



Student anxiety levels: before and after a football match: a study on football athletes

Niveles de ansiedad estudiantil: antes y después de un partido de fútbol: un estudio sobre atletas de fútbol

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Abstract

Introduction: Anxiety plays a crucial role in affecting athletes' performance and well-being, particularly in high-pressure sports like football. While much research has focused on pre-competition anxiety, less attention has been given to how anxiety fluctuates after competition and the role of mental health support in addressing these changes.

Objective: This study aims to investigate the anxiety levels of football players before and after a match, using a 16-item Likert scale to measure cognitive and somatic anxiety. The objective is to understand how anxiety levels change and explore the role of psychological support in managing anxiety.

Results: The results show a significant reduction in anxiety levels, with the pretest average being 70.81 and the posttest average dropping to 47.63. The paired samples t-test confirmed a statistically significant decrease in anxiety ($t = 18.92, p < 0.001$). However, there was increased variability in posttest anxiety, suggesting individual differences in how athletes cope with stress.

Discussion: The findings suggest that anxiety decreases after a match, likely due to the relief of competition ending. However, the variability in post-match anxiety highlights the need for personalized psychological support, such as counseling, to help athletes manage residual stress.

Conclusions: This study emphasizes the importance of mental health support for athletes before and after competitions. Tailored psychological interventions can help manage anxiety and improve athletes' overall well-being and performance.

Keywords

Athlete anxiety; sports performance; psychological support; cognitive and somatic anxiety; sports competition.

Resumen

Introducción: La ansiedad juega un papel crucial en el rendimiento y el bienestar de los atletas, especialmente en deportes de alta presión como el fútbol. Mientras que gran parte de la investigación se ha centrado en la ansiedad previa a la competencia, se ha prestado menos atención a cómo fluctúa la ansiedad después de la competencia y al papel del apoyo psicológico en abordar estos cambios.

Objetivo: Este estudio tiene como objetivo investigar los niveles de ansiedad de los futbolistas antes y después de un partido, utilizando una escala Likert de 16 ítems para medir la ansiedad cognitiva y somática. El objetivo es entender cómo cambian los niveles de ansiedad y explorar el papel del apoyo psicológico en la gestión de la ansiedad.

Resultados: Los resultados muestran una reducción significativa en los niveles de ansiedad, con un promedio de 70.81 en el pretest y una disminución a 47.63 en el posttest. La prueba t de muestras relacionadas confirmó una disminución estadísticamente significativa de la ansiedad ($t = 18.92, p < 0.001$). Sin embargo, hubo una mayor variabilidad en la ansiedad post-test, lo que sugiere diferencias individuales en cómo los atletas manejan el estrés.

Discusión: Los hallazgos sugieren que la ansiedad disminuye después del partido, probablemente debido al alivio de que la competencia haya terminado. Sin embargo, la variabilidad en la ansiedad posterior resalta la necesidad de un apoyo psicológico personalizado, como el asesoramiento, para ayudar a los atletas a manejar el estrés residual.

Conclusiones: Este estudio subraya la importancia del apoyo en salud mental para los atletas antes y después de las competiciones. Las intervenciones psicológicas personalizadas pueden ayudar a gestionar la ansiedad y mejorar el bienestar y el rendimiento general de los atletas.

Palabras clave

Ansiedad en los atletas; rendimiento deportivo; apoyo psicológico; ansiedad cognitiva y somática; competencia deportiva.

Introduction

Research in sports psychology has long highlighted the significant role of anxiety in influencing athletes' performance and overall well-being. Athletes often face heightened levels of anxiety before competitions, which can negatively impact their focus, decision-making, and physical performance (Mercer et al. 2025). Cognitive anxiety, which involves worry and fear of failure, and somatic anxiety, which includes physical symptoms such as tension and restlessness, are two of the most commonly studied forms of anxiety in athletes (Kaur Chawla et al. 2025; Zhang et al. 2025). Various studies have shown how these forms of anxiety affect performance, demonstrating that athletes' ability to manage their anxiety is crucial for maintaining peak performance under pressure (López-Roel, García-Ordóñez, and Isorna Folgar 2025; Martín-Rodríguez and Madrigal-Cerezo 2025; Sukmana et al. 2025). However, little attention has been given to understanding the full impact of anxiety, especially in terms of how anxiety fluctuates before and after competition.

