuries among Respondents

The prevalence and types of football-related injuries reported by the participants are presented in Table 4.2. A significant majority of respondents (76.1%) reported having sustained at least one football-related injury. Lacerations and skin injuries were the most commonly reported type of injury, with 40.2% of respondents having sustained them. This was followed by muscle and tendon injuries (23.9%). Contusions were reported by 16.3% of respondents, and ligament and joint injuries by 15.2%. The least common injuries were fractures (3.3%) and central/peripheral nervous system injuries (2.2%).

Table 4.2: Prevalence and Types of Football-Related Injuries among Respondents (N=92)

Variable	Frequency (n)	Percentage (%)
Lacerations and Skin Injuries	37	40.2
Muscle and Tendon Injuries	22	23.9
Contusions	15	16.3
Ligament and Joint Injuries	14	15.2
Fractures	3	3.3
Central/Peripheral Nervous System Injuries	2	2.2
Other Injuries	19	20.7
At least one injury	70	76.1

4.1.3 Respondents' Knowledge of Injury Prevention

The respondents' knowledge of injury prevention was assessed through a series of questions, with the results summarized in Table 4.3. Overall, respondents demonstrated good knowledge in several key areas. Majority correctly identified that lower limbs are the most commonly injured body part (97.8%), that a proper warm-up is necessary to prevent injuries (96.7%), that poor physical conditioning is a common cause of injuries (95.7%), and that wearing shin guards reduces risk of injuries (95.7%). High levels of knowledge were also observed regarding the importance of hydration (90.2%) and how previous injuries increase the risk of new ones (89.1%).

However, knowledge of specific evidence-based programs was less prevalent. Only about half of the respondents (53.3%) correctly identified the FIFA 11+ as an evidence-based injury prevention program, and 62.0% knew that running drills and strength exercises are its key components. There was uncertainty regarding stretching, with only 52.2% correctly identifying that static stretching alone is not effective for injury prevention.

Table 4.3: Respondents' Knowledge of Injury Prevention (N=92)

Variable	Response	Frequency (n)	Percentage (%)
Which of the following is a common cause of football injuries?	Adequate warm-up	3	3.3
	Poor physical conditioning	88	95.7
	Proper footwear	1	1.1
	Sufficient hydration	0	0.0
Is a proper warm-up necessary to prevent football injuries?	True	89	96.7
	False	3	3.3
Which of the following is an evidence-based injury prevention program for	FIFA 11+	49	53.3
	General stretching	39	42.4
	Yoga sessions	4	4.3

football?	Meditation	0	0.0
Does wearing shin guards reduce the risk of lower limb injuries in football?	True	88	95.7
	False	4	4.3
Is adequate hydration important for preventing football injuries?	True	83	90.2
	False	9	9.8
Which body part is most commonly injured in amateur football?	Head	0	0.0
	Upper limbs	2	2.2
	Lower limbs	90	97.8
	Back	0	0.0
Does static stretching alone effectively prevent football injuries?	True	44	47.8
	False	48	52.2
Can previous injuries increase	True	82	89.1
	False	10	10.9

the risk of new injuries in football?			
Which of the following is a key component of the FIFA 11+ program?	Running drills and strength exercises	57	62.0
	High-intensity interval training	26	28.3
	Static stretching only	8	8.7
	Nutritional advice	1	1.1

4.1.4 Respondents' Attitudes Towards Injury Prevention

The attitudes of respondents towards injury prevention were generally positive, as shown in Table 4.4. Majority of respondents agreed or strongly agreed that injury prevention is important (91.3%), that they are willing to spend time learning about it (91.3%), that using protective equipment is necessary (96.7%), and that warm-up exercises can reduce their

risk of injury (85.9%). Furthermore, a large majority (81.5%) indicated they would follow an injury prevention program if recommended by a coach.

While confidence in their ability to perform injury prevention exercises correctly was high (72.8% agreed or strongly agreed), some attitudes revealed potential barriers and risks. Many participants were neutral about whether their team provides enough support for injury prevention (41.3%). A number of respondents (40.2%) agreed or strongly agreed that they would continue playing even with a minor injury, with another 35.9% being neutral on the matter. Most players did not view time as a significant barrier, with 60.9% disagreeing or strongly disagreeing that lack of time prevents them from practicing injury prevention strategies.

Table 4.4: Respondents' Attitudes Towards Injury Prevention (N=92)

