

# Dribbling emotions and anxiety in women's football: a scoping review

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## Abstract

**Background and Study Aim** Fear of failure, choking under pressure, financial disparities in income, and concerns related to body image and social pressure may intensify on-field challenges. These factors make the competitive environment particularly demanding for female soccer players. The aim of the current review is to map the available evidence on anxiety in women's football over the past decade and to identify interventions designed to manage anxiety among female soccer players.

**Material and Methods** A scoping review was conducted following the PRISMA-ScR guidelines. An extensive search was carried out across four major databases for publications dated between 2014 and 2024. Two independent reviewers screened titles and abstracts, followed by full-text screening and data extraction. Any disagreements were resolved by a third researcher. The findings were tabulated and synthesized in a narrative format. The study was pre-registered on the Open Science Framework.

**Results** The search yielded 2885 unique records. A total of 21 texts were reviewed in full, and the final sample included 14 studies. Some of the records included mentioned modifications to psychosocial interventions, such as Virtual Reality (VR) relaxation sessions, pre-exercise sporting massage, and psychological training programs (including psycho-neuromuscular theory and visualization techniques). These interventions led to a reduction in anxiety, though their effectiveness varied significantly across different approaches. Our results suggest that research on women's football may disproportionately focus on psychological interventions for managing anxiety. This highlights the need for broader investigations into other factors that influence athletes' performance and well-being.

**Conclusions** This scoping review helps clarify the current landscape of anxiety research in women's soccer. It highlights both promising interventions and gaps in the research over the past decade. Although the body of evidence on anxiety interventions is small, it suggests that psychological interventions may be effective in reducing anxiety among female soccer players.

**Keywords:** anxiety, women soccer, female football, psychology, scoping review

## Introduction

Anxiety is a significant factor that can impact performance and well-being in competitive sports. In women's football, this issue is particularly concerning due to the unique pressures' female athletes face. These pressures include societal expectations, gender-based comparisons, and the struggle for equal recognition and support in the sport. Despite the critical role that anxiety plays in influencing performance, the research on this topic within women's football is not as robust as it is in men's soccer.

This disparity raises important questions about how well current research addresses the specific needs of female athletes. In this context, despite growing interest in this area, studies on

anxiety among female soccer players have not yet achieved the same depth and breadth as research on their male counterparts [1]. This legacy of male-centric sports coverage has shaped the research environment. Men's football, with its longer history of institutional support, continues to attract more attention. This is particularly evident in fields like sports medicine research, strength and conditioning, and sociology. In comparison, women's football receives significantly less focus [2, 3, 4].

Stereotypes, disproportionately directed funding toward men's sports, and limited media coverage of women's sports reflect broader patterns of gender inequality in sports financing. These factors perpetuate the perception that sports remain predominantly focused on men and contribute to the existing imbalance [5, 6, 7].

In the evolving landscape of sports psychology, a notable gap remains in the empirical exploration of anxiety among women football players, despite the

pressing need for enhanced attention, awareness, and targeted interventions [8, 9]. This lack of targeted research leaves a void in understanding how anxiety impacts performance, well-being, and the overall athletic experience for female players.

The purpose of this study is to map the evidence on anxiety in women’s football over the past decade and to identify interventions designed to improve anxiety management among female soccer players.

**Methodology**

The pre-registration of this study was uploaded to the Open Science Framework (OSF) on July 6, 2024 (<https://osf.io/bd95z/>). The PRISMA extension for scoping reviews (PRISMA-ScR) was employed. This approach is increasingly used to generate evidence on a topic and identify research gaps [10].

*Search strategy*

On June 27, 2024, a comprehensive search for potentially relevant documents on anxiety was conducted using the software “Publish or Perish” [11] across four electronic bibliographic databases: PubMed, Scopus, CrossRef, and Google Scholar. A broad set of keywords was used to identify the specified literature:

- (1) “women” AND “soccer” AND “anxiety”;
- (2) “female” AND “football” AND “anxiety”;
- (3) “fear” AND “female” AND “football”;
- (4) “female” AND “soccer” AND “cognitive”;
- (5) “female” AND “soccer” AND “somatic”;
- (6) “female” AND “soccer” AND “trait”;
- (7) “female” AND “soccer” AND “trait anxiety”;
- (8) “female” AND “soccer” AND “state anxiety.”

Article search and selection procedures were performed independently by two researchers (EAT and VP). The full article screening was restricted to freely available full-text papers. Any disagreements were resolved by a third reviewer (GT).

