



The Relationship Between Psychosocial Stressors and Burnout in Football Referees in Bandung City

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Article History

Received October 2025

Accepted October 2025

Published Vol.14 No.(3) 2025

Keywords:

Aggression; Burnout;
Gatepsychosocial Stressors;
Environmental Pressure;
Football Referee

Abstract

Football referees play a crucial role in maintaining the integrity and smooth running of matches, yet they frequently face social and emotional pressure from players, coaches, and spectators, which can trigger psychosocial stressors. Environmental pressure and repeated verbal or physical aggression can potentially lead to emotional exhaustion and burnout, ultimately impacting the referee's psychological well-being and performance on the field. This study aims to analyze the relationship between psychosocial stressors, including environmental pressure and aggression, and burnout levels among football referees in Bandung. The research approach used was a quantitative correlational approach with a cross-sectional design. The results showed that environmental pressure had a significant positive relationship with emotional exhaustion ($\rho = 0.666$; $p < 0.01$) and cynicism ($\rho = 0.400$; $p < 0.01$). In addition, aggression is also significantly related to emotional exhaustion ($\rho = 0.388$; $p < 0.01$), but was not related to professional efficacy ($\rho = 0.062$; $p = 0.671$). These findings indicate that the higher the social pressure and aggression experienced, the greater the likelihood of referees experiencing burnout, especially in the emotional dimension. Therefore, psychological counseling programs, stress management training, and ongoing social support are needed for referees to maintain their mental well-being and professionalism.

How to Cite

Mubaroq, G. Q., Kusmaedi, N., & Hardwis, S. (2025). The Relationship Between Psychosocial Stressors and Burnout in Football Referees in Bandung City. *Journal of Physical Education, Sport, Health and Recreation*, 14 (3), 923-930.

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INTRODUCTION

In recent decades, mental health issues have become a global concern due to the significant increase in cases of stress, depression, and psychological exhaustion in various levels of society (Wang et al., 2025). Social, economic, and environmental pressures cause individuals to face increasingly complex psychological demands (Morrison et al., 2025). (Klamert et al., 2025) the concept of planetary mental health emphasizes that mental well-being must be viewed as an integral part of global health, as social and environmental factors mutually influence human psychological well-being. This phenomenon is also reflected in the world of sport, where mental health is a crucial component determining performance and the quality of participation (Chen et al., 2025). Although sport is known to provide significant physiological and psychological benefits, the dynamics of competition, public expectations, and performance pressures make it a high-risk environment for stress and psychological well-being (Li, 2025; Pasquerella et al., 2025).

In the context of competitive sports, the referee plays a central role as a decision maker who ensures that the match runs fairly, orderly and in accordance with applicable regulations (Zhou et al., 2025). This position requires decisiveness, high concentration, and the ability to make decisions quickly under situational pressure (Zhao & Zhang, 2025). However, this great responsibility also makes referees one of the parties most vulnerable to psychological pressure (Plasto et al., 2025). Various studies show that referees often face stress due to intense interactions with players, coaches, and spectators, which are often accompanied by criticism, protests, and even intimidation (Orviz-Martínez et al., 2021). This pressure not only affects their performance in leading matches, but can also impact their emotional well-being and motivation (Klatt et al., 2025). In a competitive game environment like football, unmanaged stress has the potential to develop into more serious psychological problems, including emotional exhaustion and burnout (Reinert et al., 2024; Zhang et al., 2024).

Psychosocial stressors are pressures that arise from interactions between individuals and their environment, which can affect a person's emotional, cognitive and behavioral conditions (Scheit et al., 2025). According to Lazarus and Folkman (1984), stress arises when a person assesses environmental demands as exceeding his or her coping abilities (Tremolada et al., 2016). In the context of sport, psychosocial stressors can stem

from various factors such as performance pressure, role conflict, social expectations, and even stressful interpersonal relationships (Keriven et al., 2025). For soccer referees, these stressors can arise in the form of loud protests from players, verbal pressure from coaches and spectators, uncertainty about decisions made, and the fear of making mistakes under public scrutiny (Drole et al., 2025; Kruger, 2025). Repeated social pressure can cause concentration disorders, emotional exhaustion, and reduce the referee's confidence in leading the match (Liebrenz et al., 2025). If not managed with adaptive coping strategies, these psychosocial stressors have the potential to cause long-term psychological impacts, including an increased risk of burnout (Buller-Peralta et al., 2024).