Variable	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
Injury prevention is important for amateur footballers.	0 (0.0)	0 (0.0)	8 (8.7)	30 (32.6)	54 (58.7)
I am willing to spend time learning about	1 (1.1)	2 (2.2)	5 (5.4)	32 (34.8)	52 (56.5)

injury prevention strategies.					
Using protective equipment (e.g., shin guards) is necessary.	0 (0.0)	1 (1.1)	2 (2.2)	46 (50.0)	43 (46.7)
I believe warm-up exercises can reduce my risk	0 (0.0)	2 (2.2)	11 (12.0)	47 (51.1)	32 (34.8)

of football injuries.					
Injury prevention programs like FIFA 11+ are too complex.	16 (17.4)	24 (26.1)	36 (39.1)	15 (16.3)	1 (1.1)
I would follow a program if my coach recommended it.	0 (0.0)	0 (0.0)	17 (18.5)	51 (55.4)	24 (26.1)
I feel	0	2	23	47	20

confident in my ability to perform exercises correctly.	(0.0)	(2.2)	(25.0)	(51.1)	(21.7)
Lack of time prevents me from practicing injury prevention.	11 (12.0)	45 (48.9)	30 (32.6)	6 (6.5)	0 (0.0)
My team provides enough support for injury	4 (4.3)	13 (14.1)	38 (41.3)	35 (38.0)	2 (2.2)

preventi on.					
I would continue playing even if I have a minor injury.	6 (6.5)	16 (17. 4)	33 (35 .9)	36 (3 9. 1)	1 (1.1)

4.1.5 Respondents' Injury Prevention Practices

The injury prevention practices of the participants were examined, revealing some notable discrepancies between their knowledge and behaviour. The findings are detailed in Table 4.5. Despite the near-universal acknowledgment of the necessity of warm-ups, the application was inconsistent. While 40.2% of the footballers reported always performing a warm-up, a significant portion (33.7%) stated they never do, and 22.8% only do so sometimes. A similar trend was observed with the use of shin guards. Although 95.7% of participants knew they reduce the risk of injury, 44.6% reported never using them, compared to only 28.3% who always do.

Awareness of specific, evidence-based programs was limited, with a majority (54.3%) of participants having never heard of the FIFA 11+ injury prevention program. Nevertheless,

a large majority (78.3%) of the amateur footballers reported using at least one form of injury prevention strategy. The most commonly practiced strategy was performing adequate warm-ups (63.0%), followed by stretching (38.0%) and the use of shin guards (34.8%). Less common practices included taping (5.4%), while no participants reported using braces or masks.

Regarding the source of their injury prevention information, the participants relied mostly on their own initiative through self-research (37.0%) and their coach (34.8%). Physiotherapists (16.3%) and teammates (10.9%) were less frequent sources of information.

Table 4.5: Respondents' Injury Prevention Practices (N=92)

Question	Category	Frequency (n)	Percentage (%)
How often do you perform a warm-up before playing football?	Always	37	40.2
	Often	3	3.3
	Sometimes	21	22.8
	Never	31	33.7
How often do you use shin guards during football matches?	Always	26	28.3
	Often	4	4.3
	Sometimes	21	22.8
	Never	41	44.6
Have you ever heard of the FIFA 11+ injury prevention program?	Yes	42	45.7
	No	50	54.3
Do you	Yes	72	78.3

currently use any injury prevention strategies?	No	20	21.7
What form of injury prevention are you engaged in? *	Adequate warm-ups	58	63.0
	Stretching	35	38.0
	Taping	5	5.4
	Braces	0	0.0
	Shin guards	32	34.8
	Masks	0	0.0
	Others	2	2.2
Who primarily provides you with information about injury prevention?	Coach	32	34.8
	Physiotherapist	15	16.3
	Self (e.g., online research)	34	37.0
	Teammates	10	10.9
	Other	1	1.1

4.1.6 Descriptive Statistics of Respondents' Knowledge and Attitudes

The overall knowledge and attitude levels of the respondents are summarized in Table 4.6. Three-quarters of the respondents (75.0%) demonstrated a good level of knowledge regarding injury prevention. About a quarter (23.9%) had a fair level of knowledge, and only a single participant (1.1%) was found to have a poor level of knowledge.

Regarding attitudes, the vast majority of respondents (85.9%) were classified as having a neutral attitude towards injury prevention. A smaller portion of the participants (12.0%) showed a positive attitude, while only two respondents (2.2%) had a negative attitude.

Table 4.6: Descriptive Statistics of Respondents' Knowledge and Attitude Levels (N=92)

Variable	Category	Frequency (n)	Percentage (%)
Knowledge	Poor	1	1.1
	Fair	22	23.9
	Good	69	75.0
Attitude	Negative	2	2.2
	Neutral	79	85.9
	Positive	11	12.0

4.1.7 Association between Respondents' Gender and Knowledge and Attitude Levels

A Chi-square test was performed to examine the association between gender and the levels of knowledge and attitude towards injury prevention. The results, as shown in Table 4.7, indicated that there was no significant association between gender and either knowledge or attitude levels ($p > 0.05$).

Table 4.7: Association between Respondents' Gender and Knowledge and Attitude Levels using Chi-square Test

Variable	Category	Male n (%)	Female n (%)	χ^2	p-value
Knowledge	Poor	0 (0.0)	1 (100.0)	1.725	0.422
	Fair	14 (63.6)	8 (36.4)		
	Good	44 (63.8)	25 (36.2)		
Attitude	Negative	2 (100.0)	0 (0.0)	1.792	0.408
	Neutral	48 (60.8)	31 (39.2)		

Posi tive	8 (72. 7)	3 (27.3)

4.1.8 Association between Respondents' Department and Knowledge and Attitude Levels

The association between the participants' department and their levels of knowledge and attitude was examined using Chi-square test. As shown in Table 4.8, the results showed that there was no significant association for either knowledge or attitude ($p > 0.05$).

