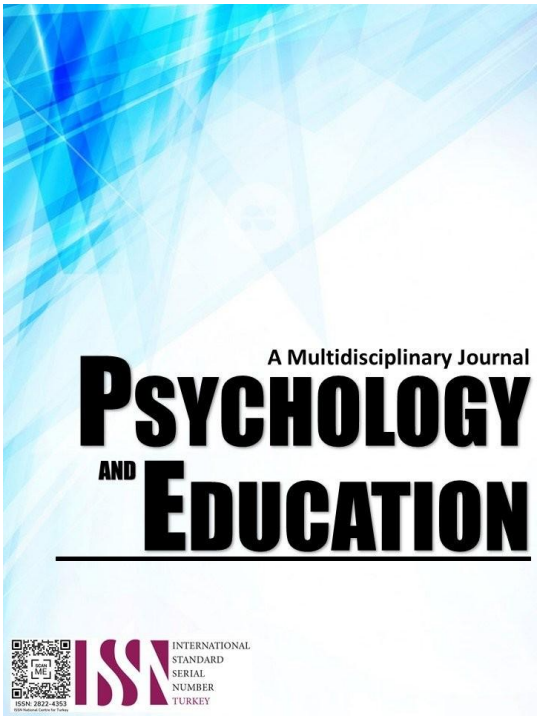
SPORTS INJURIES AND PREVENTIVE STRATEGIES AMONG THE ATHLETES IN PANGASINAN II DIVISION



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Research Article

Sports Injuries and Preventive Strategies among the Athletes in Pangasinan Ii Division

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Abstract

This study investigates the prevalence of common sports injuries and the implementation of preventive strategies among athletes in the Pangasinan II Division from 2022 to 2024. As participation in school-based sports continues to grow, concerns about athlete safety have become increasingly important. Injuries—particularly those affecting the shoulder, elbow, knee, leg, and ankle—pose significant challenges to athletic development by limiting performance and interrupting training. A total of 131 sports coaches from various schools in the division participated in the study through a validated survey. The most frequently reported injuries included rotator cuff strains, tennis elbow, runner's knee, groin pulls, and ankle sprains. These were often linked to overuse, inadequate preparation, and unsafe playing environments. The study assessed the extent to which preventive strategies were applied across three key areas: education and training, environmental safety and maintenance, and policy enforcement. Results revealed that while coaches had a moderate level of awareness and application of training-related preventive strategies, there were clear gaps in the upkeep of facilities and enforcement of safety policies. Coaches also highlighted several challenges, such as insufficient medical support, limited access to proper equipment, and a lack of structured orientation for both staff and athletes. Statistical analysis showed a significant relationship between how often injuries occurred and how effectively preventive strategies were carried out. To address these concerns, the research proposes a practical, context-specific preventive plan aimed at promoting athlete safety and improving sports performance. By strengthening training programs, ensuring safer environments, and reinforcing clear policies, schools can better protect student-athletes and foster healthier sports participation.

Keywords: *sports injuries, preventive strategies, coaching practices, athlete safety, physical education, injury management*

Introduction

Injuries are an inevitable part of sports. Regardless of how cautious athletes and their coaches may be, the physical demands of training and competition carry the risk of harm. Even minor injuries can interrupt an athlete's performance and hinder their progress toward peak performance.

Despite the apparent importance of reducing injury risk, it is often overlooked in practice. Even though many sports professionals agree on its relevance (Edouard, 2021), preventive efforts are not consistently implemented across athletic programs. In a recent online survey, less that one-third of athletes self-declared having a partially or fully adopted any injury risk reduction program during their lifetime. The injury risk reduction program is defined in the survey as a set of specific exercises related to the sport which aims to reduce the rick of injury, including muscle strengthening, stretching or balance exercises (Ruffault, 2022).

Although injury prevention and rehabilitation have long been part of sports science, there are still important gaps in both knowledge and practice. Edouard and Ford (2020) pointed out that more work is needed to deepen the understanding of injury epidemiology, risk factors, and how injuries actually occur. They also emphasized the need to improve practical approaches that help reduce the chances of injury, reinjury, and long-term effects that may follow. This highlights the importance of continued research on how injuries happen and how they can be better prevented, especially at the grassroots level.

Over the last ten years in the United States, more young people have been getting involved in organized sports, whether for fun or competition. While this trend lines up with national efforts to promote better health and more physical activity, studies show a troubling rise in sports-related injuries among youth (Lykissas et al., 2013). Mugele et al. (2018) reviewed the impact of general versus sport-specific injury prevention programs on injury rates among athletes. Out of an initial pool of 6,619 studies, only 15 met the criteria for inclusion. An additional 13 studies were identified through reference lists and other sources, bringing the total to 28. Among these, one study focused on sport-specific strategies, seven used general approaches, and 20 combined both. Of the 28 studies, 24 reported a reduction in injury rates. The remaining four showed no effect—one used a general strategy, and three used mixed approaches. Overall, general and mixed programs appeared to reduce injury rates. However, sport-specific programs were largely unexplored, and despite frequent discussion about what defines them, no clear agreement was reached. Future research could focus on better defining these programs and evaluating their actual effectiveness.

Edouard et al. (2023) explored how athletes perceive injury risk and efforts to reduce it. The study found that many participants believed injury is an inevitable part of sport and something that should be considered when making life decisions. However, fewer agreed with the idea that taking injury risks is necessary to reach top performance. Most athletes reported using injury prevention strategies in their daily routines. Common practices included warming up properly, staying hydrated, and paying attention to pain. On the other hand, strategies like taking digestive naps, seeking psychological support, or focusing on mental preparation were mentioned less often. These

findings offer useful insight into how injury prevention approaches can be improved and better integrated into athletic training.