While previous research shows that anxiety tends to increase before a match and decrease afterward, it remains unclear why some athletes experience a significant reduction in anxiety after a match, while others continue to experience high levels of stress. The factors contributing to this variability are not yet fully understood. Questions still remain regarding how individual coping mechanisms, the intensity of competition, and the outcomes of the match influence athletes' anxiety levels (Li et al. 2025; Yue et al. 2025). Additionally, while the importance of mental health in sports is increasingly recognized, the role of counselors and mental health professionals in managing athletes' anxiety, particularly post-competition, has not been widely explored (Holden et al. 2025; Serpa 2025).

This study aims to address this gap by focusing on the anxiety levels of football players before and after a match. Using a 16-item Likert scale designed to measure cognitive and somatic anxiety (Marcel and Paquet 2010), this study will evaluate how anxiety levels fluctuate around the competition. By examining pretest and posttest anxiety levels, the study aims to provide deeper insight into how competition affects athletes' psychological condition and whether anxiety significantly decreases after the match. This research also aims to investigate the role of mental health support, such as counseling, in helping athletes manage their anxiety more effectively.

The findings of this study are expected to provide valuable insights into the psychological dynamics that unfold in competitive sports, specifically regarding anxiety. By examining the levels of anxiety experienced by football players before and after a match, this study aims to deepen the understanding of how anxiety affects athletes during competition and how it can impact their performance and recovery. This research will also explore whether psychological interventions, such as counseling or mental skills training, can effectively reduce anxiety levels and improve athletes' coping mechanisms (Guo, Chen, and Wang 2025; Wang et al. 2025). Understanding the fluctuations in anxiety levels and the effectiveness of various interventions will be critical in shaping more effective mental health strategies for athletes.

Furthermore, this study will emphasize the importance of personalized psychological support tailored to the needs of each athlete. Athletes experience anxiety in unique ways, and a one-size-fits-all approach to mental health support may not be as effective (Guo et al. 2025; Wang et al. 2025). By ensuring that athletes are mentally prepared before the match and supported afterward to manage residual stress, teams can help improve their mental resilience and overall performance. Personalized interventions can provide athletes with the tools they need to cope with competition-related anxiety, and by reducing this stress, athletes may experience improved focus, decision-making, and physical performance (Kaczmarek et al. 2025).

Additionally, the research will highlight the need for a holistic approach in supporting athletes. Integrating both physical and psychological health is essential for optimizing performance and promoting long-term well-being. Mental health support should be seen as a critical component of an athlete's overall training regimen (Júdice et al. 2025). By recognizing the importance of both mind and body in achieving peak performance, sports organizations can create an environment where athletes can thrive, not only physically but also mentally. This holistic approach can lead to better mental resilience, reduced risk of burnout, and improved long-term career sustainability for athletes (Kang 2025; Zhou et al. 2026). Therefore, the findings of this study will be pivotal in advocating for comprehensive support systems in sports that address both the physical and psychological needs of athletes.



Method

The data for this study was collected from 27 football players from a regional football team. Anxiety levels of the participants were measured using a 16-item Likert scale, designed to assess two indicators of anxiety: Cognitive Anxiety (7 items) and Somatic Anxiety (9 items). These indicators were based on the modified version of the Sport Anxiety Scale (SAS) developed by Marcel and Paquet (2010). The participants responded to the items both before and after the match to evaluate their anxiety levels at these two time points. The Likert scale was selected to ensure that responses were consistent and could be quantified for statistical analysis. Each item was carefully developed to measure both cognitive anxiety (e.g., worry and fear of failure) and somatic anxiety (e.g., physical symptoms of anxiety), providing a comprehensive assessment of the athletes' anxiety experiences.

The participants were selected from a regional football team, and participation was voluntary. All athletes provided informed consent prior to the study, and they were assured that their participation would remain anonymous and their responses confidential. Ethical guidelines for research involving human participants were followed, ensuring anonymity at all stages of the research. The data collection involved administering the Likert scale twice: once before the match (pretest) and once immediately after the match (posttest), to capture fluctuations in anxiety levels associated with the competition.