Table 4.8: Association between Respondents' Department and Knowledge and Attitude Levels using Chi-square Test

Variable	Category	MBCn (%)	ANAn (%)	PHSn (%)	NRSn (%)	PSTn (%)	MLSn (%)	RADn (%)	χ^2	p
Knowledge	Poor	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	11.93	0.451
	Fair	3 (13.6)	9 (40.9)	2 (9.1)	4 (18.2)	1 (4.5)	2 (9.1)	1 (4.5)		

	Good	12 (17.4)	15 (21.7)	13 (18.8)	8 (11.6)	13 (18.8)	3 (4.3)	5 (7.2)		
Attitude	Negative	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	16.21	0.181
	Neutral	15 (19.0)	21 (26.6)	14 (17.7)	10 (12.7)	12 (15.2)	2 (2.5)	5 (6.3)		
	Positive	1 (9.1)	2 (18.2)	1 (9.1)	1 (9.1)	2 (18.2)	3 (27.3)	1 (9.1)		

4.1.9 Association between Respondents' Academic Level and Knowledge and Attitude Levels

A Chi-square test revealed that there was no statistically significant association between academic level and knowledge or attitude levels ($p > 0.05$), as detailed in Table 4.9.

Table 4.9: Association between Respondents' Academic Level and Knowledge and Attitude Levels using Chi-square Test

Variable	Category	100 Level n (%)	200 Level n (%)	300 Level n (%)	400 Level n (%)	500 Level n (%)	χ^2	p
Knowledge	Poor	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	14.389	0.072
	Fair	9 (40.9)	5 (22.7)	5 (22.7)	3 (13.6)	0 (0.0)		
	Good	9 (13.0)	24 (34.8)	13 (18.8)	16 (23.2)	7 (10.1)		
Attitude	Negative	0 (0.0)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	10.737	0.217
	Neutral	17 (21.5)	25 (31.6)	17 (21.5)	16 (20.3)	4 (5.1)		
	Positive	1 (9.1)	4 (36.4)	1 (9.1)	2 (18.2)	3 (27.3)		

4.1.10 Association between Respondents' Years of Football Experience and Knowledge and Attitude Levels

The results of a Chi-square test showed that there was no significant association was found between years of football experience and the levels of either knowledge or attitude ($p > 0.05$). Table 4.10

Table 4.10: Association between Respondents' Years of Football Experience and Knowledge and Attitude Levels using Chi-square Test

Variable	Category	< 1 year n (%)	1–3 years n (%)	4–6 years n (%)	7–10 years n (%)	> 10 years n (%)	χ^2	p-value
Knowledge	Poor	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	13.746	0.089
	Fair	5 (22.7)	6 (27.3)	10 (45.5)	1 (4.5)	0 (0.0)		
	Good	6 (8.7)	25 (36.2)	22 (31.9)	13 (18.8)	3 (4.3)		
Attitude	Negative	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)	8.476	0.388
	Neutral	12 (15.2)	26 (32.9)	29 (36.7)	10 (12.7)	2 (2.5)		
	Positive	0 (0.0)	4 (36.4)	2 (18.2)	4 (36.4)	1 (9.1)		

4.1.11 Association between Prevalence of Football Injury among Respondents and Knowledge and Attitude Levels

Results of a Chi-square test showed that the association between having a history of football injury and the levels of knowledge and attitude was not statistically significant, as detailed in Table 4.11.

Table 4.11: Association between Prevalence of Football Injury among Respondents and Knowledge and Attitude Levels using Chi-square Test

Variable	Category	0 Injuries n (%)	1 Injury n (%)	2 Injuries n (%)	3 Injuries n (%)	4+ Injuries n (%)	χ^2	p
Knowledge	Poor	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5.965	0.651
	Fair	6 (27.3)	9 (40.9)	4 (18.2)	2 (9.1)	1 (4.5)		
	Good	15 (21.7)	28 (40.6)	22 (31.9)	3 (4.3)	1 (1.4)		
Attitude	Negative	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	11.440	78
	Neutral	19 (24.1)	32 (40.5)	23 (29.1)	3 (3.8)	2 (2.5)		
	Positive	1 (9.1)	5 (45.5)	3 (27.3)	2 (18.2)	0 (0.0)		

4.1.12 Relationship between Respondents' Age and Knowledge and Attitude Scores

A Pearson's correlation coefficient test was computed to assess the relationship between age and the participants' knowledge and attitude scores. There was no significant correlation between age and knowledge score ($r = .199$, $p = .057$) or between age and attitude score ($r = .137$, $p = .194$), as shown in Table 4.12.

Table 4.12: Correlation between Respondents' Age and Knowledge and Attitude Scores using Pearson's Correlation Test

Variable	r	p
Knowledge Score * Age	.199	.057
Attitude Score * Age	.137	.194

4.1.13 Relationship between Respondents' BMI and Knowledge and Attitude Scores

The relationship between BMI and knowledge and attitude scores was investigated using Pearson's correlation test. No significant correlation was found between BMI and knowledge score ($r = -.011$, $p = .915$) or between BMI and attitude score ($r = -.017$, $p = .871$). Table 4.13.