Burnout is a condition of psychological exhaustion that arises due to chronic pressure and stress that is not resolved effectively (Galily, 2024). According to (Maslach & Jackson, 1981) Burnout consists of three main dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. In the context of sports, this phenomenon is often experienced by individuals with high levels of responsibility and intense workloads, such as coaches, athletes, and referees (Akbar et al., 2025). For football referees, the pressure to make quick decisions, public expectations of fairness, and a lack of social support can trigger symptoms of burnout (Lin et al., 2025). Several studies have shown that referees who experience burnout tend to lose motivation, show decreased concentration, and make more frequent errors when officiating matches (Lopes de Lima et al., 2025). This condition not only impacts individual performance, but can also affect the quality of competition as a whole (Choudhary & Chitranshi, 2025; Sarmiento-Carbajal et al., 2025). Therefore, understanding the factors that cause burnout, including psychosocial stressors, is an important step in maintaining the mental well-being and professionalism of referees.

The phenomenon of burnout among soccer referees has attracted the attention of several researchers attempting to identify the psychological factors that influence their mental state and performance. Several previous studies have highlighted various psychological aspects that influence referee performance and mental well-being (Tsaniyah et al., 2025) found that most Indonesian professional referees have low levels of anxiety, but still face difficulties in cognitive and affective aspects such as worry and impaired concentration (Arbinaga, 2023) showed that psychological inflexibility was positively associated with

pain catastrophization in referees in Spain, while research (Hani, 2025) revealed that the use of VAR technology can create new psychological pressure and doubts for referees. On the other hand, (Hamzah et al., 2025) proved that psychological management training can increase referee confidence and decision-making accuracy (Orviz-Martínez et al., 2021) found that social pressure and verbal aggression in matches were positively related to burnout levels, and social support acted as a protector against psychological exhaustion.

However, most research still focuses on a single variable and is conducted abroad, in a social and cultural context different from the situation in Indonesia. Studies specifically examining the relationship between psychosocial stressors and burnout in soccer referees at the local level are still very limited, even though referees in regional areas also face high social and emotional pressures during match officiating. Based on these conditions, this study was conducted to answer the question of whether there is a relationship between psychosocial stressors and burnout levels in soccer referees in the city of Bandung. This study aims to analyze the relationship between these two variables and provide an empirical overview of the levels of psychosocial stressors and burnout experienced by soccer referees in the city of Bandung.

The novelty of this study lies in its focus on exploring the relationship between psychosocial stressors and burnout among football referees in Bandung City, a topic rarely examined in the Indonesian context. By adapting validated international instruments to local conditions, this research provides new empirical evidence on how social and environmental pressures contribute to referee burnout within a developing-country sports environment.

METHODS

This study uses a quantitative correlational approach with a cross-sectional design. The correlational approach was chosen because it aims to determine the relationship or connection between two variables without providing treatment to the research subjects (Sugiyono, 2021). According to (Creswell, JW, & Creswell, 2018). Correlational research is used when researchers want to identify the extent to which two or more variables have a statistical relationship in a natural context. A cross-sectional design is used because data collection is carried out at a specific point in time to obtain a picture of the relationship between variables at the same time (Hanum et al., 2023).

Thus, this design is considered most appropriate to answer the research objective, namely to analyze the relationship between psychosocial stressors and burnout in soccer referees in Bandung City.

