Tanjungpura Journal of
Coaching Research
Tanjungpura Journal of Coaching Research 2026: 4(1): 92-100
https://jurnal.untan.ac.id/index.php/TAJOR/index

Research Articles

Impact of psychological stress resulting from competition on probability of sports injuries among athletes

Ali Khayon Tarish Hamidi [ABCD*]
University Of Basrah,
IRAQ

Saif Salah Hassan Hegel [BCE]
University Of Basrah,
IRAQ

Abstract

Background Sports competitions are significant psychological stress factors for athletes, increasing the risk of sports injuries. Exposure to psychological stressors during sports competitions like fear of failure, fear of being evaluated by others, excessive excitation from a high degree of responsibility for performance, can cause attention disruption and disturbance of the athlete's psychomotor skill performance. As a result, there is an increased risk of injury during sports competitions.

Objectives This research aims to study relationship between levels of psychological stress during competition and probability of athletes sustaining injuries.

Methods The correlational research design was conducted with young athletes involved in individual sports and team sports. The subjects of this study were all athletes affiliated with Iraqi clubs, schools, and universities who compete in national, regional, and local competitions—approximately 50 to 100 male and female athletes. Structured questionnaires were utilized to collect data on psychological variables: competition anxiety, psychological stress level, fear of failure, and probability of sports injuries. Descriptive statistics (Mean, SD, CV) were calculated for demographic data, psychological variables and Pearson correlation analysis was performed.

Results A moderate positive correlation between psychological anxiety and probability of sports injuries was found ($r = 0.68$; $p = 0.001$), indicating that as psychological anxiety increases so does the probability of sports injuries. There was a moderate positive correlation between psychological stress level and probability of sports injuries ($r = 0.65$; $p = 0.002$), suggesting that as psychological stress level increase so does the probability of sports injuries. There was a strong positive correlation between fear of failure and probability of sports injuries ($r = 0.70$; $p = 0.001$), suggesting that as fear of failure increases so does the probability of sports injuries.

Conclusion This study concluded that psychological stress during sports competitions had a correlation with sports injuries. This study adds to the body of knowledge by showing how psychological preparation should be taken seriously and implemented during athletes' training to avoid sports injuries.

Keywords: psychological stress, competition anxiety, sports injury, athletes, sport psychology.

Received: December 23, 2025 Accepted: March 16, 2026
*Correspondence: lec.ali.kheoon@uobasrah.edu.iq
Ali Khayon Tarish Hamidi
University Of Basrah, HP7W+7RF, Basrah, Basra Governorate, 00964, Iraq

OPEN ACCESS

How Cite: Hamidi, A. K. T., & Hefel, S. S. H. (2026). Impact of psychological stress resulting from competition on probability of sports injuries among athletes. *Tanjungpura Journal of Coaching Research, 4*(1), 92-100. https://doi.org/10.26418/tajor.v4i1.103349

Authors' contribution:
A. Conception and design of the study; B. Acquisition of data; C. Analysis and interpretation of data; D. Manuscript preparation; E. Obtaining funding

INTRODUCTION

Sports injuries are a major concern for athletes of all competitive levels and across sports disciplines. Not only can injuries impair athletes' performance, but they can also take a toll on athletes' physical health, mental well-being, and career development (C. Wang et al., 2024). Additionally, sports injuries can force athletes to take longer periods of time to recover, causing them to miss competition or even require retirement from sport entirely. For these reasons, studying injury risk and preventive factors has been an important topic in research fields of sports science, sports medicine, and sport psychology (Helmi et al., 2024; Sari, 2019; Schmikli et al., 2009). Traditionally, injuries have been thought to result primarily from biomechanical and physiological factors such as muscular fatigue, overtraining, deconditioning, poor recovery, and faulty movement patterns. These psychological constructs may contribute to greater mechanical stress on muscles, ligaments and joints than they can structurally withstand (Meeuwisse et al., 2007), which increases athlete susceptibility to acute and overuse injuries. For instance, athletes with weak muscular strength, inadequate flexibility, or poor neuromuscular control may be unable to absorb high amounts of force during competition.