While the current study focuses on Cognitive and Somatic Anxiety, we acknowledge the importance of considering additional variables in future research, such as the players' positions on the field, the match outcome (win, loss, or draw), the intensity of competition, and the athletes' experience level. These factors could provide deeper insights into how different aspects of the game impact anxiety levels. For this study, we focused on two primary forms of anxiety, but further exploration of other psychological factors, such as coping mechanisms or mental resilience, could enrich the analysis.

The data was analyzed using JASP Beta, a statistical software (van den Bergh, Wagenmakers, and Aust 2023). First, the normality of the data was assessed using the Shapiro-Wilk test for both pretest and posttest anxiety levels. The results showed a *W*-value of 0.931 for both pretest and posttest, with a *p*-value of 0.073, indicating that the data did not significantly deviate from normality. Based on this, parametric tests were deemed appropriate for further analysis. A paired samples *t*-test was used to examine the difference in anxiety levels before and after the match, as the data consisted of two measurements from the same group of participants. The paired samples *t*-test aimed to determine whether a significant difference existed between pretest and posttest anxiety levels, with the null hypothesis being that no significant difference existed between the two.

Results

The following analysis examines the anxiety levels of 27 football players both before and after a match. The data provides insight into how players' emotional states changed throughout the match, highlighting both the average anxiety levels and the degree of variation in responses. Table 1 below presents these findings, offering a clear comparison between the pre-match and post-match anxiety levels. In the pretest (before the match), the average anxiety level was 70.81, with a standard deviation of 3.163, indicating relatively consistent anxiety levels among the players. After the match (posttest), the average anxiety level decreased to 47.63, but with a higher standard deviation of 5.047. This suggests greater variation in anxiety levels among the players after the match. The coefficient of variation for the pretest was 0.045, indicating low variation, while the posttest coefficient of variation increased to 0.106, reflecting a wider range of responses to anxiety after the match. Overall, the data demonstrates that football players experienced a decrease in anxiety following the match, though the variation in anxiety levels was notably higher after the match compared to before.

Table 1. Descriptive Statistics of Anxiety Levels Before and After the Match.

	N	Descriptives			
		Mean	SD	SE	Coefficient of variation
Pretest	27	70.81	3.163	0.609	0.045
Posttest	27	47.63	5.047	0.971	0.106

Table 2 presents the results of a paired samples t-test comparing the anxiety levels of 27 football players before and after a match. The t-value is 18.92, with 26 degrees of freedom, and the p-value is less than 0.001. This indicates a statistically significant difference in the anxiety levels between pretest (before the match) and posttest (after the match), suggesting that the reduction in anxiety after the match is highly significant. The note specifies that this test was conducted using Student's t-test.

Table 2. Paired Samples T-Test for Anxiety Levels Before and After the Match.

Paired Samples T-Test				
Measure 1	Measure 2	t	df	p
Pretest	Posttest	18.92	26	< .001

Note. Student's t-test.

Figure 1. Bar Plot of Anxiety Levels Before and After the Match.

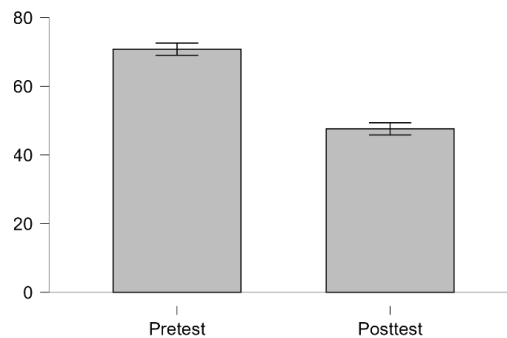


Figure 1 shows a bar graph comparing the anxiety levels of participants before (pretest) and after (posttest) a football match. In the pretest, the average anxiety level of participants is higher, with a value around 70, reflected in the taller bar. In contrast, in the posttest, the average anxiety level decreases to around 47, as seen in the shorter bar. The error bars above each bar represent the standard error of the mean (SE), indicating the variability of the data. The pretest bar has smaller error bars, suggesting less variation among participants, while the posttest bar has slightly larger error bars, indicating slightly more variability in anxiety levels after the match. Overall, this graph shows a significant decrease in anxiety levels after the match, supporting the finding that participants' anxiety decreased following the football match.