Smyth et al. (2019) explored injury prevention strategies tailored for pre-elite athletes involved in Olympic and professional sports. They identified four main intervention categories: exercise, psychological approaches, equipment use, and nutrition. Among the seven studies that focused on exercise-based interventions, four reported a protective effect, while three found no significant impact—resulting in mixed evidence. The authors cautioned that these findings should be interpreted carefully, as many studies had a high risk of bias, lacked detail in reporting, and offered limited insight into how interventions could be implemented in practice. The strength of evidence was evaluated using established guidelines by Reurink et al. (2014), which ranked interventions as strong, moderate, limited, or conflicting, depending on the number and quality of studies and the consistency of their findings.

Wang Hua et al. (2022) looked into sports injury prevention and regional fitness trends. Their research showed that although urban residents have a strong interest in fitness, limited resources often lead them to choose lower-complexity activities such as running, walking, or circuit training. Most injuries from these activities were minor, with skin abrasions being the most common. The study concluded that providing better guidance for safe exercise can help improve people's understanding of injury risks and lay the groundwork for a more structured sports system, while also offering essential knowledge on emergency care.

Hanlon et al. (2019) focused on how injury prevention programs affect lower-body performance in youth athletes. They found that the FIFA 11+ program was the most frequently used. Across the studies analyzed, improvements were seen mainly in strength, coordination, posture, and balance. However, gains in speed were modest, and endurance was not significantly improved by any of the programs. The study concluded that while such programs can improve some modifiable risk factors for injury, others remain largely unaddressed.

Saragiotto et al. (2014) examined risk factors and preventive strategies in elite athletes. Overtraining and poor technique were identified as leading causes of injury. Common preventive measures included muscle strengthening and nutritional counseling. The study also noted that other contributing factors such as inadequate diet and certain behavioral habits played a role in injury risk.

With ongoing changes in the education system, there's increasing emphasis on developing athletes holistically, intellectually, physically, morally, and emotionally. Interestingly, Glatterer (2012) noted that athletes competing at lower levels tend to experience higher injury rates. Sport, beyond competition, is widely recognized for its contributions to health, education, and national development. Zeigler (2007) noted that the first formal sport management program was introduced in 1966 in response to the growing complexity of managing athletic programs across different sectors.

Mental health has also been linked to athletic performance and injury prevention. A meta-analysis by Moore et al. (2019) reviewed 14 studies on martial arts training and found that it had a moderate positive effect on reducing anxiety and depression, and a smaller effect on improving overall wellbeing. These findings suggest that mental and emotional readiness can help athletes avoid injury and perform better in competition.

Injuries don't just take a physical toll; they also affect athletes psychologically. Leguizamo et al. (2023) found that injured athletes often blamed bad luck, disruptions in their routines, and negative emotions for their injuries. Coping strategies included reframing thoughts, calming techniques, seeking social support, and sometimes withdrawing mentally. The study emphasized the importance of social support and good communication from coaches and medical staff in promoting athlete wellbeing.

Athletes' views on injury and prevention are also important to consider. Edouard et al. (2023) found that many athletes see injury as a normal part of sports and believe it should be factored into major life decisions. The study also showed that most athletes are willing to use basic injury prevention strategies like warming up, staying hydrated, and paying attention to pain. However, fewer gave importance to things like mental preparation or psychological support. These findings suggest that while many athletes recognize the value of injury prevention, there may still be gaps in how they approach it, especially beyond the physical aspects.

Sutter et al. (2023) introduced a framework for interdisciplinary research into sports injuries. Their approach involved three key steps: building a shared understanding of injury causes using insights from multiple disciplines; compiling both qualitative and quantitative data; and fostering integrated discussions among team members. This method aims to offer a more complete picture of how injuries happen and how they might be prevented.

Preventing injury isn't just about physical conditioning. Akande, Vanwyk, and Osagie (2000) argued that regular exercise boosts blood flow to the brain, helping maintain cognitive function and even improving mental health outcomes in people with severe disorders. Activities like cycling, brisk walking, or even using stairs can reduce stress and enhance both mental and physical resilience.

Despite the saying "prevention is better than cure," injury prevention in sports continues to pose challenges. Arabnejad et al. (2023) stressed the importance of teaching safety practices to adolescent athletes. Their findings suggested that factors such as nutrition, training intensity, age, and sports experience all play a role in injury risk. They also noted that sports with fewer collisions tend to have fewer injuries, and that injury rates peak during the summer months. As a result, the authors recommended standardizing sports facilities for hot weather conditions and ensuring the use of proper equipment, especially in contact sports. They also highlighted the role of sports insurance in helping reduce financial burdens for injured athletes.

Based on these insights, the current study will examine the common injuries experienced by athletes in the Pangasinan II Division during both training and competitions. It will also assess how well coaches understand and apply injury prevention strategies, as well as the challenges they face in doing so.

Research Questions

This study focused on the sports injuries and injury prevention strategies among the athletes in the division of Pangasinan II for all the sports trainings and events from 2024-2025. Specifically, it sought to answer the following:

1. What is the degree of the occurrence of the common sports injuries among athletes along:
    1.1. shoulder;
    1.2. elbow;
    1.3. knee;
    1.4. leg; and
    1.5. ankle?
2. What is the level of execution of the injury prevention strategies along:
    2.1. education and training;
        2.1.1. awareness of programs;
        2.1.2. skills development;
    2.2. environmental and engineering;
        2.2.1. safety design;
        2.2.2. regular maintenance;
    2.3. policy;
        2.3.1. safety policies; and
        2.3.2. compliance and enforcement?
3. What are the challenges encountered in employing injury prevention strategies among athletes?
4. What injury prevention plan for the athletes can be proposed?

Methodology

Research Design

This study used the descriptive method of research. According to Trochim (2015), descriptive research methods aim to objectively measure variables of interest. To assess the effects of learners' perceptions on behavioral choices, the study provided a framework for data collection and analysis, offering valuable insights relevant to both pre-service and practicing educators. For this research, a structured questionnaire was selected as the primary data-gathering tool.