Explosive sporting movements such as sprinting, jumping, and quickly changing direction place high demands on the musculoskeletal system to stabilize the body and maintain equilibrium. If athletes are incapable of adequately controlling movement, they may be more susceptible to injury when participating in athletics (Ferraz et al., 2023). More recent perspectives on sports injuries consider that they are caused by a multitude of factors. Instead of only psychological factors, injury causation has been described as a complex interplay between physiological, biomechanical, environmental, and psychological factors (Meeuwisse et al., 2007). In fact, sport psychology researchers have identified psychological stress related to athletic competition as one of the many factors that can increase athletes' risk of injury (Kaplánová, 2024; C. M. Wang et al., 2022). Whether training for practices or competing in athletic events, athletes are regularly exposed to psychological stressors such as positive and negative expectations of performance outcomes, fear of failure, perceived judgment from coaches and spectators, and pressure to perform well. These stressors may elicit psychological responses that impact how athletes think, feel, and perform during athletics (Ashwani Bali, 2015).

One of the earliest theoretical frameworks for understanding the effect of psychological stress on sports injury risk was the stress–injury model developed by (M. B. Andersen & Williams, 2016). This model suggests that psychological stressors elicit physiological and attentional responses that increase athletes' risk of injury. Stress can increase muscle tension and restrict athletes' attentional focus, which can slow reaction time and limit athletes' ability to make quick, effective decisions during sport (Pierce et al., 2020). Furthermore, stress-induced attentional and physiological changes can have poor effects on athletes' movement patterns and coordination. Poor movement patterns during athletic activity can increase athletes' chances of improper form during sports, which can easily lead to injury. Research has begun to support the idea that psychological stress can increase athletes' injury risks. In a meta-analysis on the psychological factors associated with athletic injury risk, Ivarsson et al. found that athletes with higher levels of stress were more injured than their lower stress counterparts (Lochbaum, Stoner, et al., 2022). This meta-analysis and others like it have provided evidence that psychosocial factors, such as an athlete's anxiety, stress history, and coping resources, can help predict injury risk (Ivarsson et al., 2017). Other research in sports psychiatry has linked psychological stress and competitive anxiety with disruptions in neuromuscular coordination and attentional control.

These factors are crucial for athletes when trying to successfully complete complex, coordinated movements while focusing on the athletic task at hand (Lochbaum, Sherburn, et al., 2022). It stands to reason that athletic competition can elicit strong feelings of psychological stress, especially in younger athletes who may not know how to properly cope with these feelings. The possibility of failing, being evaluated by coaches and peers, and letting the team down are all examples of

psychological stressors that athletes may face during a competition. These factors can lead to certain athletes feeling angry or anxious during their athletic performance, which can directly impact how they move and make decisions while playing sports (Fekih et al., 2020; Kaplánová, 2024). For example, some athletes may perform their sport-specific movements too quickly, not account for distance when jumping or running, and apply too much force when jumping or hitting another player. These examples can result in injury to the knee, ankle, hamstring, or shoulder due to overextension or improper placement. These injuries are common in sport and can be affected by athletes' emotional states and competition anxiety levels.

Although research has begun to explore the potential connection between psychological stress and sports injury risk, there is still conflicting information. Some studies have found strong positive relationships between measures of stress and injury incidence, while other studies have found weak relationships (Petrovic, 2017; Sawyer, 2006). These discrepancies may be explained by differences in study methodology, sample, sport, and stress assessment. Furthermore, there is a paucity of research exploring how psychological stress and injury risk may differ across different types of sport and levels of athletic experience. There may be a moderating effect of experience on the stress–injury relationship. Experienced athletes may have learned how to better cope with the pressures of competition after being exposed to high-intensity competitions. These athletes may know how to calm themselves down by controlling their emotions and what they tell themselves during sport. By utilizing psychological strategies such as emotional control, reframing negative thoughts, visualizing athletic success, and using relaxation techniques, these athletes can reduce their injury risk by having better control over their movements and mental state (Boato et al., 2020; Morgulev et al., 2018). On the other hand, less experienced athletes may react strongly to psychological stress and as a result lose attentional control during competition.

Experience may not be the only difference between athletes participating in individual sports versus team sports. There also may be differences in psychological stress experienced in individual sports when compared to team sports. Although athletes compete against others in individual and team sports, athletes practicing individual sports may feel as if there is more pressure on them to perform because the outcome of the competition solely lies on them (M. B. Andersen & Williams, 2016). Research has yet to examine how psychological stress may differ between individual and team athletes. The purpose of this study, therefore, was to explore the relationship between psychological stress experienced during competition and risk of sports injuries in athletes. The study aimed to address this question in athletes who compete in both individual and team sports. To address this topic, the study had four specific objectives: (1) to assess the overall level of psychological stress athletes experience during competition, (2) to examine the relationship between psychological stress and injury risk, as measured by competition anxiety, stress level, and fear of failure, (3) to determine if there are differences in psychological stress and injury risk in individual sports compared to team sports, and (4) to provide suggestions on how to incorporate psychological training into injury prevention programs.