The subjects of this study were 50 active soccer referees residing and working in Bandung City, Indonesia. The sampling technique used was purposive sampling, a non-probability sampling technique in which participants are selected based on specific criteria relevant to the research objectives (Etikan, 2016). This technique allows researchers to select subjects who meet the characteristics that are considered to provide the most accurate information regarding the phenomenon being studied (Sugiyono, 2021). The inclusion criteria in this study include: (1) having active status as a football referee for at least the last year, (2) having active status leading matches in the PSSI Bandung City competition.

Participants ranged in age from 19 to 50 years, with a mean age of 26.2 years (SD = 6.23). Most respondents had 1–3 years of match officiating experience and were regularly involved in various match categories, from children's age groups (SSB/U12) to adult amateur leagues. Several respondents also held provincial and national referee licenses.

This study used two main instruments that had been psychometrically tested and adapted to the research context. The first instrument was the Psychosocial Stressor Scale, adapted from research (Orviz-Martínez et al., 2021). This instrument was developed to assess various sources of psychological stress experienced by soccer referees during matches, including environmental stress and experiences of verbal and physical aggression. This scale was used because it has proven reliable and valid in measuring psychosocial factors related to burnout in a population of grassroots soccer referees. Adaptation of the instrument was carried out through a process of back-translation and adjustment to the Indonesian cultural context, as suggested by (Beaton et al., 2000), to ensure equivalence of meaning and validity of content in local contexts.

The second instrument is the Maslach Burnout Inventory-General Survey (MBI-GS), which was developed by (Maslach & Jackson, 1981). This instrument measures three main dimensions of burnout: emotional exhaustion, cynicism, and professional efficacy. The MBI-GS was chosen because it is the most widely used burnout measure and has been shown to have good reliability and cross-cultural validity in both work and sport contexts (Kristensen et al., 2005). Each item in both instruments was scored using a

7-point Likert scale (0 = never to 6 = every day). The internal reliability of the instruments was examined using the Cronbach's Alpha test, and the results showed a value of α above 0.70, which indicates a good level of internal consistency (Kline, 1999).

Prior to conducting the study, the researcher first applied for official permission from the Association of Indonesian Football Associations (Askot PSSI) Bandung, the institution that oversees the referees. After obtaining approval, the researcher conducted a socialization of the research objectives and procedures during a routine referee training activity held on April 17, 2025. During the socialization stage, the researcher explained that participation was voluntary, the data collected would be kept confidential, and would only be used for academic purposes. Each participant was asked to provide written consent through an informed consent form before completing the questionnaire. This process was carried out to ensure that all participants understood their rights, obligations, and benefits of participating in the study, in accordance with the ethical principles of human research as outlined by the American Psychological Association (Principles et al., 2002). Data collection was conducted online using Google Forms. The questionnaire included instructions, demographic statements, and items from both research instruments (psychosocial stressors and burnout). Participants took approximately 10–15 minutes to complete all questions.

All collected data was analyzed using IBM SPSS Statistics software version 26 (Fadluloh et al., 2024). Data analysis was conducted through two main stages: descriptive analysis and inferential analysis. The first stage was descriptive analysis, which was used to provide an overview of the characteristics of respondents and the distribution of each research variable. This analysis included calculating the mean, standard deviation, minimum, and maximum values for each variable: environmental stress, aggression, and the three dimensions of burnout: emotional exhaustion, cynicism, and professional efficacy (Sugiyono, 2019).

The second stage is an inferential analysis aimed at examining the relationship between psychosocial stressors (environmental pressure and aggression) and burnout levels. Prior to the correlation test, the data were tested for normality using the Kolmogorov–Smirnov method. The results indicated that the data were not normally distributed, so the analysis was continued with the Spearman's Rank correlation test. This test

was chosen because it is non-parametric, does not require the assumption of a normal distribution, and is suitable for measuring the strength and direction of the relationship between two ordinal or interval-scale variables (Field, 2018; Pallant, 2020). The significance level was set at $p < 0.05$ to determine a statistically significant relationship. The correlation coefficient value (ρ) interpreted using guidelines from (Cohen, 1988), Where $\rho < 0.30$ is considered a weak relationship, $0.30-0.50$ indicates a moderate relationship, and >0.50 indicates a strong relationship. The results of the analysis are presented in a correlation table and explained narratively.