Furthermore, Groves et al. (2009) explained that researchers utilized questionnaires to transform information provided directly by individuals into structured data. The findings suggested that classroom management impacted both how learners acquired knowledge and how educators facilitated learning within the classroom environment.

According to Wasll, (2015), descriptive research is a formal, objective, systematic process to describe and test relationships and examine cause and effect interactions among variables. Surveys were utilized for descriptive, explanatory, and exploratory research. Moreover, a survey is utilized to collect original data for describing a population too large to directly observe A survey obtains information from a sample of people using self-report, that is, the people respond to a series of questions posed by the investigator (Frey, et, al 2014).

In this study, data were collected through self-administered questionnaires, which were either distributed digitally or personally to the respondents by the researcher. The research instrument, a structured questionnaire, was employed to gather information from the participants. Quantitative research techniques, specifically utilizing the Likert scale, were applied to measure and analyze the responses.

Respondents

The respondents of the study were sports coaches from the Division of Pangasinan II during the 2024–2025 academic year. According to data provided by the Sports Coordinator of the 5th District of Pangasinan in 2024, there were 230 registered coaches participating in division trainings. The total number of respondents will be one-hundred thirty-one (131) coaches from Pangasinan II division. The sample size of the population was determined using Yamane's formula and utilized a random sampling technique. The sample size was computed as $n = N / (1+Ne2)$ at a .05 level of significance (e). This study was conducted at Pangasinan II division since the researcher is a sports coach and a Head Teacher of the division.

Instrument

In this study, the information was collected through self-administered questionnaires personally distributed to the respondents by the researcher. The research instrument was a questionnaire designed to gather information from the respondents. Likewise, quantitative

research techniques using the Likert scale were utilized.

A survey questionnaire was used as the primary tool for gathering the needed data. The initial draft was prepared by the researcher and reviewed by the adviser or research panel. The survey questionnaire for the respondents consisted of three parts. Part I dealt with common injuries encountered by athletes, including shoulder, elbow, knee, leg, and ankle injuries. Part II addressed the injury prevention strategies implemented by coaches. Lastly, Part III covered the challenges encountered in implementing injury management strategies among athletes.

To obtain the reliability and validity of the survey questionnaire, the researcher sought the help of validators. The set of validators included the research adviser, a MAPEH expert, a research expert, a school head, and a sports coach from the Pangasinan II division. Cronbach's alpha was utilized to measure the internal consistency of the questionnaire. The computed Cronbach alpha reliability of 0.94 indicated that the instrument used in this study was 94% reliable. The reliability coefficient was calculated using the Pearson product-moment correlation coefficient formula. A correlation coefficient of 0.75 was considered adequate to judge the reliability of the instrument.

In addition, data collection started with applying for a research permit from the Schools Division Superintendent of Pangasinan II division. The researcher administered the questionnaires in cooperation with the school heads and discussed guidelines on how to respond to the questionnaires. Once the questionnaires were distributed to the respondents, the researcher retrieved them after a week; results were recorded and statistically treated.

Procedure

The implementation of the study was undertaken by the researcher after permission was secured from the authorities of Pangasinan II division. Proper communication was coordinated with the School Heads before the distribution of the questionnaire. The researcher oriented the respondent-coaches either verbally or through text information before distributing the questionnaire. The conduct of the study helped athletes, coaches, teachers, school heads, and officials in managing injuries among athletes.

Furthermore, the researcher retrieved the completed questionnaires and responses. The purpose and objectives of the study were clearly explained. Utmost confidentiality was assured to avoid inhibitions from the respondents in accomplishing the questionnaire. The respondents were asked to choose their preferred responses by checking the appropriate boxes.

Data Analysis

The data gathered from the questionnaire was subjected to appropriate tools to answer the specific problems of the study. The data were tallied, organized, tabulated, and presented in textual and tabular form.

The weighted mean was used to determine the degree of occurrence of the common injuries among the athletes in Pangasinan II division. The weighted mean was used to determine the level of skills of coaches in the implementation of injury prevention strategies among the athletes along treatment of minor injuries, and treatment of serious injuries. For the challenges encountered by the athletes, weighted mean was used. The data of the study was processed, organized, and summarized using the Statistical Package for Social Sciences (SPSS 26).

Ethical Considerations

Given that the respondents for the study on "Sports Injuries and Injury Prevention Strategies Among the Athletes in Pangasinan II Division" are coaches, it's crucial to uphold ethical principles of confidentiality and respect for autonomy.

Coaches participating in the study should be assured that any information they provide will be treated with strict confidentiality. This includes ensuring that individual responses are anonymized, and that no personally identifiable information is shared in any publications or presentations resulting from the study. Emphasizing the importance of confidentiality can help foster trust and encourage honest and open responses from the coaches.

Coaches should be given the opportunity to autonomously decide whether or not to participate in the study. This involves providing clear and transparent information about the purpose, scope, and potential implications of the research. Coaches should understand that participation is voluntary, and they should not face any pressure or coercion to take part. Additionally, coaches should be informed of their right to withdraw from the study at any time without repercussion.

Prior to participating in the study, coaches were asked to provide informed consent. This entails providing them with a detailed explanation of the study's objectives, methods, potential risks, and benefits. Coaches should have the opportunity to ask questions and seek clarification before consenting to participate. Consent forms should clearly outline these details and emphasize the voluntary nature of participation.

Furthermore, the researcher ensured that the study is conducted in a manner that respects the dignity and professional expertise of the coaches. This includes maintaining a respectful and non-judgmental approach during data collection and analysis.

By prioritizing confidentiality, respecting autonomy, and obtaining informed consent from coaches, the study can uphold ethical

standards and contribute valuable insights into sports injuries and injury prevention strategies within the Pangasinan II Division coaching community.

Results and Discussion

This section presented the data collected, statistical analyses made, and the interpretation of the salient findings.