Table 4.13: Correlation between Respondents' BMI and Knowledge and Attitude Scores using Pearson's Correlation Test

Variable	r	p
Knowledge Score * BMI	-.011	.915
Attitude Score * BMI	-.017	.871

4.1.14 Relationship between Respondents' Knowledge and Attitude Scores

The results of a Pearson's Correlation's test showed that there was a statistically significant, strong positive correlation between respondents' knowledge score and attitude score ($r = .422$, $p < .001$). Table 4.13

Table 4.14: Correlation between Respondents' Knowledge and Attitude Scores using Pearson's Correlation Test

Variable	r	p
Knowledge Score * Attitude Score	.422	< .001

4.2 Hypothesis Testing

Hypothesis 1: There will be no significant association between age and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Pearson's Correlation

P-value: 0.05

Observed p-value: 0.057

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 2: There will be no significant association between age and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Pearson's Correlation

P-value: 0.05

Observed p-value: 0.194

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 3: There will be no significant association between gender and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.422

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 4: There will be no significant association between gender and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.408

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 5: There will be no significant association between department and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.451

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 6: There will be no significant association between department and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.181

JUDGEMENT: The observed p-value is greater than 0.05; a a null hypothesis is therefore NOT REJECTED.

Hypothesis 7: There will be no significant association between level and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.072

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 8: There will be no significant association between level and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.217

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 9: There will be no significant association between sport and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.651

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 10: There will be no significant association between sport and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.178

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 11: There will be no significant association between years of experience and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.089

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 12: There will be no significant association between years of experience and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Chi-square Test

P-value: 0.05

Observed p-value: 0.388

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 13: There will be no significant association between BMI and knowledge of injury prevention among amateur footballers in UNIBEN.

Test: Pearson's Correlation

P-value: 0.05

Observed p-value: 0.915

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

Hypothesis 14: There will be no significant association between BMI and attitudes towards injury prevention among amateur footballers in UNIBEN.

Test: Pearson's Correlation

P-value: 0.05

Observed p-value: 0.871

JUDGEMENT: The observed p-value is greater than 0.05; the null hypothesis is therefore NOT REJECTED.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 DISCUSSION

5.1.1 Sociodemographic Profile and Injury Prevalence

The finding that the majority of the present study's respondents were male (63.0%) suggests that football within the university's amateur setting remains a male-dominated sport. This demographic observation is corroborated by several studies from various parts of Nigeria, including those by Gbadamosi et al. (2015) and Onakunle et al. (2016), which also reported a male dominance in amateur football. The reason for this is likely rooted in socio-cultural factors where football is traditionally promoted and followed more intensely as a male sport in Nigeria.

The results of the present study showed a high injury prevalence, with 76.1% of the amateur footballers in the University of Benin reporting they had sustained at least one football-related injury over their playing career. This suggests that participation in amateur university-level football carries a considerable injury risk. This finding is in strong agreement with a study conducted in Benin City by Azubuike and Okojie (2009), who found a comparable football injury prevalence of 81.6% among amateur footballers. Furthermore, a systematic review by Gurau et al. (2023a) reinforces this finding by noting that amateur football maintains a high injury incidence, comparable to and sometimes exceeding that of professional level football. The similarity in prevalence across these studies implies that high injury risk is a consistent and predictable feature of amateur

football, both within Nigeria and internationally.

The results of the present study also found that lacerations and skin injuries were the most commonly reported type of injury (40.2%). This diverges from the trend in the literature where musculoskeletal injuries of the lower limbs, such as sprains and strains, are typically most predominant (Azubuike & Okojie, 2009; Bello *et al.*, 2020; Gurau *et al.*, 2023b). The reason for this discrepancy likely points to specific environmental and systemic factors within the Nigerian university setting. Studies by Owoeye et al. (2013) and Bello et al. (2020) found that poor playing field conditions are a significant issue. Abrasive, uneven, or poorly maintained playing surfaces would directly contribute to a higher rate of skin injuries from falls and tackles. Another plausible reason is the lack of adequate and professional medical support, a common feature in amateur football settings (Owoeye *et al.,* 2013). This scarcity may lead to an under-diagnosis and under-reporting of more complex musculoskeletal injuries, while more visible and easily self-diagnosed skin injuries are more frequently reported by the players themselves.

5.1.2 Knowledge of Injury Prevention

The results of the present study showed that respondents have good knowledge regarding key injury prevention principles. This was evidenced by over 95% of respondents correctly identifying the lower limbs as the most vulnerable body part and recognizing the necessity of a warm-up. This finding agrees with the results of a study by Bakare et al. (2021) who found that informed players are better positioned to adopt positive attitudes towards football injury prevention. The reason for this high level of general awareness can likely be attributed to the respondents' higher academic background in the University of Benin.