RESULTS AND DISCUSSION

A descriptive analysis was conducted to provide an overview of the levels of psychosocial stressors and burnout among football referees in Bandung City. **Table 1** displays the mean values and standard deviations for each study variable.

Table 1. Descriptive analysis

Variables	N	Mean	Elementary School
Environmental Pressure	50	2.27	1.01
Aggression	50	3.09	1.01
Emotional Exhaustion	50	2.52	0.94
Cynicism	50	1.57	0.85
Professional Efficacy	50	4.54	0.96

The analysis results showed that the level of environmental pressure felt by referees was in the moderate category ($M = 2.27$; $SD = 1.01$), while the level of verbal and physical aggression was also classified as moderate ($M = 3.09$; $SD = 1.01$). In the burnout dimension, emotional exhaustion had a moderate average ($M = 2.52$; $SD = 0.94$), indicating psychological pressure experienced by some respondents. Cynicism was low ($M = 1.57$; $SD = 0.85$), indicating that most referees still had an emotional attachment to their role. Meanwhile, professional efficacy showed the highest value ($M = 4.54$; $SD = 0.96$), indicating good self-confidence and professional competence among referees.

To determine the relationship between psychosocial stressors (environmental pressure and aggression) and the three dimensions of burnout (emotional exhaustion, cynicism, and professional efficacy), a Spearman's Rank correlation test

was conducted. The results of the analysis are presented in **Table 2**.

Table 2. Spearman Correlation Analysis

Variables	ENV	AGG	EE	S	EP
Environmental pressure	1	.395	.666	.400	-.181
Aggression	.395	1	.388	.302	.062
Emotional Exhaustion	.666	.388	1	.501	-.213
Cynicism	.400	.302	.501	1	-.316
Professional Efficacy	-.181	.062	-.213	-.316	1

Note:

ENV (Environmental pressure)

AGG (Aggression)

EE (Emotional Exhaustion)

S (Cynicism)

EP (Professional Efficacy)

The results of the correlation test show that environmental stress has a significant positive relationship with emotional exhaustion ($\rho = 0.666$; $p < 0.01$) and cynicism ($\rho = 0.400$; $p < 0.01$), but was not significantly related to professional efficacy ($\rho = -0.181$; $p = 0.207$). This means that the higher the environmental pressure experienced by referees, the greater the level of emotional exhaustion and the tendency towards cynicism that emerges. In addition, aggression is also significantly positively related to emotional exhaustion ($\rho = 0.388$; $p < 0.01$) and cynicism ($\rho = 0.302$; $p < 0.05$), but was not related to professional efficacy ($\rho = 0.062$; $p = 0.671$). A significant negative relationship was found between cynicism and professional efficacy ($\rho = -0.316$; $p < 0.05$), indicating that the higher the level of cynicism, the lower the referee's self-confidence and perception of professional competence.

The results of this study indicate that psychosocial stressors, consisting of environmental pressure and experiences of aggression, have a significant positive relationship with emotional exhaustion and cynicism in soccer referees in Bandung City. Who explained that stress arises when individuals perceive environmental demands to exceed their coping capacity (Klatt et al., 2025). In the context of match leadership, pressure from spectators, coaches, and expectations for quick and accurate decisions can be significant sources of stress. If these conditions persist without social support and effective coping strategies, they can potentially lead to emotional exhaustion and cynicism toward one's duties and social environment.

A strong relationship between environmental stress and emotional exhaustion ($\rho = 0.666$; $p < 0.01$) indicates that the situational aspects of the match are the main factor contributing to stress in referees. This result is in line with research (Orviz-Martínez et al., 2021) in Spain, which found that match environments with high levels of verbal aggression and social pressure correlated with increased levels of burnout. However, this study's findings offer a novel contribution because they were conducted in the Indonesian socio-cultural context, where the intensity of emotional interactions between players, coaches, and spectators is often higher, even at youth levels. This may explain why emotional exhaustion emerged despite the fact that most of the respondents were young and had relatively little leadership experience.