*Study eligibility*

To be included in the review, papers needed to focus on anxiety among women football players, be published between 2014 and 2024, be written in English, involve human participants, and describe a measurement or intervention for anxiety, regardless of study design. No age limit was imposed in the search, and all levels of play were included. The review encompassed bibliographic databases, grey

literature databases, and other sources such as conference proceedings, theses, and dissertations. Articles without freely available full text, papers that did not specifically assess anxiety in women soccer players, or those that included mixed-gender group data or lacked gender data, non-player participants, studies on male soccer players, atypical development, female soccer referees, or anxiety topics in other women’s sports were excluded.

*Record screening and data extraction*

Records identified in the search were uploaded to the “Rayyan” [12] software to resolve potential duplicates. Two researchers (E.A.T and V.T.) reviewed the titles and abstracts of each paper against the eligibility criteria (e.g., wrong population, wrong outcome, other language, no freely available full text). After the initial screening, the full texts of the selected records were gathered and independently examined to ensure they met the eligibility criteria. Any disagreements between the reviewers were resolved by a third reviewer (G.T.). The results were then extracted, and a table was populated with the following data: author, year of publication, title, sample size and participant characteristics, type of instrument used in the research, and study results.

*Data synthesis*

The results were synthesized in accordance with the Guidelines, which provide a structured approach to combining qualitative and quantitative data [13]. This guidance specifically supports narrative synthesis in systematic reviews.

**Results**

The synthesis aimed to present the range of evidence that met the objectives of the scoping review. The search generated 5742 results. After deduplication, 2885 unique records remained. Of the 21 records read in full, 7 were excluded, and 14 met the inclusion criteria (Fig. 1). Data from the primary studies were initially presented in a tabular format as the starting point for the synthesis. The studies were then clustered based on characteristics in the data extraction tables, such as participants, sample size, instruments, and outcomes. The summary of these findings is presented in Table 1.

**Table 1.** Findings from the Literature Review

N°	Reference	Participants	Tools	Main findings
1	2	3	4	5
1	[15]	19 women soccer players	The Sports Motivation Scale The Anxiety Scale	Massage increased psychological stimulation and motivation, positively affecting situational anxiety.