Common Sports Injuries Among Athletes

Degree of Occurrence of Common Sports Injuries Among Athletes Along Shoulder

Table 1 shows the degree of occurrence of the common sports injuries among athletes along shoulder. Table 1 presents that the rotator cuff injury along shoulders occurred most as the most common sports injury among the athletes, 3.76 mean. It is followed by impingement, 3.31 mean; and instability, 2.37 mean. Further, the overall weighted mean, 3.17 shows that these common sports injuries along shoulder slightly occurred to all events.

Confirming these results is the study of Gibson et al. (2022) that on the 3,889 studies screened, 97 described shoulder injury in youth sports. Shoulder injuries were identified in 24 unique sports. 'e median seasonal prevalence of shoulder injury was 10.9% (range 1.2–28.2%). 'e most common injury mechanisms identified were contacted with another player, contact with the playing environment, and falling to the ground. Risk factors for shoulder injury identified were side-to-side strength imbalances, weak external rotator muscles, and scapular dyskinesia.

With the result of this study and other studies, it can be concluded that shoulder injuries are common and prevalent among athletes. Hence, needs later prevention strategies.

Table 1. *Degree of Occurrence of Common Sports Injuries Among Athletes Along Shoulders*

Indicators	*MSV*	*DR*
Rotator Cuff Injury (the tendons or bursae near the joint became inflamed from overuse or sudden injury)	3.76	O
Impingement (when the top of the shoulder blade puts pressure on the soft tissues beneath it when the arm is lifted)	3.31	S
Instability (when the round end of the upper arm bone is forced out of its shallow socket)	2.37	R
Overall Weighted Mean	3.15	S

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Sometimes (S); 1.51–2.50 – Rarely (R); 1.00–1.50 – Occasional (O).*

Degree of Occurrence of Common Sports Injuries Among Athletes Along Elbows

Table 2 shows the degree of occurrence of common sports injuries among athletes along elbows.

Table 2 presents that the tennis elbow or lateral epicondylitis injury along elbows occurred most as the common sports injury among athletes, 3.66 mean. It is followed by the injuries on golfer's elbow or media epicondylitis, 3.29 mean. Further, the injuries in the ulnar collateral ligament, and little league elbow, both at 2.44 mean. The overall weighted mean, 2.96 shows that these common sports injuries slightly occurred to athletes.

Table 2. *Degree of Occurrence of Common Sports Injuries Among Athletes Along Elbows*

Indicators	*MSV*	*DR*
Tennis elbow or lateral epicondylitis (when the tendons in the elbow develop small tears and become inflamed)	3.66	O
Golfers's elbow or media epicondylitis (it causes pain in the inner part of the elbow and may spread to the forearm and wrist)	3.29	S
Ulnar collateral ligament injury (tears to the ligament on the inner part of the elbow)	2.44	R
Little league elbow (a growth plate injury in the elbow, and the pain is in the inner part of the elbow)	2.44	R
Overall Weighted Mean	2.96	S

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Sometimes (S); 1.51–2.50 – Rarely (R); 1.00–1.50 – Occasional (O).*

Degree of Occurrence of Common Sports Injuries Among Athletes Along Knees.

Table 3 shows the degree of occurrence of the common sports injuries among athletes along knees.

Table 3 presents that the runner's knee or jumper's knee injuries occurred most as the common sports injury among athletes, 3.60 mean. It often occurs as a common injury in the knees. It is followed by the tendon tear in the knee, 3.40 mean. Further, the knee injuries such as dislocation, fracture and torn ligament came next with 2.90, 2.89, and 2.88 means, respectively. These injuries slightly occurred to all athletes in the different events. Also, the meniscal tear is a knee injury that slightly occurred to athletes in the different events.

Table 3. *Degree of Occurrence of Common Sports Injuries Among Athletes Along Knees*

Indicators	*MSV*	*DR*
Runner's knee or Jumper's knee (pain or tenderness close to the knee cap at the front of the knee)	3.60	O
Tendon tear (common in sports that involve running and jumping due to forceful landing and awkward jump)	3.40	S
Dislocation (to slip out of position)	2.90	S
Fracture (a break in the bone)	2.89	S
Torn ligament (when the knee is over-extended or twisted, the ligaments within it can tear)	2.88	S
Meniscal tear (an awkward twist or pivot causing a tear, common when the knee suffers a sprain or complete tear of the ligaments)	2.69	S
Overall Weighted Mean	3.06	S

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Sometimes (S); 1.51–2.50 – Rarely (R); 1.00–1.50 – Occasional (O).*

The overall weighted mean, 3.06 shows that these common sports injuries along the knees sometimes occurred to athletes. This implies that these knee injuries slightly occurred to athletes.

Degree of Occurrence of Common Sports Injuries Among Athletes Along Legs.

Table 4 shows the degree of occurrence of the common sports injuries among athletes along legs.

Table 4 presents that the groin pull in the legs are the most common sports injury among athletes, 3.76 mean. It often occurs as a common injury in the legs. It is followed by the hamstrings strain, 3.34 mean. It sometimes occurred to athletes in all events. Also, the shin splints sometimes occurred as a common sports injury among the athletes in the different events. These injuries slightly occurred to all athletes in the different events.

The overall weighted mean, 3.40 shows that these common sports injuries along the legs sometimes occurred to athletes in the different events. This implies that these leg injuries slightly occurred to athletes.

Table 4. *Degree of Occurrence of Common Sports Injuries Among Athletes Along Legs*

Indicators	*MSV*	*DR*
Groin Pull (a quick side-to-side motion that can strain the muscles of the inner thighs)	3.76	O
Hamstring strain (three muscles run along the back of the thigh and form the hamstring, usually it involves a lot of running, jumping, and sudden start and stop	3.34	S
Shin splints (pain caused by inflammation of the muscles, tendons and bone tissue)	3.25	S
Overall Weighted Mean	3.40	S

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Sometimes (S); 1.51–2.50 – Rarely (R); 1.00–1.50 – Occasional (O).*

Degree of Occurrence of Common Sports Injuries Among Athletes Along Ankles.