Another interesting finding is the positive relationship between aggression and cynicism ($\rho = 0.302$; $p < 0.05$). Referees who experience more frequent disrespect, both verbally and physically, tend to show decreased empathy and emotional attachment to their role. This is in line with the theory (Maslach & Jackson, 1981) which states that cynicism is a defense mechanism against chronic emotional stress, in which individuals attempt to distance themselves emotionally from their work to reduce the psychological burden. In the context of soccer refereeing, cynicism can manifest itself in the form of decreased motivation, loss of interest in officiating matches, or an indifference to the reactions of spectators and players.

Meanwhile, professional efficacy showed the highest mean score and was not significantly associated with psychosocial stressors. This indicates that most referees still maintain self-confidence and belief in their competence despite facing high pressure. This condition can be explained by protective factors such as competition experience, peer support, and intrinsic motivation, which are important supports in maintaining psychological stability. This finding is consistent with research findings (Hamzah et al., 2025) who found that psychological management training can improve referee confidence and decision-making accuracy. In addition, (Tsaniyah et al., 2025) also reported that although most Indonesian professional referees experience cognitive anxiety, their level of self-confidence remains high due to the positive meaning of their roles and responsibilities.

Overall, the results of this study reinforce the view that psychosocial stressors significantly contribute to the emergence of burnout symptoms in soccer referees, particularly in the dimen-

sions of emotional exhaustion and cynicism. However, the persistence of high professional efficacy suggests potential psychological resilience in referees. This requires attention in the development of coaching programs, particularly by providing training in emotional regulation, stress-coping strategies, and social support from referee organizations. Such approaches have been shown to be effective in reducing emotional exhaustion and improving mental well-being in sports populations (Schaufeli et al., 2009).

Thus, this study provides an empirical contribution to the sports psychology literature, particularly in the context of burnout and psychosocial stressors in the soccer refereeing profession. It also emphasizes the importance of addressing psychological aspects in referee training, not just technical and physical aspects. In the long term, the results of this study can serve as a basis for referee associations and sports organizations in Indonesia to develop sports psychology-based intervention programs aimed at maintaining mental balance, improving decision-making quality, and extending the professional careers of referees.

CONCLUSION

The results of this study indicate that psychosocial stressors, including environmental pressure and experiences of aggression, have an effectively positive relationship with emotional exhaustion and cynicism among soccer referees in Bandung City. The higher the pressure and intensity of aggression experienced, the greater the likelihood of referees experiencing psychological exhaustion and cynicism towards their duties. Meanwhile, the professional efficacy dimension remained at a high level and showed no effectively relationship with either stressor, indicating psychological resilience in the majority of referees.

These findings underscore the importance of addressing psychological aspects in the development of soccer referees, as social pressures and the match environment can impact their mental well-being and professional performance. Therefore, referee organizations and associations are advised to integrate psychological counseling programs, stress management training, and strengthening social support into their routine training activities.

On the other hand, referees are expected to develop adaptive coping strategies and maintain a balance between professional responsibilities and emotional well-being. Furthermore, future research is expected to involve a broader sample

and employ a mixed-methods approach to gain a deeper understanding of the subjective experiences, psychosocial stress, and mental adaptation strategies used by referees in facing challenges in the football match environment.

The results of this study are expected to provide a scientific contribution to the development of sports psychology studies, particularly in understanding the psychosocial factors that influence the mental well-being of referees, as well as provide a practical basis for referee organizations and associations in designing effective psychological coaching and mentoring programs.