However, the present study's finding that only 53.3% of respondents could identify the FIFA 11+ program shows a deficit in knowledge of specific, evidence-based interventions. This finding is comparable to the results of a study by Owoeye et al. (2013), who found an even lower awareness rate (20.7%) of the FIFA 11+ among amateur football players in a Nigerian youth league. The consistency of these findings suggests a systemic failure within the Nigerian amateur football ecosystem to disseminate and promote current best practices. The discrepancy between high general awareness and low specific knowledge may be due to the fact that while the respondents' university curriculum provides foundational knowledge, it may not cover specialized, applied topics like sports-specific injury prevention programs.

Furthermore, this study revealed a widespread misconception regarding stretching, with nearly half the players being incorrect or uncertain about the ineffectiveness of static stretching as a standalone injury prevention method. This indicates a persistent adherence to traditional but outdated practices. This finding is consistent with the results of studies by Zech and Wellmann (2017) and Som et al. (2022), which showed that stretching remains one of the most common prevention strategies players use, driven by a misplaced belief in its efficacy. The reason for this may be the deeply ingrained nature of stretching as a traditional warm-up component, which has not yet been displaced by modern, evidence-based knowledge in the amateur football setting.

5.1.3 Attitudes Towards Injury Prevention

The present study's results revealed a mostly neutral to positive attitude towards injury prevention among respondents. A majority of them (91.3%) acknowledging its importance

and expressing a willingness to learn about it. This positive disposition is consistent with findings from international studies, where a high interest in injury prevention has been consistently reported among both amateur and elite players (Loose *et al.,* 2018 and Bakare *et al.,* 2021). This suggests that amateur players, regardless of their background, generally understand and value the concept of staying injury-free, which forms a crucial foundation for any successful injury prevention intervention.

Conversely, the present study's results showed that the attitude of players towards playing with a minor injury was poor, with 40.2% agreeing they would continue to play. This finding aligns with the results of a study by Puszczałowska-Lizis et al. (2025), whose study of Polish amateur footballers found that an alarming 91% had trained or played while in pain. The reason for this finding may be attributed to a pervasive 'warrior culture' within amateur football, where players feel pressured to demonstrate toughness and commitment, causing them to prioritize immediate participation over long-term health. This mentality likely contributes to a higher rate of re-injury, a factor that Gurau et al. (2023b) found to be slightly higher in amateur (16.66%) than in professional (15.25%) football. This difference might be potentially explained by premature return to play and inadequate rehabilitation in the amateur football setting.

5.1.4 Injury Prevention Practices

The present study's findings showed that there was a significant disparity between players' knowledge and their actual prevention practices. The present study's results found that 33.7% of players reported never performing a warm-up, despite 96.7% acknowledging that it is necessary in injury prevention. This discrepancy is not unique to the present study's

population. Studies by Njoku and Ugwuoke (2023) and Puszczałowska-Lizis et al. (2025) also reported inconsistent warm-up practices among amateur athletes. The consequences of this gap are significant, as highlighted by Gurau et al. (2023b), who noted that traumatic injuries, which are often preventable with proper preparation, are more frequent in amateur (76.88%) than in professional (64.16%) football. The reason for this gap appears to be systemic rather than stemming from individual lack of knowledge. Factors such as a lack of time, inadequate facilities, and insufficient enforcement by coaches likely create an environment where best practices are difficult to implement consistently.

The present study's results also found that players primarily relied on their own initiative through self-research (37.0%) and their coach (34.8%) for information on injury prevention, with qualified physiotherapists being a less frequent source (16.3%). This finding suggests that professional medical support is often scarce in amateur football settings. This finding agrees with the results of studies by Gbadamosi et al. (2015) and Bello et al. (2020), which highlighted the limited access to and awareness of physiotherapy services among amateur teams, with the latter noting that a majority of injured players in Kano resorted to self-treatment. This absence of professional medical guidance creates a vacuum that is filled by potentially unreliable sources. While coaches are central figures, their own knowledge may be limited, and as Loose et al. (2018) found, there is often a lack of consensus between players and coaches on key prevention and recovery strategies, which further complicates effective injury management.

5.1.5 Influence of Sociodemographic Variables on Knowledge and Attitudes towards Injury Prevention

The results of the present study found that there was no statistically significant association between the sociodemographic variables (gender, department, academic level and years of football experience) and respondents' levels of knowledge and attitudes towards injury prevention. There was also no statistically significant relationship between respondents' age and BMI and their knowledge and attitude scores. This suggests individual player characteristics did not significantly influence how much a player knew about injury prevention or how they felt about it.

The present study's findings is comparable to the results of a study by Owoeye et al. (2013), who also found no significant association between years of football experience and knowledge of injury prevention among Nigerian youth players. The reason for this may be that in an unstructured amateur environment, longer participation does not necessarily equate to learning evidence-based practices. Instead, it may simply lead to the reinforcement of existing, and potentially incorrect, habits and beliefs. Furthermore, the relatively narrow age range of the participants (18–25 years) may have limited the statistical variability needed to detect a significant correlation. This educational foundation provided by the university appears to act as a great leveler on amateur footballers knowledge and attitudes towards injury prevention, overriding the potential influence of individual demographic differences

5.2 Conclusion

This study concluded that undergraduate amateur footballers in the faculty of Basic Medical Sciences, University of Benin possess good knowledge of fundamental injury prevention principles. However, a clear deficiency exists in their knowledge of specific, evidence-based interventions such as the FIFA 11+ program, and common misconceptions, particularly regarding stretching, are prevalent.