Table 5 shows the degree of occurrence of the common sports injuries among athletes along ankles.

Table 5 presents that the ankle sprain is the most common sports injury among athletes, 3.29 mean. It often occurs as a common injury in the ankles. It is followed by the achilles tendinitis, 2.38 mean. This injury rarely occurs to athletes in all events. This means a minimal occurrence among the athletes in the different events.

Table 5. *Degree of Occurrence of Common Sports Injuries Among Athletes Along Ankles*

Indicators	*MSV*	*DR*
Ankle sprain (happens when you land awkwardly when jumping or pivoting, when walking in an uneven surface, or when someone lands on your foot)	3.29	S
Achilles tendinitis (results from a stretch, tear, or irritation to the tendon connecting the calf muscle to the back of the heel)	2.38	R
Overall Weighted Mean	2.84	S

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Sometimes (S); 1.51–2.50 – Rarely (R); 1.00–1.50 – Occasional (O).*

The overall weighted mean, 2.84 shows that these common sports injuries along the ankles sometimes occurred to athletes in the different events. This implies that these ankle injuries slightly occurred to athletes.

This result relates to the study of Vriend (2017) which included a total of 155 studies, mostly randomized controlled trials (43%). The majority of studies (55%) focused on strategies requiring a behavioral change on the part of athletes. Studies predominantly evaluated the preventive effect of various training programs targeted at the 'pre-event' phase (n = 73) and the use of equipment to avoid injury in the 'event phase' (n = 29). A limited number of studies evaluated the preventive effect of strategies geared at rules and regulations (n = 14), and contextual modifications (n = 18). Studies specifically aimed at preventing re-injuries were a minority (n = 8), and were mostly related to ankle sprains (n = 5).

Level of Execution of Injury Prevention Strategies

Level of Execution of Injury Prevention Strategies Along Education and Training on the Awareness of Programs

Table 6 shows the level of execution of injury prevention strategies along education and training specifically on the awareness of programs.

Table 6 shows that there is a moderate level of execution of injury prevention strategies along education and training on the awareness of programs, 3.38 overall mean.

Specifically, there is a high level of execution of injury prevention strategies base on coach experiences of implementing injury prevention strategies, 3.66 mean. Meanwhile, a moderate level of execution, 3. 47 mean for the coaches as an advocate or a member of the division or other agency's programs that focuses or includes injury prevention. Also, a moderate level of execution, 3.30 mean for the coaches being aware and well-verse of injury prevention programs. Further, the coaches joining injury prevention programs and activities in the division and other agencies got 3.28 mean; and the coaches having been a long-time coach and aware of the injury prevention strategies, 3.21 mean. For both, the coaches got a moderate level of execution of the injury prevention strategies.

Table 6. *Level of Execution of Injury Prevention Strategies Along Education and Training on the Awareness of Programs*

Indicators	*MSV*	*DR*
1. The coach has experiences of implementing injury prevention strategies	3.66	H
2. The coach is an advocate or a member of the division or other agency's programs that focuses or includes injury prevention	3.47	M
3. The coach is aware and well-verse of injury prevention programs	3.30	M
4. The coach has joined injury prevention programs and activities in the division or other agencies	3.28	M
5. The coach has been a long-time coach and aware of the injury prevention strategies	3.21	M
Overall Weighted Mean	3.38	M

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

With these results, it can be concluded that the coaches can execute the injury prevention strategies at a moderate level. Thus, the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

These results are connected with the study of Alnefaie et al. (2025) which concluded that physical therapists in Saudi Arabia have moderate-to-low awareness and implementation of sports injury prevention programs (SIPPs), especially outside of sports-specific fields. Sports physical therapists and those with higher education have significant awareness. There are minimal regional differences but a strong positive correlation between awareness and implementation. Enhanced training, resources, and institutional support are needed to improve SIPP implementation in rehabilitation.

Level of Execution of Injury Prevention Strategies Along Education and Training on the Skills Development

Table 7 shows the level of execution of injury prevention strategies along education and training specifically on the skills development.

Table 7 shows that along education and training on the skills development, coaches gaining a certificate or diploma that certifies his capability to implement injury prevention strategies got the highest mean, 3.57. This means that coaches have a high level of execution of injury prevention strategies.

Table 7. *Level of Execution of Injury Prevention Strategies Along Education and Training on the Skills Development*

Indicators	*MSV*	*DR*
1. The coach has gained a certificate or diploma that certifies his capability to implement injury prevention strategies	3.57	H
2. The coach has attended trainings on injury prevention strategies	3.41	M
3. The coach has earned at least a minimum educational background to implement injury prevention strategies	3.20	M
4. The coach has been well-exposed of injury incidents and can implement prevention strategies	3.18	M
5. The coach has the necessary educational background to implement injury prevention strategies	3.17	M
Overall Weighted Mean	3.31	M

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

For coaches having attended trainings on injury prevention strategies, 3.40 mean, there is a moderate level of execution of injury prevention strategies. Likewise, a moderate level of execution was shown on with coaches having earned at least a minimum educational background to implement injury prevention strategies, 3.20 mean; coaches having been well-exposed of injury incidents and can implement prevention strategies, 3.18 mean; and coaches having the necessary educational background to implement injury prevention strategies, 3.17 mean.

With 3.31 as the overall mean, this means that there is a moderate level of execution of injury prevention strategies along education on skills development. With these results, we can conclude that the coaches can only execute the injury prevention strategies at a moderate level. Thus, the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

Confirming this is the study of Wang Hua et al. (2022) on sports injury prevention and regional sports fitness, they found out that current urban residents' enthusiasm for fitness is high, however due to lack of conditions, athletes tend to choose some sports with lower complexity (circuits, running, walking). Most of the injuries caused by these types of sports are skin abrasions. The severity of these injuries is not high. Hence, the researchers have concluded that providing effective exercise guidance to its practitioners can improve their sports cognition, build a foundation for the professional sport system, and provide relevant knowledge about emergency treatments.