REFERENCES

- Akbar, A., Abd Karim, Z., Utamy Syafitri, F., Intan Cahyani, F., & Yong Hon, G. (2025). The invisible traits of professional footballers: a qualitative analysis of attitude and respect from a sports psychology view. *Salud, Ciencia y Tecnologia*, 5. <https://doi.org/10.56294/salud-cyt20252084>
- Arbinaga, F. (2023). Pain Catastrophizing Related to Psychological Inflexibility, Self-Reported Injuries and Perfectionism in Soccer Referees. *Journal of Science in Sport and Exercise*. <https://doi.org/10.1007/s42978-023-00234-z>
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *Spine*, 25(24), 3186–3191. <https://doi.org/10.1097/00007632-200012150-00014>
- Buller-Peralta, I., Gregory, S., Low, A., Dounavi, M. E., Bridgeman, K., Ntalianis, G., Lawlor, B., Naci, L., Koychev, I., Malhotra, P., O'Brien, J. T., Ritchie, C. W., Dauvilliers, Y., & Muniz-Terrera, G. (2024). The pivotal role of sleep in mediating the effects of life stressors and healthy habits on allostatic load in mid-life adults. *Frontiers in Human Neuroscience*, 18(December), 1–17. <https://doi.org/10.3389/fnhum.2024.1509223>
- Chen, W., Peng, B., Hu, H., Yu, L., & Li, L. (2025). A study on the cross-lagged relationships between adolescents' sport participation and self-control ability and mental health. *Scientific Reports*, 15(1), 35497. <https://doi.org/10.1038/s41598-025-19457-x>
- Choudhary, S., & Chitranshi, J. (2026). Compelled to contribute: The unseen pressure behind extra-role behavior. *Multidisciplinary Reviews*, 9(1). <https://doi.org/10.31893/multirev.2026011>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Creswell, J. W., & Creswell, J. D. (2018). Literatuur. In *Acht grafvondsten van de Veluwse klokkeergroep als uitgangspunt voor chronologische beschouwingen over de relaties*