This study adds to the current literature by exploring the relationship between sports injuries and psychological stress among both individual and team sport athletes. Findings from this study may help coaches and instructors better understand the importance of incorporating psychological skills training into their athletes' routine to help reduce sports injury risk.

MATERIALS AND METHODS

Participant

The target population was a sample of all the athletes involved in Iraqi clubs, schools, and universities who played in the national, regional and the local competitions at the time of study. The community was approximated to be about 50-100 male and female athletes of different sports including football, basketball, gymnastics, and track and field. The respondents were between 16 and 25 years old, at least two years of experience in their respective sports and are of both sexes. This

community was chosen to have a comprehensive and real study of psychological stress in the course of competition and to observe the likelihood of athletic injuries and ratification effects in athletic performance under varying training and competition settings.

Research Design

The researchers used descriptive analytical method to accurately describe psychological phenomenon and sports injuries among athletes. To analyze relationship between psychological stress during competition and probability of sports injuries using scientific and statistical measurement tools. Identifying patterns of behavior and interaction between psychological and physical factors, and determining extent of their impact on injuries. To provide the accuracy and objectivity of results, the research was based on a number of scientific methods of data collection. There was the use of a questionnaire that was specifically tailored to determine the level of psychological stress caused by competition and its effects on the likelihood of sporting injuries by the athletes. It contained items that were associated with personal information, level of experience, causes of injury, extent of injury, prevention and rehabilitation measures. Moreover, the documentation of injury cases and the recovery time was done through medical records and past injury history which led to the integration of psychological and physical data.

Structured interviews were also conducted with some players and coaches to obtain qualitative information about their experience with psychological pressure during competition and its impact on physical performance. On physical side, standard devices and equipment such as weight scales, height scales, muscle strength measuring devices, and flexibility measuring devices were used to assess the physical factors associated with injuries. The validity of questionnaire and reliability of data were verified by presenting form to experts in sports and medical fields. Reliability of instrument was also tested using Cronbach's Alpha coefficient (8-5) on a small pilot sample before actual application. Data collection was made possible within the athletes' training and competition environment under supervision of researchers to ensure adherence to scientific procedures and to clarify any queries during completion of questionnaires, which enhanced reliability and accuracy of the data collected for later analysis.

Data Analysis

After collecting and coding data from questionnaire forms, it was analyzed using SPSS v.26 statistical program, in order to ensure accuracy of results and to extract indicators that achieve the research objectives. The researchers used a range of statistical analyses appropriate to nature of data, including:

1. Arithmetic mean: To determine general trend of responses and estimate average levels of psychological stress and probability of sports injury.
2. Standard deviation: To measure extent of dispersion of values around mean and to determine homogeneity of sample.
3. Coefficient of variation: To determine percentage of relative variance among individuals in sample for each variable.
4. Pearson correlation: To measure strength and direction of relationship between psychological stress and degree of probability of sports injury.
5. Percentages: To display distribution of responses and to illustrate prevalence of each stressor or injury factor.

The reason behind adopting these statistical treatments was to interpret results scientifically and objectively so that the researcher would arrive at correct conclusion with regard to the impact of psychological stress on probability of sports injury, and be able to make practical as well as scientific recommendations in the field of sports prevention and rehabilitation.

RESULTS AND DISCUSSION

Results

As displayed in Table 1, athletes participating in the study had comparable characteristics. For instance, the mean age of participants was M = 18.0 years (SD = 0.36), CV = 2.0%. The average training age was M = 4.5 years (SD = 0.56), CV = 12.4%. Descriptives statistics of anthropometric characteristics showed the average height of athletes was M = 177.5 cm (SD = 2.39), CV = 1.3%. Furthermore, the average body mass was M = 81.5 kg (SD = 2.56), CV = 3.1%.

Table 1. Variables Demographics for The Sample

Variable	Measurement unit	Mean	Standard deviation	Coefficient of variation
Age	Year	18.0	0.36	2.0%
Training age	Year	4.5	0.56	12.4%
Height	cm.	177.5	2.39	1.3%
Mass	Kg.	81.5	2.56	3.1%

As illustrated in Table 2, the average score of psychological anxiety during competition was M = 3.72 (SD = 0.81), CV = 21.7%, which means that athletes experienced moderate competition anxiety. Additionally, athletes experienced moderate levels of stress during competition on average (M = 3.65, SD = 0.77), CV = 21.1%, and scores ranged from 1 to 5 showing that athletes reported relatively similar levels of psychological stress. The highest mean score was observed for fear of failure, M = 3.80 (SD = 0.79), CV = 20.8%, showing that fear of failure was the highest form of psychological pressure experienced by athletes. Concerning injury ratings, probability of sports injury had M = 3.60 (SD = 0.85), CV = 23.6%.