The attitudes of the players towards injury prevention are neutral to positive, with most of them acknowledging its importance and expressing a willingness to engage in preventive activities. Despite this, there was a prevalent attitude characterized by a willingness to continue playing despite minor injuries, which points to a cultural norm that conflicts with their otherwise positive attitudes towards injury prevention. This highlights a disconnect between theoretical attitudes and practical, on-field decision-making.

Knowledge and attitudes towards injury prevention were not influenced by age, gender, department, academic level, years of football experience and BMI among amateur footballers in the faculty of Basic Medical Sciences, University of Benin.

5.3 Recommendations

i. Evidence-Based Educational Workshops: The University's Sports Committee, in collaboration with the various faculties, should design and implement mandatory annual workshops for all registered student-athletes and coaches. These workshops should focus on translating knowledge into practice by moving beyond general principles to provide practical, hands-on training on specific, evidence-based, and low-cost injury prevention programs like the FIFA 11+. A key component should be dedicated to debunking common

myths surrounding practices like static stretching.

ii. Coach Education and Empowerment: Given that coaches are a primary source of information, it is imperative that they are well-informed. The university should require all coaches of its registered teams to obtain a basic certification in sports injury prevention and first aid. This would empower them to enforce best practices, such as mandatory structured warm-ups, and to create a team environment where preventative measures are non-negotiable.

iii. Establish Clear Return-to-Play Protocols: To counter the hazardous culture of playing through pain, the Sports Council should develop and enforce clear, medically-guided return-to-play protocols. These protocols should remove the decision from the hands of the player and coach and require clearance from a qualified health professional. This should be supported by an awareness campaign that reframes player health as a key component of long-term team success, thereby challenging the "tough-it-out" mentality.

iv. Formalize an Inter-Faculty Sports Medicine Support Program: To address the critical lack of access to professional guidance, a formal program should be established that embeds senior students from the Physiotherapy, Nursing, and Medical Laboratory Science departments within the university's sports teams. Under the supervision of faculty staff, these students could provide on-site first aid, guide prevention exercises, and serve as a reliable source of evidence-based information, creating a mutually beneficial system that enhances player safety and provides invaluable practical experience for the students.

5.4 Implications for Further Study

i. Qualitative Exploration of the Knowledge-Practice Gap: This study quantitatively identified a significant gap between what players know and what they do. Future research

should employ qualitative methods, such as semi-structured interviews and focus groups with both players and coaches, to explore the underlying reasons for this discrepancy. Such a study could provide rich, contextual insights into the specific barriers—be they cultural pressures, time constraints, lack of resources, or coach priorities—that hinder the implementation of injury prevention practices.

ii. Assessment of Coaches' Knowledge and Impact: As coaches were identified as a primary source of information, a critical next step is to conduct a specific study assessing the knowledge, attitudes, and practices of coaches within the same amateur football setting. A correlational study could then examine the relationship between a coach's level of knowledge and the injury incidence and prevention behaviours of their team, thereby quantifying the coach's influence on player safety.

iii. Longitudinal Interventional Research: The current study provides a cross-sectional snapshot. A logical progression would be to design and implement a longitudinal, interventional study. A cluster-randomized controlled trial could be conducted across the university's different faculty teams, where an intervention group receives the educational workshops and access to the proposed student-led medical support, while a control group continues with their usual practices. Tracking injury rates, knowledge scores, and practice adherence over a full season would provide robust evidence on the effectiveness of such interventions in a real-world setting.

iv. Comparative and Broader-Scale Studies: This study was limited to a specific, medically-inclined population within one university. Future research should seek to broaden the scope by expanding the study to a multi-university or regional level to create a more generalizable picture of the state of injury prevention in Nigerian amateur football. This would allow for

a more comprehensive understanding of the challenges and opportunities for improving player safety on a larger scale.