- saalisch-böhmische Schnurkeramik, Enkelgraf-cultuur, Klokbeke-Oostgroep en Nederlands-Westduitse klokbekeergroepen. <https://doi.org/10.2307/j.ctt2204s7w.11>
- Drole, K., Paravlic, A., Steffen, K., & Doupona, M. (2025). Physical, psychosocial and dual-career loads as risk factors for injuries and illnesses in elite handball players: a 45-week prospective cohort study. *Frontiers in Sports and Active Living*, 7(August), 1–9. <https://doi.org/10.3389/fspor.2025.1664247>
- Etikan, I. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1. <https://doi.org/10.11648/j.aj-tas.20160501.11>
- Fadluloh, F. M., Sartono, H., Kusumah, W., & Mulyana, M. (2024). Athletes' Perception of Parental Support and Achievement Motivation: A Correlational Study with Early Age Individual Sport Athletes in Swimming. 412–421. <https://doi.org/https://doi.org/10.31949/ijsm.v4i4.11454>
- Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). SAGE Publications.
- Galily, Y. (2024). From Sport Psychology to Action Philosophy: Immanuel Kant and the Case of Video Assistant Referees. *Behavioral Sciences*, 14(4). <https://doi.org/10.3390/bs14040291>
- Hamzah, M. A., Abdurrahman, E., Nova, A., Tungkup, D. A. L., Pratama, A. R., & Zebua, M. C. (2025). Pelatihan Manajemen Psikologi Untuk Meningkatkan Pengambilan Keputusan Wasit Sepak Bola. *KITA Papua Selatan: Jurnal Pengabdian Multidisiplin*, 1(1), 29–36.
- Hani, A. T. (2025). Un estudio analítico del uso de la tecnología VAR y su relación con la vacilación psicológica de los árbitros en la Liga Profesional Iraquí An analytical study of the use of VAR technology and its relationship to the psychological hesitation of referees i. 2025, 1132–1139.
- Hanum, L., Mesra, R., Pratiwi, S. H., Putri, P. O., Marlina, R., Zuriah, N., Widadiyah, Q., Rogahang, S. S. N., Larekeng, S. H., Syukrilla, W. A., Anantadjaya, S. P., Effendi, Sari, R., Kudus, A., Paling, S., Mardiah, & Safriyani, E. (2023). Metode Penelitian Pendidikan.
- Keriven, H., Sánchez-Sierra, A., de-la-plaza-San-Frutos, M., García-Pérez-de-Sevilla, G., Clemente-Suarez, V., Garcia-Laredo, E., Saenz-Bravo, M., Owoeye, O. B. A., Miñambres-Martín, D., & Domínguez-Balmaseda, D. (2025). Psychological wellbeing of student-athletes: a comparative study between European and American athletes. *Frontiers in Psychology*, 16(July), 1–9. <https://doi.org/10.3389/fpsyg.2025.1604783>
- Klamert, L., Brockett, C., Craike, M., Shrestha, N., & Parker, A. G. (2025). The imperative of planetary mental health: insights, recommendations, and a call to action. *Global Public Health*, 20(1), 1–13. <https://doi.org/10.1080/17441692.2025.2541220>
- Klatt, S., Bea, L. M., Brückner, S., Jungen, A., Noël, B., & Strauss, B. (2025). Stress and Anxiety Among Elite Volleyball Referees While Officiating. *Journal of Sports Science and Medicine*, 24(1), 160–171. <https://doi.org/10.52082/jssm.2025.160>
- Kline, R. B. (1999). Book Review: Psychometric theory (3rd ed.). *Journal of Psychoeducational Assessment*, 17(3), 275–280. <https://doi.org/10.1177/073428299901700307>
- Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work and Stress*, 19(3), 192–207. <https://doi.org/10.1080/02678370500297720>
- Kruger, A. (2025). The prevalence of mental health and psychosocial concerns among South African student-athletes. *Journal of Affective Disorders Reports*, 20(February). <https://doi.org/10.1016/j.jadr.2025.100888>
- Li, X. Y. (2025). The relationship between quality of sports friendships and mental health in Chinese junior high school students: the bidirectional chain mediating effects of sport motivation and exercise adherence. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-025-21287-5>
- Liebrez, M., Imboden, C., Colangelo, J., Buadze, A., & Smith, A. (2025). The care episode of a young elite-level female cyclist with major depressive disorder and comorbid eating disorder: A sports psychiatry case report from Switzerland. *Discover Mental Health*, 5(1), 1–6. <https://doi.org/10.1007/s44192-025-00242-1>
- Lin, K. H., Hsu, C. C., & Lin, K. Y. (2025). Job stress and burnout among hospital administrative staff: a cross-sectional study. *Scientific Reports*, 15(1), 1–10. <https://doi.org/10.1038/s41598-025-17209-5>
- Lopes de Lima, C. Z., de Sousa Fortes, L., Pires, D. A., Souza Machado, H. E., Socorro Dantas Oliveira, A. Do, Coswig, V. S., & Penna, E. M. (2025). Mental fatigue increases perception of effort but does not compromise the inhibitory control of football referees during a match simulation physical task. *European Journal of Sport Science*, 25(3), 1–12. <https://doi.org/10.1002/ejsc.12222>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99–113. <https://doi.org/10.1002/job.4030020205>
- Morrison, J., Rimal, D., Pradhan, I., Luitel, N. P., & Rose-Clarke, K. (2025). How can sport promote adolescent mental health? A qualitative study from the rural plains of Nepal. *SSM - Mental Health*, 8(April), 100491. <https://doi.org/10.1016/j.ssmmh.2025.100491>
- Orviz-Martínez, N., Botey-Fullat, M., & Arce-García, S. (2021). Analysis of burnout and psychosocial factors in grassroots football referees. *International Journal of Environmental Research*