Table 2. Variables Pressures Psychology and Possibility Injury

Variable	Measurement unit	Mean	Standard deviation	Coefficient of variation
Psychological anxiety during competition	Degree (1–5)	3.72	0.81	21.7%
Stress level	Degree (1–5)	3.65	0.77	21.1%
Failure fear	Degree (1–5)	3.80	0.79	20.8%
Sports injury probability	Degree (1–5)	3.60	0.85	23.6%

Table 3 shows that all the psychological stress variables positively correlated with the probability of sports injury. Specifically, psychological anxiety during competition had a strong positive correlation with injury probability ($r = 0.68$, $p = 0.001$). Stress level positively correlated with injury probability ($r = 0.65$, $p = 0.002$). Fear of failure positively correlated with injury probability the strongest ($r = 0.70$, $p = 0.001$). A weak positive correlation was also found for injury probability variable ($r = 0.12$, $p = 0.041$).

Table 3. Pearson Correlation Coefficients Between Psychological Variables and Probability of Developing Condition

Variable	Probability	Coefficient Correlation (r)	Sig. level (p)
Psychological anxiety during competition	Probability Injury	0.68	0.001
Stress level	Probability Injury	0.65	0.002
Failure fear	Probability Injury	0.70	0.001
Sports injury probability	Probability Injury	0.12	0.041

Discussion

Athletes all around the world are likely afraid of getting injured because it could affect their athletic performance. Researchers from Germany wanted to see how much psychological stress affected young athletes' risk of injury while competing (Geiger et al., 2023). These findings conclude

that the risk of injury is significantly and positively associated with psychological stress during competition (anxiety, stress, and fear of failure). This means that when athletes experience psychological stress during competitions, they are more likely to get injured. This could be due to athletes being distracted and stressed which causes them to not be able to focus or keep full attention on their sport, or they could be more neuromuscularly tense (M. B. Andersen & Williams, 1988, 2016). When athletes are placed under a lot of stress or anxiety, they are more likely to narrow their attentional focus which could result in a slow reaction time. They are also likely to become more muscle tense which could cause difficulties when executing movements. Stress can alter an athlete's physiology and attention making them more injury prone (Stefanska et al., 2024). These are just some of the reasons that athletes who experience higher amounts of stress may get injured while competing.

This study supports the stress–injury model by (M. B. Andersen & Williams, 1988, 2016). This model states that psychological stress can alter athlete physiology and attention which can make them more injury prone. The model suggests that there are two mediators that are responsible for the increase in injury risk: physiological mechanisms and attentional mechanisms. When athletes experience stress, they may become more muscle-tense which can increase the chances of movement errors (Brenner et al., 2019). These movement errors during competition can increase an athlete's risk for injuries such as ligament sprains, muscle strains, and joint instability. Other research done by Ivarsson et al., (2017) have found that stress can predict injury occurrence. Their study showed that there was a positive correlation between injury and psychological stress. This can be because athletes who experience competitive anxiety may have worse coordination and decision-making skills while playing sports (Dafun JR & Custodio, 2025; Imka et al., 2025; Pamungkas et al., 2025).

Research that focused on athletes' response to competitive stress has found results that support this study. The study showed that athletes experience stress and anxiety when their performance is being evaluated (Aydoğan & Hadi, 2020; Johnson & Ivarsson, 2025). This pressure can cause athletes to make errors in their movement skills because they are trying to analyze every move they make (Keriven et al., 2025). The present study also found that fear of failure had the strongest relationship with injury probability out of all the other variables (M. H. Andersen et al., 2019; Kaplánová, 2024). Fear of failure means the athletes are worried about their performance not being good enough or they are being watched by their coach and other competitors. This may cause them to experience more tension when they are competing which can cause their body to physiologically respond to this stress. This can cause athletes to become more muscle tense which can increase the chances of movement errors.