Level of Execution of Injury Prevention Strategies Along Environmental and Engineering on the Safety Design

Table 8 shows the level of execution of injury prevention strategies along education and training specifically on the skills development.

Table 8 shows that there is moderate level of execution of injury prevention strategies along environmental and engineering on safety and design having 3.08 as overall mean. This means that the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

A moderate level of execution with a 3.31 mean was concluded for two indicators which are the regular conduct of physical placement and replacement activities, and safety monitoring on the places and activities where athletes are expected to rest, practice and play. Also, a moderate level of execution of injury prevention strategies to the rest of the indicators particularly on the regular inspection and maintenance activity on the playing venues, 3.27 mean; on the safety and wellness plans being incorporated by coaches in all the programs and activities of the athletes, 2.89 mean; and if all coaches and assistant coaches are educated or trained to check on the safety design of playing venues, 2.60 mean. This means that all indicators show that the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

Align with these results is the study of Arabnejad et al. (2023) which indicated in their study that it is highly significant to know and teach safety tips for preventing sports injuries among adolescent athletes. In addition, considering sports nutrition and training intensity in various sports in terms of age, physical fitness, and sports history affect the reduction of injuries. Furthermore, the sports fields with the least collisions had the minimum injury while the most injuries occurred in the middle of summer. Thus, the consideration of sports officials to standardize sports venues in summer will significantly reduce the possibility of sports injuries.

Table 8. *Level of Execution of Injury Prevention Strategies Along Environmental and Engineering on the Safety Design*

Indicators	*MSV*	*DR*
1. There is a regular conduct of physical placement and replacement activities	3.31	M
2. There is a safety monitoring on the places and activities where athletes are expected to rest, practice and play	3.31	M
3. There is a regular inspection and maintenance activity on the playing venues	3.27	M
4. Safety and wellness plans are incorporated by coaches in all the programs and activities of the athletes	2.89	M
5. All coaches and assistant coaches are educated or trained to check on the safety design of playing venues	2.60	M
Overall Weighted Mean	3.08	M

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

Level of Execution of Injury Prevention Strategies Along Environmental and Engineering on the Regular Maintenance

Table 9 shows the level of execution of injury prevention strategies along education and training on the regular maintenance.

Table 9 shows that there is low level of execution of injury prevention strategies along environmental and engineering on regular maintenance with the 2.32 overall mean. This means that the coaches' level of execution of injury prevention strategies is limited and less sufficient.

Only in the first indicator, "safety equipment and materials are inspected from time-to-time moderate level of execution" with a 2.76 mean which got a moderate level of execution of injury prevention strategies. For the rest of the indicators, a low level of execution of injury prevention strategies was obtained. Particularly, "routine check-up of possible source of injuries are implemented," 2.36 mean; "all playing venues are regularly inspected by the coaches and proper authorities," and "plan for safety and wellness of athletes and coaches are crafted before any sports' activities," both got a 2.22 mean. Lastly, "preventive measures for injuries are oriented not only

to coaches but also to players and sports' committees," got a 2.03 mean. This means that these four indicators show that the coaches' level of execution of injury prevention strategies is limited and less sufficient.

In line with these results is the study of Smyth et al. (2019) on the injury prevention strategies specific to pre-elite athletes competing in Olympic and professional sports which found out that there are four interventions identified. These included exercise, psychological, equipment and nutrition. Of the seven exercise interventions, four showed a protective effect and three found no significant effect, providing conflicting evidence. The result of this study particularly aligns with the indicators in table 9.

Table 9. *Level of Execution of Injury Prevention Strategies Along Environmental and Engineering on the Regular Maintenance*

Indicators	*MSV*	*DR*
1. Safety equipment and materials are inspected from time to time	2.76	M
2. Routine check-up of possible source of injuries are implemented	2.36	L
3. All playing venues are regularly inspected by the coaches and proper authorities	2.22	L
4. Plan for safety and wellness of athletes and coaches are crafted before any sports' activities	2.22	L
5. Preventive measures for injuries are oriented not only to coaches but also to players and sports' committees	2.03	L
Overall Weighted Mean	2.32	L

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

Level of Execution of Injury Prevention Strategies Along Policy on the Safety Policies

Table 10 shows the level of execution of injury prevention strategies along policy on the safety policies.

Table 10. *Level of Execution of Injury Prevention Strategies Along Policy on the Safety Policies*

Indicators	*MSV*	*DR*
1. Required physical exams to athletes and coaches	4.82	VH
2. Ensured the availability of medical doctors in all sports activities	4.41	H
3. Developed a system or flow of activities to ensure safety of athletes	3.15	M
4. Incorporated safety policies before the implementation of any sports activities or programs	2.73	M
5. Oriented athletes and all other concerns on safety policies and procedures	2.55	M
Overall Weighted Mean	3.53	H

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

Table 10 shows that there is high level of execution of injury prevention strategies along policy on safety policies with the 3.53 overall mean. This means that the coaches' level of execution of injury prevention strategies is highly broad and very sufficient.

Meanwhile, there is a very high level of execution of injury prevention strategies on requiring physical exams to athletes and coaches, 4.82 overall mean. This means that the coaches' level of execution of injury prevention strategies is highly broad and very sufficient. Further, there is a high level of execution on the ensuring the availability of medical doctors in all sports activities, 4.41 mean. This means that the coaches' level of execution of injury prevention strategies is slightly broad and less sufficient.