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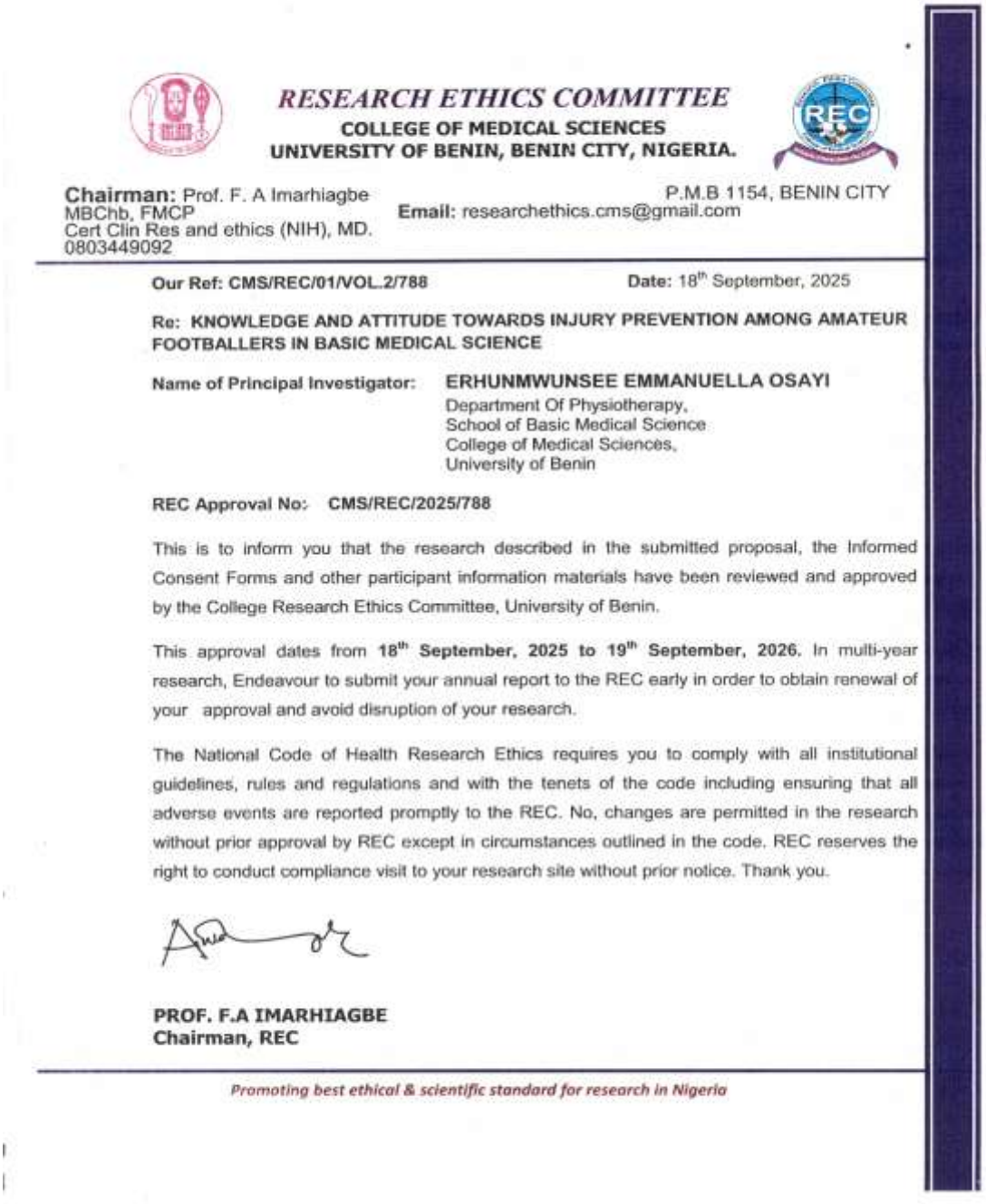
APPENDICES

APPENDIX I



RESEARCH ETHICS COMMITTEE
COLLEGE OF MEDICAL SCIENCES
UNIVERSITY OF BENIN, BENIN CITY, NIGERIA.

Chairman: Prof. F. A Imarhiagbe
MBChb, FMCP
Cert Clin Res and ethics (NIH), MD.
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P.M.B 1154, BENIN CITY
Email: researchethics.cms@gmail.com

Our Ref: CMS/REC/01/VOL.2/788 **Date:** 18th September, 2025

Re: KNOWLEDGE AND ATTITUDE TOWARDS INJURY PREVENTION AMONG AMATEUR FOOTBALLERS IN BASIC MEDICAL SCIENCE

Name of Principal Investigator: **ERHUNMWUNSEE EMMANUELLA OSAYI**
Department Of Physiotherapy,
School of Basic Medical Science
College of Medical Sciences,
University of Benin

REC Approval No: CMS/REC/2025/788

This is to inform you that the research described in the submitted proposal, the Informed Consent Forms and other participant information materials have been reviewed and approved by the College Research Ethics Committee, University of Benin.

This approval dates from **18th September, 2025 to 19th September, 2026.** In multi-year research, Endeavour to submit your annual report to the REC early in order to obtain renewal of your approval and avoid disruption of your research.

The National Code of Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the code including ensuring that all adverse events are reported promptly to the REC. No, changes are permitted in the research without prior approval by REC except in circumstances outlined in the code. REC reserves the right to conduct compliance visit to your research site without prior notice. Thank you.

PROF. F.A IMARHIAGBE
Chairman, REC

Promoting best ethical & scientific standard for research in Nigeria

APPENDIX II

INFORMED CONSENT FORM

Title of Study: Knowledge and Attitudes towards Injury Prevention among Amateur Footballers in the University of Benin.

Researcher: Emmanuella Osayi Erhunmwunsee

I am a final-year student of the Department of Physiotherapy, University of Benin, conducting a research study as part of the requirements for the completion of my undergraduate project.