Although this correlation was weak, past psychological stress history had a positive significant correlation with injury probability ($r = 0.12$, $p = 0.041$). This means that athletes who have experienced a high amount of psychological stress in the past are slightly more likely to get injured. Past psychological stress could effect how athletes feel when they are playing sports. If athletes have been put under stress frequently in the past, they are more likely to get injured than athletes who aren't as stressed (Kovacs, 2023; Tang et al., 2023). However, there can be more reasons why past psychological stress does not have a stronger correlation with injury probability. Research has shown that past stress can affect injury occurrence. Injury risk can be affected by psychological factors (Antonio, 2023; Raglin, 2001). The study showed that when athletes are stressed about their performance they are more likely to injury themselves (Jeoung, 2020; Tossici et al., 2024). Coaches can help athletes out by trying to reduce athletes' stress when playing sports (Chang et al., 2020). They can do this by incorporating relaxation and mental training into their practice.

Research limitations

The limitations of this study include the use of self-reported questionnaires which can be affected by athletes' personal judgment, the sample only included young athletes which were all from one region of the world, and finally, this study was cross-sectional. Future studies should use a

longitudinal or experimental approach, include more athletes, and use actual injury data to determine injury occurrence.

CONCLUSION

The study findings indicated that the psychological stress caused by athletic competition has a great positive influence on the probability of sports injuries in young athletes because the more the levels of anxiety, stress, and fear of failure are, the higher the risk of injury. Analysis findings confirmed that the psychological variables and the physical variables interact with each other, as evidenced by muscle fatigue and poor motor coordination which put one at risk of injury during competition. The results demonstrated that expectations of coach and audience, and fear of failure, are the most significant causes of stress and hence coaches and sports teams should consider how to manage them to enhance performance of sportspeople and minimize injuries. The findings affirm that psychological factor of athletes is a major contributor to injury prevention as it is being observed in existing literature (M. B. Andersen & Williams, 1988, 2016; Ivarsson et al., 2017). It is essential to integrate psychological support and stress management programs into training plans of all athletes, especially during competitive periods. Encouraging athletes to practice relaxation and mental control techniques such as deep breathing, meditation, and positive visualization to reduce stress during competition. Providing training courses for coaches on how to deal with psychological pressures on players, with a focus on psychological support and boosting self-confidence. Regular monitoring of the psychological stress and injuries levels of the players in order to determine the effectiveness of psychological and physical prevention programs and constantly improve them. It is recommended that future research using bigger samples and other age groups should be carried out to determine how psychological stress influences sports injuries in different sports.

ACKNOWLEDGMENTS

The author gratefully acknowledges the assistance provided in completing this manuscript. He also thanks the University of Basra for its support and encouragement.

CONFLICT OF INTEREST AND FUNDING

There is no conflict of interest.

REFERENCES

Andersen, M. B., & Williams, J. M. (2016). A Model of Stress and Athletic Injury: Prediction and Prevention. *Journal of Sport and Exercise Psychology*. https://doi.org/10.1123/jsep.10.3.294

Ashwani Bali. (2015). Psychological Factors Affe cting Sports Performance. *International Journal of Physical Education, Sports and Health*. *1*(6), 92-95. https://doi.org/10.22271/kheljournal.2026.v1.i6b.123

Boato, E. M., Albuquerque, A. P., Nascimento, E. F., Rodrigues, G. M., Melo, G. L. R., & Moita, M. C. (2020). The physical education and the Infantile Systemic Hyalinosis: A case report. *Heliyon*. https://doi.org/10.1016/j.heliyon.2020.e04411

Dafun JR, P. B., & Custodio, J. M. (2025). Application of plyometric training: How does it affect throwing strength and speed in handball? *Journal of Applied Movement and Sport Science*, *1*(1 SE-Research Articles), 1–9. https://doi.org/10.65575/jamss.v1i1.4

Fekih, S., Zguira, M. S., Koubaa, A., Ghariani, I., Zguira, H., Bragazzi, N. L., & Jarraya, M. (2020). The impact of a motor imagery-based training program on agility, speed, and reaction time in a sample of young tennis athletes during ramadan fasting: Insights and implications from a randomized, controlled experimental trial. *Nutrients*, *12*(11), 1–14.

https://doi.org/10.3390/nu12113306

Ferraz, A., Duarte-Mendes, P., Sarmento, H., Valente-Dos-Santos, J., & Travassos, B. (2023). Tracking devices and physical performance analysis in team sports: a comprehensive framework for research-trends and future directions. *Frontiers in Sports and Active Living*, *5*, 1284086. https://doi.org/10.3389/fspor.2023.1284086