The rest of the indicators got a moderate level of execution of injury prevention strategies. It includes the "development of a system or flow of activities to ensure safety of athletes, 3.15 mean; the incorporation of safety policies before the implementation of any sports activities or programs, 2.73 mean; and the orientation of athletes and all other concerns on safety policies and procedures, 2.55 mean. This means that these three indicators show that the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

Aligned with these results is the study Leguizamo et al. (2023) on exploring attributional and coping strategies in competitive injured athletes, found out that athletes attributed their sport injury mostly to bad luck, routine deviations, and negative mental states, while coping strategies used included cognitive restructuring, emotional calming, seeking social support, mental withdrawal, and behavioral risk. Factors such as training deviations, social support, psychological responses, and injury diagnosis seems to have influenced the coping strategies employed. As the researchers concluded, sport injuries and illnesses significantly impact athletes' careers and wellbeing. Support and effective communication from coaching staff and healthcare professionals were identified as crucial for athletes' wellbeing.

Level of Execution of Injury Prevention Strategies Along Policy on the Compliance and Enforcement

Table 11 shows the level of execution of injury prevention strategies along policy on the compliance and enforcement.

Table 11 shows that there is moderate level of execution of injury prevention strategies along policy on compliance and enforcement with the 3.53 overall mean. This means that the coaches' level of execution of injury prevention strategies is minimally broad and less sufficient.

Further, there is a high level of execution of injury prevention strategies as coaches following the advice of authorities knowledgeable

on injury prevention strategies, 3.80 mean. This means that the coaches' level of execution of injury prevention strategies is slightly broad and sufficient.

Meanwhile, the rest of the four indicators got a, there is a high level of execution on the ensuring the availability of medical doctors in all sports activities, 4.41 mean. This means that the coaches' level of execution of injury prevention strategies is slightly broad and less sufficient.

Table 11. *Level of Execution of Injury Prevention Strategies Along Policy on Compliance and Enforcement*

Indicators	*MSV*	*DR*
1. Followed advise of authorities knowledgeable on injury prevention strategies	3.80	H
2. Implemented safety and wellness plans in the sports programs or activities	2.42	L
3. Formulated contingency plans for the sports programs or activities	2.29	L
4. Enjoined shared responsibility with parents or guardians on the safety of their children	2.20	L
5. Conducted risk assessment and hazard analysis on the playing venues	2.06	L
Overall Weighted Mean	2.55	M

Legend: *4.51–5.00 – Very High (VH); 3.51–4.50 – High (H); 2.51–3.50 – Moderate (M); 1.51–2.50 – Low (R); 1.00–1.50 – Very Low (VL).*

The rest of the indicators got a low level of execution of injury prevention strategies. It includes the implementation of safety and wellness plans in the sports programs or activities, 2.42 mean; the formulation of contingency plans for the sports programs or activities, 2.29 mean; the enjoining of shared responsibility with parents or guardians on the safety of their children, 2.20 mean; and the conduct of risk assessment and hazard analysis on the playing venues, 2.06 mean. This result means that these four indicators show that the coaches' level of execution of injury prevention strategies is limited and insufficient.

These results align with the study of Johnson (2017), a study conducted on psychosocial factors and sports injuries stated that numerous interventions based on psychological strategy have been conducted to prevent the risk of sports injuries. This can be accomplished by altering stress reactions through participation in practices that have been shown to reduce the risk of injury, such as cognitive behavioral therapy, psychological skills training, and the mindfulness-acceptance-commitment method. Hence, policies should be strengthened for coaches to get involved and lessen the risk of injuries in sports.

Relationships between the Degree of Occurrence and the Level of Execution of Injury Prevention Strategies

Table 12 below presents the Pearson r Coefficients of Correlations between the degree of occurrence of common sports injuries and the level of execution of injury prevention strategies.

Table 12 presents that between the common sports injuries in the knee and the execution of injury prevention strategies along education and training on the awareness of programs and skills development, the computed r-values, -.197 and -.237 yielded a .024 and .000 level of significance, respectively. The significant level of the Pearson r coefficient of correlations is below the significance level of 0.05 set at the start of this study. Therefore, the null hypothesis which states, "There is no significant relationship between the degree of occurrence of the common sports injuries among athletes and the level of execution of the injury prevention strategies," is rejected.

Table 12. *Relationships between the degree of occurrence of common sports injuries and the level of execution of injury prevention strategies*

Independent Variables	*Pearson Correlation*	*Education and Training*		*Environmental and Engineering*		*Policy*	
Common Injuries		*Awareness of Programs*	*Skills Development*	*Safety Design*	*Regular Maintenance*	*Safety Policies*	*Compliance and Enforcement*
Shoulder	r-Value	.044	.062	-.217*	.031	-.180*	-.078
	Sig	.621	.482	.013	.725	.040	.378
Elbow	r-Value	.007	.008	-.204*	-.015	.005	-.002
	Sig	.941	.931	.019	.863	.952	.982
Knee	r-Value	-.197*	-.237**	.038	.099	-.114	-.033
	Sig	.024	.006	.666	.260	.196	.707
Legs	r-Value	-.106	-.098	-.250**	.043	.004	-.110
	Sig	.229	.264	.004	.625	.967	.213
Ankle	r-Value	-.089	-.060	.049	-.074	.056	.260**
	Sig	.311	.496	.580	.398	.525	.003

**Significant at 0.05 level*

Likewise, between the common sports injuries in the shoulder, elbow and legs, and the execution of injury prevention strategies along environmental and engineering particularly on safety and design, the computed r-values, -.217, -.204, and -.250 yielded a .013, .019, and .004 level of significance, respectively. This result means that there is a significant relationship between the degree of occurrence of the common sports injuries among athletes and the level of execution of the injury prevention strategies particularly on environmental and engineering.