**Table 1.** (Continued)

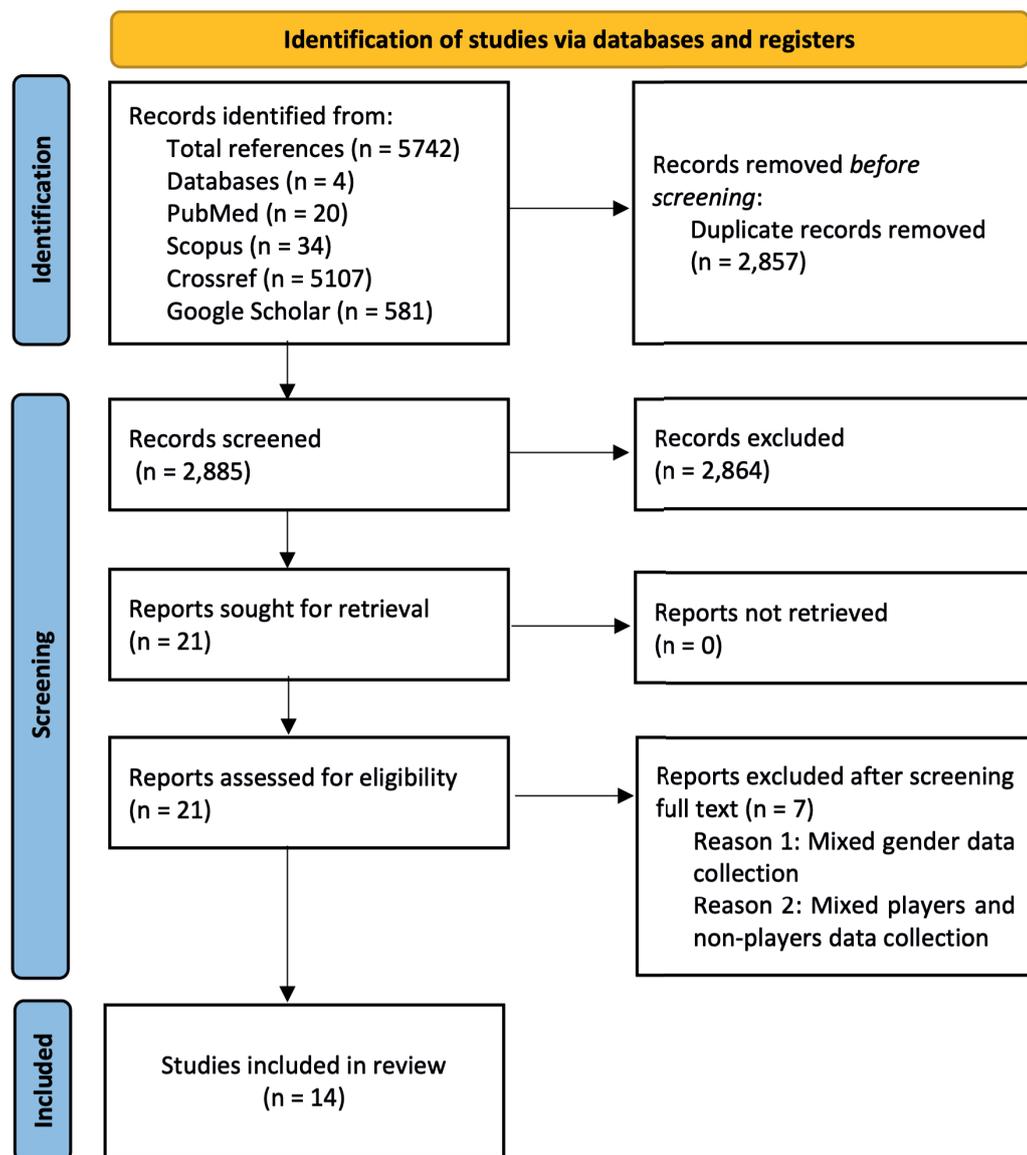
N°	Reference	Participants	Tools	Main findings
1	2	3	4	5
2	[16]	14 women soccer players	Heart rate monitor (Polar RS800CX, Finland) Competitive State Anxiety Inventory-2R (CSAI-2R)	The study underscores the value of using HRV as a measure of pre-competitive anxiety in semi-professional soccer players.
3	[17]	48 women soccer players	Sports Achievement Motivation Test (SAMT) Sports Competitive Anxiety Test (SCAT)	The findings indicate that professional female soccer players had moderate achievement motivation and highly competitive anxiety.
4	[18]	50 women soccer players	Sport Competition Anxiety Test (SCAT)	Significant reduction in anxiety levels with psychoneuromuscular theory and visualization techniques.
5	[19]	103 women soccer players	Generalised Anxiety Disorder Scale (GAD-7) Kessler-10 (K10) distress scale Centre for Epidemiological Studies Depression Scale (CES-D) SCOFF questionnaire	The prevalence of symptoms among semi-elite female footballers was 49.5% for distress; 44.7% for depression; 20.4% for generalised anxiety and 22.3% for an eating disorder.
6	[20]	43 women soccer players	Short Profile of Mood States (ISP) State-Trait Anxiety Inventory (STAI) Yo-Yo Intermittent Recovery [YYIR] test	YYIR-1 test showed significant changes in mood states and hormonal levels. State and trait anxiety correlated with cortisol and mood
7	[21]	8 women soccer players	State-Trait Anxiety Inventory (STAI) Incredibly Short Profile of Mood States (ISP) Cortisol (saliva sampling)	Significant relationships between cortisol levels and anxiety scores. The STAI questionnaire was useful in predicting cortisol surges.
8	[22]	52 women soccer players	DSR questionnaire BAI questionnaire HCYTOMAG-60K kit	PMS group had higher anxiety levels. IL-10 correlation varied with PMS status.

**Table 1.** (Continued)

N°	Reference	Participants	Tools	Main findings
1	2	3	4	5
			Demographic Questionnaire	
			Mental Readiness Form-3 (MRF-3)	
9	[23]	13 women soccer players	Rating Scale for Mental Effort (RSME) DELSYS Trigno Avanti Virtual Reality Head-Mounted Display (VR HMD) and Application Polar H10 sensor Pro Strap	VR significantly reduced cognitive and somatic anxiety, and improved self-confidence. 84.62% would use VR again
10	[24]	30 women soccer players	Sports Competition Anxiety Test (SCAT)	Significant anxiety differences between players from Manipur and Sikkim. Psychological conditioning recommended.
11	[25]	128 women soccer players	The Achievement Motive Scale—Sport (AMS-S) The Competitive Trait Anxiety-Questionnaire (CTA-Q) Competitive State Anxiety Inventory-2 (CSAI-2)	Somatic state anxiety was negatively associated with senior national team experience and positively associated with worry trait anxiety and fear of failure. Cognitive state anxiety was negatively associated with hope for success and positively associated with somatic and worry trait anxiety.
12	[26]	20 women soccer players	Competitive State Anxiety Inventory-2 (CSAI-2)	The study observed that moderate competition anxiety among women soccer players is associated with fluctuations and inconsistencies in their playing performance.
13	[27]	42 women soccer players	Competitive State Anxiety Inventory-2 (CSAI-2)	The anxiety levels among female elite soccer players vary between Manipur and Tripura. There are differences in anxiety levels between female elite football players in Manipur and Tripura