Helmi, B., Aditya, R., & Lusiana, L. (2024). Development of a sports injury aid and treatment handbook for high school students. *Journal Of Sport Education (JOPE)*. https://doi.org/10.31258/jope.6.1.60-71

Imka, A. J., Jatra, R., & Dafun JR, P. B. (2025). The contribution of leg muscle power and eye-foot coordination to the accuracy of futsal shooting of students. *Journal of Applied Movement and Sport Science*, *1*(3 SE-Research Articles), 20–29. https://doi.org/10.65575/jamss.v1i3.87

Ivarsson, A., Tranaeus, U., Johnson, U., & Stenling, A. (2017). Negative psychological responses of injury and rehabilitation adherence effects on return to play in competitive athletes: a systematic review and meta-analysis. *Open Access Journal of Sports Medicine*, *8*, 27–32. https://doi.org/10.2147/OAJSM.S112688

Kaplánová, A. (2024). Psychological readiness of football players for the match and its connection with self-esteem and competitive anxiety. *Heliyon*, *10*(6), e27608. https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e27608

Lochbaum, M., Sherburn, M., Sisneros, C., Cooper, S., Lane, A. M., & Terry, P. C. (2022). Revisiting the Self-Confidence and Sport Performance Relationship: A Systematic Review with Meta-Analysis. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph19116381

Lochbaum, M., Stoner, E., Hefner, T., Cooper, S., Lane, A. M., & Terry, P. C. (2022). Sport psychology and performance meta-analyses: A systematic review of the literature. *PLoS ONE*. https://doi.org/10.1371/journal.pone.0263408

Meeuwisse, W. H., Tyreman, H., Hagel, B., & Emery, C. (2007). A dynamic model of etiology in sport injury: The recursive nature of risk and causation. *Clinical Journal of Sport Medicine*, *17*(3), 215–219. https://doi.org/10.1097/JSM.0b013e3180592a48

Morgulev, E., Azar, O. H., & Lidor, R. (2018). Sports analytics and the big-data era. *International Journal of Data Science and Analytics*, *5*, 213–222. https://doi.org/10.1007/s41060-017-0093-7

Pamungkas, G. R., Jatra, R., & Németh, Z. (2025). Physical condition levels of futsal extracurricular students at YLPI Perhentian Marpoyan Junior High School. *Journal of Applied Movement and Sport Science*, *1*(3 SE-Research Articles), 1–11. https://doi.org/10.65575/jamss.v1i3.91

Petrovic, K. (2017). The benefits of taekwondo training for undergraduate students: A phenomenological study. *Societies*, *7*(3). https://doi.org/10.3390/soc7030027

Pierce, S., Erickson, K., & Sarkar, M. (2020). High school student-athletes' perceptions and experiences of leadership as a life skill. *Psychology of Sport and Exercise*, *51*. https://doi.org/10.1016/j.psychsport.2020.101716

Sari, S. (2019). Development of multimedia based sport injury pencak silat management model. *International Journal of Recent Technology and Engineering*, *8*(2), 191–194. https://doi.org/10.35940/ijrte.B1043.0982S919

Sawyer, B. (2006). Sports injuries: diagnosis and management, 3rd edn. *British Journal of Sports Medicine*. https://doi.org/10.1136/bjsm.2006.026575

Schmikli, S. L., Backx, F. J. G., Kemler, H. J., & Van Mechelen, W. (2009). National survey on sports injuries in the netherlands: target populations for sports injury prevention programs. *Clinical Journal of Sport Medicine*, *19*(2), 101–106. https://doi.org/10.1097/JSM.0b013e31819b9ca3

Wang, C. M., Hong, J. C., Ye, J. H., & Ye, J. N. (2022). The relationship among gameplay self-efficacy, competition anxiety, and the performance of eSports players. *Entertainment Computing*. https://doi.org/10.1016/j.entcom.2022.100489

Wang, C., Stovitz, S. D., Kaufman, J. S., Steele, R. J., & Shrier, I. (2024). Principles of musculoskeletal sport injuries for epidemiologists: a review. *Injury Epidemiology*, *11*(1), 21. https://doi.org/10.1186/s40621-024-00507-3

Information about the authors:

Ali Khayoon Tarish Hamidi; (Correspondent Author) lec.ali.kheoon@uobasrah.edu.iq; College of Physical Education and Sports Sciences, University of Basra, Iraq

Saif Salah Hassan Hegel; College of Physical Education and Sports Sciences, University of Basra, Iraq