Figure 2. Q-Q Plot for Normality of Residuals.

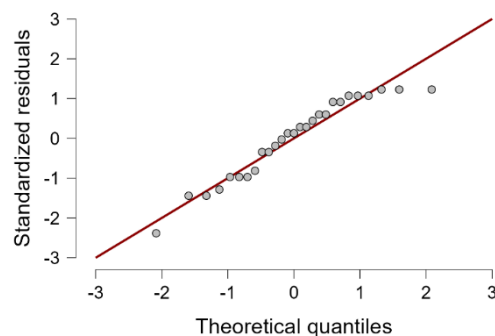


Figure 2 is a Q-Q plot (Quantile-Quantile plot) that visually assesses the normality of residuals in the data. In the plot, the horizontal axis (x-axis) represents the theoretical quantiles expected from a standard normal distribution, and the vertical axis (y-axis) represents the standardized residuals that is, the differences between the observed values and the values predicted by the model, adjusted by their standard deviation.

Each point on the plot corresponds to one observed residual. The red diagonal line is the reference line that shows where the points would lie if the residuals followed a perfect normal distribution. When the plotted points cluster close to this line, it indicates that the data are approximately normally distributed. In this figure, most points fall along or near the reference line, which suggests that the residuals do not deviate substantially from normality. If the points were widely scattered away from the line especially at the upper and lower ends it would indicate departures from normality, which could affect the appropriateness of parametric statistical tests used in the study.

Figure 3. Change in Anxiety Levels Before and After the Match.

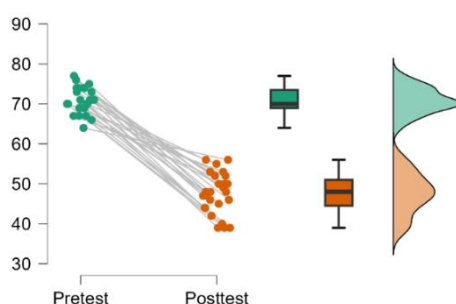


Figure 3 presents a combination of plots illustrating the changes in anxiety levels from pretest (before the match) to posttest (after the match) for the participants. The line plot on the left shows individual changes in anxiety levels for each participant, where green dots represent pretest values and orange dots represent posttest values. The lines connecting the dots indicate the change in anxiety for each individual, demonstrating that most participants experienced a decrease in anxiety after the match. The box plots in the middle summarize the data distribution for both pretest and posttest anxiety levels. The green box plot represents the distribution of pretest anxiety levels, while the orange box plot represents posttest anxiety levels. These box plots show the median, interquartile range, and potential outliers for both time points. The density plots on the right offer a smoothed view of the distribution of anxiety scores for both pretest and posttest. The overlapping distributions provide insight into how anxiety levels shifted between the two measurements. Overall, this figure visually supports the findings that anxiety levels were higher before the match and decreased afterward, with most participants showing a significant reduction in anxiety.

Discussion

The findings of this study clearly show that football players experience a significant reduction in anxiety levels after a match. In the pretest, anxiety levels were considerably high, with a mean of 70.81, while in the posttest, anxiety dropped significantly to a mean of 47.63. This drop was confirmed through a paired samples t-test, which yielded a t-value of 18.92 and a p-value of less than 0.001, indicating that the difference between the two measurements was statistically significant. These findings are consistent with previous research, which suggests that athletes often experience heightened anxiety before competition due to performance pressure, but experience relief after the competition concludes (Ford et al. 2017; Li et al. 2025; Yue et al. 2025). This result emphasizes the importance of understanding how anxiety impacts athletes during and after competitive events, and how this anxiety can vary between individuals.

One explanation for this significant reduction in anxiety could be the psychological relief athletes feel once the competitive pressure has dissipated. In sports psychology, it is often noted that athletes are

under a considerable amount of stress before a match, but once the event concludes, they experience a sense of relief, which leads to a natural reduction in anxiety levels (Arnetz and Ekman 2006). This is supported by the "catastrophe theory," which posits that athletes can experience high levels of anxiety before an event, but the anxiety typically decreases once the pressure of the competition is over (Melguizo Ibáñez et al. 2025; Rahmadhani et al. 2026). The findings in this study align with this theory, showing that the anxiety levels of football players are significantly higher before the match and decrease afterward.