**Table 1.** (Continued)

N°	Reference	Participants	Tools	Main findings
1	2	3	4	5
14	[28]	16 women soccer players	Competitive State Anxiety (CSAI-2) VO2 Peak Testing Polar HR monitor	No significant differences in VO2peak with pre-performance anxiety; strong correlation between cognitive and somatic anxiety.



**Figure 1.** PRISMA Flow Diagram [14]

## Discussion

The aim of this study was to map the evidence on anxiety in women’s football over the past decade and to identify interventions aimed at managing this anxiety among female soccer players. The review identified 14 studies that met the inclusion criteria, highlighting a range of psychological

interventions used to address anxiety in this population. These interventions exhibited varying levels of effectiveness, providing insight into current practices in anxiety management within women’s football.

*Overview of Included Studies.* The included studies, presented in Table 1, involved a sample

**Table 2.** Tools for Addressing Anxiety.

N°	Measurement Tools	Frequency	Author	Country
1	Competitive State Anxiety Inventory-2 (CSAI-2)	5	[16, 25, 26, 27, 28]	Spain, Denmark, India, United States
2	Sports Competition Anxiety Test (SCAT)	3	[17, 18, 24]	India
3	Heart Rate Monitor (Polar RS800CX, Finland)	1	[16]	Spain
4	DSR Questionnaire	1	[22]	Brazil
5	Beck Anxiety Inventory (BAI)	2	[22]	Brazil
6	Sports Motivation Scale	1	[15]	Turkey
7	Achievement Motive Scale—Sport (AMS-S)	1	[25]	Denmark
8	Mental Readiness Form-3 (MRF-3)	1	[23]	United States
9	Rating Scale for Mental Effort (RSME)	1	[23]	United States
10	Short Profile of Mood States (ISP)	2	[20, 21]	South Africa
11	State-Trait Anxiety Inventory (STAI)	2	[20, 21]	South Africa
12	Cortisol (saliva sampling)	1	[21]	South Africa
13	Generalized Anxiety Disorder Scale (GAD-7)	1	[19]	United Kingdom
14	Kessler-10 (K10) Distress Scale	1	[19]	United Kingdom
15	Centre for Epidemiological Studies Depression Scale (CES-D)	1	[19]	United Kingdom.
16	SCOFF Questionnaire	1	[19]	United Kingdom
17	Virtual Reality Head-Mounted Display (VR HMD)	1	[23]	United States

of 586 participants, all of whom were women soccer players. These studies were conducted in the following countries: India [17, 18, 24, 26, 27], the United Kingdom [16, 19], Denmark [25], the United States [23, 28], South Africa [20, 21], Turkey [15], and Brazil [22]. India had the highest representation with five studies, followed by the United States and South Africa with two studies each. The United Kingdom, Spain, Denmark, Turkey, and Brazil each had one study. This distribution underscores the need to diversify research efforts to develop a comprehensive understanding of anxiety in women’s soccer globally. The number of studies published by these countries may indicate higher levels of institutional support, funding, or awareness of mental health issues in female soccer within those regions.

*Tools for addressing anxiety.* The descriptions of the questionnaires or equipment used in the selected studies were divided into four separate cells to facilitate visual comparisons (Table 2). The Competitive State Anxiety Inventory-2 (CSAI-2) tended to be the most frequently used instrument in the studies presented. The second most commonly used assessment tool for measuring competitive anxiety in athletes in our scoping review was the Sports Competition Anxiety Test (SCAT).

In contrast, instruments like the Virtual Reality Head-Mounted Display (VR HMD) were used only once. This suggests that traditional anxiety measurement tools are preferred by the authors in our study and have been more prevalent in research over the last decade compared to modern technologies. This preference could be due to the familiarity, reliability, and validity of traditional instruments compared to newer, less-tested methods. Authors who used questionnaires for their studies were from India, Turkey, and the United Kingdom. Authors who used a mix of technologies and questionnaires to assess anxiety in female soccer players were from Spain, Brazil, the United States, and South Africa.