Further, between the common sports injuries in the shoulder and ankle, and the execution of injury prevention strategies along policy

on the safety policies and compliance and enforcement, the computed r-values, -.180 and .260 yielded a .040 and .003 level of significance, respectively. Following the significance level set at .05 level, hence the null hypothesis, "There is no significant relationship between the degree of occurrence of the common sports injuries among athletes and the level of execution of the injury prevention strategies," is rejected. This result means that there is significant relationship between the degree of occurrence of the common sports injuries among athletes and the level of execution of the injury prevention strategies particularly on policy.

Confirming with these results is the study of Edouard et al. (2023) on injury risk reduction perceptions in athletics, found out that there were participants who were likely to agree that injury is part of the sport and injury should be taken-into-account for life choices. While, less likely to think that risking injury is not totally necessary to achieve peak performance. Most of them were likely to adopt injury risk reduction strategies in their daily life/practice, warm-up, hydration and listening to pain were the most frequently adopted or suggested strategies, while digestive naps, psychological support, and mental preparation being the less likely. These results provide a clear and relevant orientation to improve and develop injury risk reduction measures or strategies and their adoption and implementation.

Challenges Encountered

Challenges Encountered in Employing Injury Prevention Strategies

Table 13 shows the challenges encountered in employing the injury prevention strategies along training, venue, and policy.

Table 13. *Challenges Encountered in Employing Injury Prevention Strategies*

Indicators	*Mean*	*Descriptive Equivalent*
A. Training		
1. The physical, mental and emotional abilities are not properly examined before the sports events	3.15	MS
2. The coaches and athletes are not capacitated to deal with injury prevention or management	3.15	MS
3. It is not required to all coaches to undergo orientation on injury prevention and other related issues	3.11	MS
4. The athletes are not oriented of the basic steps to do if in case an injury occurs	3.11	MS
5. The coaches have no first aid treatment trainings or exposure.	2.20	SS
Weighted Mean	2.94	MS
B. Venue		
1. There is a limited number of health care provider in the sports venue	3.72	HS
2. The sports venues are not thoroughly inspected before the start of events	3.44	MS
3. The sports management have not provided all the athletes with the needed equipment to protect themselves	2.96	MS
4. Safety and precautions are not well oriented before the sports events occur	2.86	MS
5. Inadequate first aid equipment and supplies	2.50	MS
Weighted Mean	3.10	MS
C. Policy		
Only one or two medical doctors are assigned to attend to at least four-hundred athletes	3.53	HS
There is no strict conduct of orientation to all athletes and coaches	3.44	MS
There is a lacking awareness on the safety and wellness plan	3.44	MS
There are no enough nurses to accommodate all the injury management needs of athletes	3.26	MS
The contingency plan in case of injuries are not informed to all	3.26	MS
Weighted Mean	3.39	MS
Overall Weighted Mean	3.14	MS

Legend: *4.50–5.00 – Very Highly Serious (VHS): The level of challenges encountered highly affected the execution; 3.50–4.49 – Highly Serious (HS): The level of challenges encountered affected the execution; 2.50–3.49 – Moderately Serious (MS): The level of challenges encountered slightly affected the execution; 1.50–2.49 – Not Serious (NS): The level of challenges encountered minimally affected the execution; 1.00–1.49 – Slightly Serious (SS): The level of challenges encountered did not affect the execution.*

Table 13 shows that there is a moderately serious challenge encountered in employing injury prevention strategies along training, 2.94 mean. Likewise, there is a moderately serious challenge encountered in employing injury prevention strategies along venue, 3.10 mean. Also, a moderately serious challenge encountered in employing injury prevention strategies along 3.39 mean. The overall weighted mean, 3.14 indicates a moderately serious challenge were encountered by coaches in the execution of injury prevention strategies. The above-mentioned results mean that the challenges encountered by the coaches slightly affected the execution of injury prevention strategies. Supporting the result of this study on the challenges encountered in the employment of injury prevention strategies, the study of Edouard and Ford (2020) concluded that although injury prevention and rehabilitation are not new disciplines, there is still an unmet need to improve knowledge toward theoretical understanding on epidemiology, risk factors, and injury mechanisms, as well as on practical strategies that can reduce the risk of sports injury or reinjury and of sequalae after injuries. Thus, these challenges identified must be anchored to many factors, probably not only on training, venue and policy to improve the execution of injury prevention strategies in sports.

Conclusions

Based on the findings of the study, several important conclusions can be drawn. First, while injuries aren't extremely common, they do occur across all events, especially in the shoulders, elbows, knees, legs, and ankles. These areas seem to take the most strain during training and competition. Second, the way injury prevention strategies are carried out varies. Educational and training efforts, along with safety-focused design and engineering practices, are present and somewhat effective, but they still have room for improvement. When it comes to regular maintenance of facilities and equipment, however, the effort is more limited and not as effective. Policy-related strategies show a similar pattern. While safety policies are in place and used to some degree, actual enforcement and compliance seem weaker and less consistent.

The study also found a meaningful link between how often injuries happen and how well educational strategies are implemented. This suggests that when athletes are better informed and trained, injuries may be less likely. Finally, challenges related to training conditions, venue availability, and policy enforcement do have an effect on how well injury prevention strategies are put into practice. While these challenges don't completely prevent efforts, they do make it harder to fully protect athletes. Addressing these gaps—especially in maintenance, policy enforcement, and education—can help create safer and more supportive environments for athletes to train and compete.

Based on the salient findings and conclusions of this study, the following recommendations are forwarded: The respondent-coaches should attend more relevant trainings to prevent the occurrence of sports injuries. Teachers must also participate in training programs and join organizations that focus specifically on improving injury prevention strategies. Given the significant relationship established in the study, teachers are encouraged to attend sessions or seminars that will strengthen their capabilities in all aspects of injury prevention. Additionally, it is recommended that teachers conduct school-based Learning Action Cell (LAC) sessions that focus on enhancing injury prevention strategies. Lastly, there should be a comprehensive Injury Prevention Plan implemented for all athletes participating in sports activities.

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