The variation observed in posttest anxiety levels, as indicated by the higher standard deviation and coefficient of variation (0.106), suggests that individual athletes respond differently to the end of the match. While some athletes may feel immediate relief and calmness, others may experience lingering stress, particularly if their performance did not meet expectations. The greater variability in the post-test results highlights the importance of considering individual differences in athletes' emotional responses to competition. Some athletes may find it easier to manage their anxiety, while others might need more time to recover emotionally after the match.

These results also reflect the complex nature of anxiety in athletes, as the decrease in anxiety does not necessarily imply that all athletes experience the same emotional shift. The psychological impact of a match, whether positive or negative, can vary greatly depending on the athlete's personality, coping mechanisms, and even the outcome of the game (Junge et al. 2000; Morbée et al. 2026; Xu and Hao 2025). For example, athletes who perform well may experience greater relief, while those who underperform may continue to feel a level of anxiety or disappointment after the match. This variability underscores the need for tailored psychological support for athletes to address their individual emotional needs (Mao 2025; Robazza et al. 2025).

Given the significant impact that anxiety has on both performance and mental well-being, it is essential for football teams to have access to counseling services. A counselor or sports psychologist can provide athletes with the tools to manage their pre-competition anxiety effectively, through techniques such as relaxation training, mindfulness, and cognitive-behavioral strategies (Wang et al. 2025). These tools can help athletes reduce stress and perform at their best under pressure. Additionally, counselors can provide emotional support after the match, helping athletes process their feelings, whether those feelings are of relief, disappointment, or residual stress (Lane, Micklewright, and Meijen 2025; Markov-Glazer, Elbe, and Schliermann 2025). Having access to such support allows athletes to better manage the psychological demands of competitive sports, which can ultimately contribute to their overall performance and long-term well-being.

Furthermore, counselors can assist in developing personalized strategies to manage anxiety. While generalized techniques can be effective, each athlete may have unique stressors and responses to competition. A counselor can work with individual athletes to identify specific sources of anxiety, whether they stem from performance concerns, expectations from coaches and fans, or personal pressures (Kang and Lee 2025). With tailored support, athletes can develop coping mechanisms that are specific to their needs, which can be more effective in reducing anxiety levels before and after the match.

Sports counselors are also crucial in fostering a positive team environment. By addressing mental health and emotional well-being, counselors can help reduce stigma surrounding mental health in sports, encouraging athletes to seek help when needed. This can be especially important in high-pressure sports environments like football, where there may be a tendency to focus solely on physical performance and overlook mental health (Howatson et al. 2025; Littlefair and Jopling 2025). By integrating mental health support into team dynamics, football clubs can create a culture of holistic well-being, which benefits both individual players and the team as a whole.

While this study provides valuable insights into how anxiety levels fluctuate before and after a football match, there are several areas for future research. One potential avenue for exploration is to investigate how different factors, such as the player's role on the team, the intensity of the match, or their experience level, influence anxiety levels. For example, goalkeepers or team captains may experience higher levels of anxiety due to the greater responsibility they bear during a match. Similarly, the outcome of the match (win, loss, or draw) could significantly affect the anxiety levels post-match, as athletes may respond differently based on their performance and team results.

Another important direction for future research is to examine the long-term effects of anxiety reduction strategies. While this study focuses on immediate pre- and posttest anxiety levels, it would be beneficial to understand how long-lasting the effects of anxiety management techniques are, and whether athletes who undergo psychological training show sustained improvements in anxiety regulation over time. Longitudinal studies could provide further insights into the effectiveness of interventions designed to reduce anxiety and promote mental health in athletes, especially in the context of continuous athletic careers (Kurt et al. 2025; Sukmana et al. 2025).

In conclusion, the study highlights the significant reduction in anxiety levels experienced by football players after a match, suggesting that the competitive pressure of the event plays a major role in pre-competition anxiety. The increased variability in posttest anxiety levels also points to the different ways athletes cope with the aftermath of competition. These findings underscore the importance of integrating psychological support, such as counselors or sports psychologists, into football teams to help athletes manage their anxiety levels more effectively. By providing tailored interventions, teams can ensure that players are mentally prepared before matches and emotionally supported afterward, leading to better performance and overall well-being. This approach can contribute to creating a more holistic training environment that nurtures both the physical and psychological aspects of athletic performance.