- and Public Health, 18(3), 1–18. <https://doi.org/10.3390/ijerph18031111>
- Pallant, J. (2020). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS* (7th ed.). Routledge.
- Pasquerella, L., Aychman, M. M., Tasnim, N., Piccirillo, A., Holmes, V., & Basso, J. C. (2025). The benefits of chronic sport participation and acute exercise on mental health and executive functioning in adolescents. *Scientific Reports*, 15(1), 1–11. <https://doi.org/10.1038/s41598-025-88427-0>
- Plasto, T. M., Buckley, T., & Tofler, G. H. (2025). Cardiovascular Risk and Knowledge, Attitudes and Beliefs of Football Referees Towards Acute Coronary Syndrome Events. *Heart Lung and Circulation*, 34(3), 244–252. <https://doi.org/10.1016/j.hlc.2024.09.010>
- Principles, E., Code, E., Code, T. E., & Code, T. E. (2002). Ethical principles of psychologists and code of conduct. *The American Psychologist*, 57(12), 1060–1073. <https://doi.org/10.1037/0003-066X.57.12.1060>
- Reinert, C., Gabiatti, M. P., Pillmann-Ramos, H., Silva, D. A. S., de Fragas Hinnig, P., de Carvalho, J., Panza, V. S. P., da Silva, E. L., & Hansen, F. (2024). Dietary antioxidant capacity is inversely associated with F2- isoprostane and body fat percentage in elite soccer referees. *Scientific Reports*, 14(1), 1–9. <https://doi.org/10.1038/s41598-024-80963-5>
- Sarmiento-Carbajal, J., Cabrera-Castro, R., Domínguez-Bustos, Á. R., & Hernández-Aguado, S. (2026). Rethinking the future of fishing in Spain: Stakeholder perceptions, conflicts, and structural challenges. *Marine Policy*, 183(June 2025). <https://doi.org/10.1016/j.marpol.2025.106925>
- Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, 14(3), 204–220. <https://doi.org/10.1108/13620430910966406>
- Scheit, L., Dengler, D., Belz, L., Reck, C., Harth, V., & Oldenburg, M. (2025). Pilot study on the development of digitally supported health promotion for seafarers on sea. *International Maritime Health*, 76(1), 1–10. <https://doi.org/10.5603/imh.102259>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (2nd ed.). Alfabeta.
- Sugiyono, prof. D. (2021). [b89b63e1fae25871e305a9d-9b6030a4b.pdf](https://doi.org/10.5603/imh.102259).
- Tremolada, M., Bonichini, S., & Taverna, L. (2016). Coping Strategies and Perceived Support in Adolescents and Young Adults: Predictive Model of Self-Reported Cognitive and Mood Problems. *Psychology*, 07(14), 1858–1871. <https://doi.org/10.4236/psych.2016.714171>
- Tsaniyah, N. S., Alkatiri, T. M., Priambodo, A., & Widodo, A. (2025). Tingkat Kecemasan Wasit Indonesia Saat Memimpin Pertandingan Sepak Bola. 5, 7–14.
- Wang, X., Zhou, Y., Li, L., Kueh, Y. C., Zeng, L., & Kuan, G. (2025). Psychometric properties of the Sport Mental Health Continuum – Short Form scale (Sport MHC-SF): cross-cultural validation and measurement invariance of the Chinese adaptation. *BMC Psychology*, 13(1). <https://doi.org/10.1186/s40359-025-02487-5>
- Zhang, L., Shi, H., Zhang, H., Ding, J., & Wang, Z. (2024). How do anxiety and stress affect soccer referees? An ERPs study. *Frontiers in Psychology*, 15(June), 1–11. <https://doi.org/10.3389/fpsyg.2024.1294864>
- Zhao, L., & Zhang, L. (2025). The relationship between post-traumatic stress disorder, occupational stress, occupational burnout, and mental health in football referees: a national cross-sectional survey in China. *Frontiers in Public Health*, 13(September), 1–13. <https://doi.org/10.3389/fpubh.2025.1647115>
- Zhou, Y., Preljević, A., Smailović, S., Đorđević, S., Katanić, B., Milenković, S., Wu, M., Zlatković, L., Antonijević, M., & Stanković, M. (2025). Stress Levels among Tennis Umpires: Differences by Gender, On-Court Position, Work Experience and Tournament Categories. *Sport Mont*, 23(1), 111–116. <https://doi.org/10.26773/smj.250217>