Purpose:

This study aimed to assess the level of knowledge and attitudes towards injury prevention among amateur footballers in the Faculty of Basic Medical Science, University of Benin. The findings will provide insight into the awareness and perception of injury prevention strategies and guide future physiotherapy-led interventions to reduce sports-related injuries.

Participation:

Your participation in this study is entirely voluntary. You may choose to withdraw from the study at any time without any penalty or consequence.

Confidentiality:

All information provided will be kept strictly confidential and will be used solely for research purposes. No names or identifying details will appear in any report or publication arising from this research.

Risks/Benefits:

There are no known risks associated with participating in this study. The potential benefit includes contributing to improved understanding and implementation of injury prevention programs among amateur footballers in the University of Benin.

Consent:

By signing below, you agree to voluntarily participate in this study and affirm that you have fully understood the purpose and nature of the research.

Signature: _____ Date: _____

APPENDIX III

QUESTIONNAIRE ON KNOWLEDGE AND ATTITUDE TOWARDS INJURY PREVENTION AMONG AMATEUR FOOTBALLERS IN BASIC MEDICAL SCIENCE, UNIVERSITY OF BENIN

Instructions for Participants

This questionnaire is designed to assess your knowledge and attitudes towards injury prevention in football. Please answer all questions honestly and to the best of your ability. Your responses are anonymous and will be used solely for research purposes. The questionnaire will take approximately 15–20 minutes to complete.

SECTION A: DEMOGRAPHIC INFORMATION

Instructions: Please provide the following information by filling in the blanks or ticking the appropriate option.

1. Age: _____ years
2. Gender: Male [ ] Female [ ]
3. Department: Physiotherapy [ ] Medical laboratory scientist [ ] Radiography [ ] Medical Biochemistry [ ] Anatomy [ ] Physiology [ ] Nursing Science [ ]
4. Academic Level: 100 [ ] 200 [ ] 300 [ ] 400 [ ] 500 [ ]
5. Years of Football Experience: Less than 1 year [ ] 1–3 years [ ] 4–6 years [ ] 7–10 years [ ] More than 10 years [ ]
6. Height: _____ meters
7. Weight: _____ kilograms
8. BMI: _____

9. Have you ever sustained a football-related injury? Yes [ ] No [ ]
10. If yes, specify type (e.g., ankle sprain, knee injury): _____

SECTION B: KNOWLEDGE OF INJURY PREVENTION

Instructions: Please select the correct answer by ticking one option for multiple-choice questions or indicating True/False. Each question has only one correct answer.

1. Which of the following is a common cause of football injuries?

   Adequate warm-up

   Poor physical conditioning

   Proper footwear

   Sufficient hydration

2. Is a proper warm-up necessary to prevent football injuries?

   True

   False

3. Which of the following is an evidence-based injury prevention program for football?

   FIFA 11+

   General stretching

   Yoga sessions

   Meditation

4. Does wearing shin guards reduce the risk of lower limb injuries in football?

   True

   False

5. Is adequate hydration important for preventing football injuries?

True

False

6. Which body part is most commonly injured in amateur football?

   Head

   Upper limbs

   Lower limbs

   Back

7. Does static stretching alone effectively prevent football injuries?

   True

   False

8. Can previous injuries increase the risk of new injuries in football?

   True

   False

9. Which of the following is a key component of the FIFA 11+ program?

   Running drills and strength exercises

   High-intensity interval training

   Static stretching only

   Nutritional advice

SECTION C: ATTITUDES TOWARDS INJURY PREVENTION

Instructions: Please indicate your level of agreement with the following statements by circling the appropriate number.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

10. Injury prevention is important for amateur footballers.

1. 2 3 4 5

11. I am willing to spend time learning about injury prevention strategies.

1 2 3 4 5

12. Using protective equipment (e.g., shin guards) is necessary during football matches.

1. 2 3 4 5

13. I believe warm-up exercises can reduce my risk of football injuries.

1 2 3 4 5

14. Injury prevention programs like FIFA 11+ are too complex to implement.

1 .2. 3 4 5

15. I would follow an injury prevention program if my coach recommended it.

1 2 3 4 5

16. I feel confident in my ability to perform injury prevention exercises correctly.

1 2 3 4 5

17. Lack of time prevents me from practicing injury prevention strategies.

1 2 3 4 5

18. My team provides enough support for injury prevention practices.

1 2 3 4 5

19. I would continue playing football even if I have a minor injury.

1 2 3 4 5

SECTION D: INJURY HISTORY AND PREVENTION PRACTICES

Instructions: Please select the appropriate option or provide details as requested.

20. How often do you perform a warm-up before playing football?

Always

Often

Sometime

Never

21. How often do you use shin guards during football matches

    Always

    Often

    Sometimes

    Never

22. Have you ever heard of the FIFA 11+ injury prevention program?

    Yes

    No

23. Do you currently use any injury prevention strategies (e.g., warm-ups, stretching, taping)?

    Yes

    No

24. If yes, specify: _____

25. Who primarily provides you with information about injury prevention?

    Coach

    Physiotherapist

    Teammates

    Self (e.g., online research, personal experience)

    Other (specify): _____

    End of Questionnaire