Conclusions

This study was limited in several ways, which should be considered when interpreting the findings. One key limitation is the small sample size of 27 football players, which may not be representative of all athletes in various sports or levels of competition. A larger and more diverse sample, including athletes from different sports and competitive levels, could provide more generalizable insights into anxiety levels before and after a match. Additionally, the study focused only on the immediate pretest and posttest anxiety levels, not considering long-term effects or how anxiety might fluctuate over the course of a season. Future research could benefit from including follow-up assessments to explore how anxiety levels are managed over time and how sustained interventions might influence long-term performance and well-being.

Another limitation of this study is the reliance on self-reported data using a Likert scale. While this method is effective for gauging subjective experiences of anxiety, it is subject to biases such as social desirability or inaccurate self-assessment. Future studies could incorporate other methods of assessment, such as physiological measurements (e.g., heart rate or cortisol levels), to provide a more objective measure of anxiety. Furthermore, this study did not explore the psychological factors that might contribute to varying levels of anxiety among individual athletes, such as personality traits, coping strategies, or the role of social support. Exploring these factors in future research could provide a more comprehensive understanding of how anxiety affects athletes and how best to support them.

Based on the findings and limitations of this study, several recommendations can be made. First, it is recommended that football teams and other sports organizations implement regular psychological support, including counselors or sports psychologists, to help athletes manage their pre-competition anxiety. These professionals can provide athletes with tools to cope with stress and improve their mental preparation before matches. Additionally, post-match psychological support should also be considered to help athletes process their emotions and manage any residual anxiety. Given the high variability in post-match anxiety levels, individualized interventions tailored to each athlete's emotional needs could be particularly effective.

Future studies should aim to expand the sample size and include a more diverse range of athletes to improve the generalizability of the findings. Longitudinal studies that track athletes' anxiety levels over extended periods would also be valuable to understand how anxiety is managed throughout an athletic career. Finally, combining self-reported measures with physiological data could help provide a more holistic view of anxiety and its effects on athletic performance.

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References

- Arnetz, Bengt B., and Rolf Ekman, eds. 2006. *Stress in Health and Disease*. Wiley.
- van den Bergh, Don, Eric-Jan Wagenmakers, and Frederik Aust. 2023. "Bayesian Repeated-Measures Analysis of Variance: An Updated Methodology Implemented in JASP." *Advances in Methods and Practices in Psychological Science* 6(2). doi:10.1177/25152459231168024.
- Ford, Jessica, Kenneth Ildefonso, Megan Jones, and Monna Arvinen-Barrow. 2017. "Sport-Related Anxiety: Current Insights." *Open Access Journal of Sports Medicine* Volume 8:205–12. doi:10.2147/OAJSM.S125845.
- Guo, Cong, Feng Chen, and Ying Wang. 2025. "The Psychological Impact of Competitive Sports Participation on Adolescent Athletes: An Analysis of Coping Mechanisms and Performance Outcomes." *Journal of Rational-Emotive & Cognitive-Behavior Therapy* 43(2):24. doi:10.1007/s10942-025-00587-0.
- Holden, Jane, Christopher R. D. Wagstaff, Ross Wadey, and Peter Brown. 2025. "Exploring the Barriers to Athlete Personal Development within UK Olympic and Paralympic Sport." *Psychology of Sport and Exercise* 81:102966. doi:10.1016/j.psychsport.2025.102966.
- Howatson, Glyn, Suzanna Russell, Charles Pedlar, and Shona Halson. 2025. "Physical and Mental Recovery for Female Footballers: Considerations and Approaches for Better Practice." *Sports Medicine*. doi:10.1007/s40279-025-02246-x.
- Júdice, André, João Botelho, Vanessa Machado, Luís Proença, Luciano M. A. Ferreira, Peter Fine, and José João Mendes. 2025. "Sports Dentistry Intricacies with Season-Related Challenges and the Role of Athlete-Centered Outcomes." *Frontiers in Oral Health* 6. doi:10.3389/froh.2025.1531653.
- Junge, Astrid, Jiri Dvorak, Dieter Rosch, Toni Graf-Baumann, Jiri Chomiak, and Lars Peterson. 2000. "Psychological and Sport-Specific Characteristics of Football Players." *The American Journal of Sports Medicine* 28(5_suppl):22–28. doi:10.1177/28.suppl_5.s-22.
- Kaczmarek, Franciszek, Joanna Bartkowiak-Wieczorek, Monika Matecka, Karolina Jencylik, Kinga Brzezińska, Paulina Gajniak, Sonia Marchwiak, Katarzyna Kaczmarek, Michał Nowak, Michał Kmiecik, Joanna Stężycka, Kamil Krzysztof Krupa, and Edyta Mądry. 2025. "Sleep and Athletic Performance: A Multidimensional Review of Physiological and Molecular Mechanisms." *Journal of Clinical Medicine* 14(21):7606. doi:10.3390/jcm14217606.
- Kang, Jimoon. 2025. "From Rising Stars to Early Retirees: The Accelerated Career Trajectories of League of Legends Esports Players." *Team Performance Management: An International Journal* 31(5–6):290–313. doi:10.1108/TPM-09-2024-0108.
- Kang, Sangwook, and Seungjoo Lee. 2025. "A Systematic Review of Psychological Difficulties among Elite Sports Coaches." *Frontiers in Psychology* 16. doi:10.3389/fpsyg.2025.1666035.
- Kaur Chawla, Jasmine, Indu Bala, Chanderkant Dhiman, Prince Vishal Dixit, Vismita Paliwal, Barnali Bhattacharjee, and Seema Kaushik Sharma. 2025. "Psychological Analysis of Anxiety and Its Impact on Athletic Performance in Competitive Sports." *Retos* 72:1174–85. doi:10.47197/retos.v71.117070.

- Kurt, Gulsah, Philippa Specker, Belinda Liddell, David Keegan, Randy Nandyatama, Atika Yuanita, Rizka Argadianti Rachmah, Joel Hoffman, Shraddha Kashyap, Diah Tricesaria, Mitra Khakbaz, Zico Pestalozzi, and Angela Nickerson. 2025. "Profiles of Coping Resources and Their Associations with Mental Health and Social Functioning among Refugees in Indonesia." *Cambridge Prisms: Global Mental Health* 12:e100. doi:10.1017/gmh.2025.10053.
- Lane, Andrew M., Dominic Micklewright, and Carla Meijen. 2025. "Understanding Fatigue: A Psychological Framework for Health and Performance." *Sci* 7(4):162. doi:10.3390/sci7040162.
- Li, Yuening, Yong Ren, Zhijuan Du, Ming Li, and Jicheng Jiang. 2025. "Competitive Pressure, Psychological Resilience, and Coping Strategies in Athletes' Pre-Competition Anxiety." *Scientific Reports* 15(1):35467. doi:10.1038/s41598-025-19213-1.
- Littlefair, David, and Michael Jopling. 2025. "'Literal Torture': Vulnerability, Resilience and Young People's Experiences of Pressure in Physical Education." *British Educational Research Journal*. doi:10.1002/berj.70047.
- López-Roel, Santiago, Enrique García-Ordóñez, and Manuel Isorna Folgar. 2025. "Necesidades Psicológicas Básicas En Deportistas de Alto Nivel Según Género y Edad." *Retos* 71:135-49. doi:10.47197/retos.v71.108264.
- Mao, Zhoujie. 2025. "Advancements in Research on Psychological and Emotional Aspects of Student-Athletes." *Frontiers in Psychology* 16. doi:10.3389/fpsyg.2025.1645177.
- Marcel, J., and Y. Paquet. 2010. "Validation Française de La Version Modifiée Du « Sport Anxiety Scale » (SAS)." *L'Encéphale* 36(2):116-21. doi:10.1016/j.encep.2009.05.006.
- Markov-Glazer, Alon, Anne-Marie Elbe, and Rainer Schliermann. 2025. "From Their Eyes: Deaflympic Athletes' and Coaches' Perspectives on Mental Training." *Frontiers in Sports and Active Living* 7. doi:10.3389/fspor.2025.1613833.
- Martín-Rodríguez, Alexandra, and Rubén Madrigal-Cerezo. 2025. "Technology-Enhanced Pedagogy in Physical Education: Bridging Engagement, Learning, and Lifelong Activity." *Education Sciences* 15(4):409. doi:10.3390/educsci15040409.
- Melguizo Ibáñez, Eduardo, Gabriel González-Valero, Manuel Ortega Caballero, Daniel Sanz Martín, and José Manuel Alonso Vargas. 2025. "Análisis Del Clima Motivacional Sobre La Ansiedad y El Autoconcepto Físico En Futuros Docentes de Educación Física. Un Modelo Explicativo Multigrupo." *Retos* 71:402-11. doi:10.47197/retos.v71.116534.
- Mercer, Richard A. J., Jennifer L. Russell, Donald S. Strack, Aaron J. Coutts, and Blake D. McLean. 2025. "Work Demands, Responses, and Coping Strategies for Staff in High-Performance Sport: A Scoping Review." *Sports Medicine* 55(12):3001-58. doi:10.1007/s40279-025-02324-0.
- Morbée, Sofie, Jochen Delrue, Maarten Vansteenkiste, Leen Haerens, and Athanasios Mouratidis. 2026. "Game-to-Game Dynamics: The Role of Autonomous and Controlled Reasons behind Mastery-Approach Goals and Appraisals in Soccer Performance." *Motivation and Emotion*. doi:10.1007/s11031-026-10202-z.
- Rahmadhani, Wulan, Hardianti Apriana, Johariyah Johariyah, Arnika Dwi Asti, and Kunthida Kingsawad. 2026. "Effectiveness of Physical Exercises and Yoga on Anxiety Levels in Menopausal Women: A Quasi-Experimental Study." *Retos* 74:589-97. doi:10.47197/retos.v74.117757.
- Robazza, Claudio, Francesca Vitali, Laura Bortoli, and Montse C. Ruiz. 2025. "Basic Psychological Needs Satisfaction, Coping Functions, and Emotional Experiences in Competitive Athletes: A Multi-States Theory Perspective." *Scientific Reports* 15(1):1854. doi:10.1038/s41598-025-86072-1.
- Serpa, Sidonio. 2025. "Psychological Sustainability in Elite Sport: Implications for Olympic Preparation." *Psychology International* 7(4):82. doi:10.3390/psycholint7040082.
- Sukmana, Erinda Dwimagistri, Agus Rianto, Ilham Kauli, Salmin Salmin, Rachmad Kristiono Dwi Susilo, Sutawi Sutawi, and Gusti Pirandy. 2025. "The Role of Mindfulness in Enhancing Athletic Performance: A Critical Review of Empirical Studies." *Retos* 69:1295-1309. doi:10.47197/retos.v69.116706.
- Wang, Wei, Matthew J. Schweickle, Emily R. Arnold, and Stewart A. Vella. 2025. "Psychological Interventions to Improve Elite Athlete Mental Wellbeing: A Systematic Review and Meta-Analysis." *Sports Medicine* 55(4):877-97. doi:10.1007/s40279-024-02173-3.
- Xu, Jiaxin, and Fengwei Hao. 2025. "The Role of Personality Traits in Athlete Selection: A Systematic Review." *Acta Psychologica* 260:105478. doi:10.1016/j.actpsy.2025.105478.
- Yue, Yin, Xiang Zubing, Fakhra Yasmin, and Petra Poulouva. 2025. "Impact of Competitive Anxiety and Coach Leadership Style on Track and Field Athlete Performance: Moderating Role of Coping



Strategies and Emotional Intelligence.” *Current Psychology* 44(3):1511–26. doi:10.1007/s12144-024-07125-8.

Zhang, Mingjun, Chatkamon Singnoy, Warakorn Supwirapakorn, Chairat Choosakul, and Tanida Julvanichpong. 2025. “Model Analysis of the Mediating Effect of Sport Anxiety on Wushu Routine Sport Performance.” *Retos* 73:510–20. doi:10.47197/retos.v73.116861.

Zhou, Yutao, Mengqing Wang, Francesco V. Ferraro, Ziqian Li, and Shuge Zhang. 2026. “Talent Development in High-Performing Athletes in Artistic Sports: Insights from the Athlete-Coach-Parents Triad.” *Current Psychology* 45(1):78. doi:10.1007/s12144-025-08787-8.

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