The integration of advanced physiological monitoring and biochemical analysis tools with anxiety assessment instruments over the past decade highlights a more precise and targeted approach by researchers in evaluating the mental health and performance of female football players. The United States appears to be leading in the use of the most advanced and diverse technological tools, indicating a strong emphasis on integrating high-tech solutions into research and practical application.

The incorporation of digital and mobile health

Table 3. Declared Study Limitations

Author(s) & Year	Research limitations
[15]	No limitations reported.
[16]	Small sample size. Follow-up data on HRV and pre-competitive anxiety not collected for all games. Physical load could affect results.
[17]	The study noted that the underdeveloped facilities, exposure, player payments, and infrastructure at Delhi's professional soccer clubs might have impacted the players' psychological traits.
[18]	No limitations reported.
[19]	Self-report measures may introduce bias, with severe cases possibly exaggerating symptoms.
[20]	No limitations reported.
[21]	Small sample size. More research needed to account for various player factors and validate findings.
[22]	Use of urine as a sample due to refusal of blood collection.
[23]	Small sample size. COVID-19 restrictions (face covering) may affect generalizability
[24]	No limitations reported.
[25]	The study acknowledges that the sample size of 128 players limits the generalizability of the findings. Variability in response rates and the potential for self-reported measures to reflect a more positive image of participants may affect the results.
[26]	No limitations reported.
[27]	No limitations reported.
[28]	Small sample size. Uncontrolled variables like caffeine, diet, and hydration may affect results. Not tracking playing time or adherence to off-season programs.

tools [29], wearable technology [30], physiological monitoring [31], neuroimaging [32], and biochemical analysis [33] could potentially make a significant difference in studying anxiety in women's soccer. These innovations might offer more accurate and real-time data on anxiety, enhance understanding of its impact on performance, and support more personalized and effective interventions. However, while these technologies hold promise, their effectiveness and practical applications need to be validated through further research and implementation.

*Interventions effectiveness.* Three of the 14 studies included experimental interventions with significant impacts on female soccer players' anxiety, highlighting their efficacy. One innovative approach involves Virtual Reality (VR), which immerses players in simulated environments to manage stress and anxiety. A study by Harrison et al. [23] indicated that VR could significantly reduce both cognitive and somatic anxiety, as well as overall stress, while potentially enhancing self-confidence and relaxation. Another potentially effective intervention is sports massage, as suggested by Abakay et al. [15]. Their research indicated that incorporating massage into pre-exercise warm-up routines might increase motivation and reduce situational anxiety. Additionally, techniques based on psychoneuromuscular theory and visualization appear to offer benefits. Borah and Yadav [18]

demonstrated that these methods could significantly reduce anxiety levels in players over a four-week training period. These interventions present promising strategies that might assist female soccer players in managing anxiety and enhancing their performance. However, caution should be exercised when generalizing the effectiveness of these interventions, considering the complexities of individual player experiences.

*Limitations of the reviewed studies.* The absence of reported limitations in several studies suggests either methodological robustness or a lack of thorough reporting (Table 3). Unacknowledged limitations can obscure the reliability of the findings and reduce the applicability of results across different contexts. Transparent reporting of study limitations is crucial for evaluating the validity of research and guiding future investigations [34, 35]. While the studies provide valuable insights into the prevalence and management of anxiety among female football players, the methodological limitations underscore the need for further research with larger sample sizes and more rigorous controls. This approach will enhance the generalizability and reliability of findings in understanding and addressing anxiety in female football players.

The scoping review of anxiety in women's soccer provides a comprehensive overview of the past decade's research on this topic. The review highlights a variety of methodological approaches,

with a small body of evidence suggesting that psychological interventions may be effective in managing anxiety among female soccer players. Traditional anxiety measurement tools were widely used; however, the adoption of newer technologies appears to be limited in this context.

This observation suggests a potential gap in integrating advanced technologies for anxiety assessment within women's soccer research. It is crucial to exercise caution when drawing definitive conclusions about the efficacy of interventions and the prevalence of measurement tools, given the complexities and individual variations within this research domain [36, 37, 38].

These findings underscore the need for continued exploration and the development of refined methodologies to study anxiety in women's soccer. A more comprehensive understanding of its impact on players' well-being and performance is essential and aligns with conclusions from other researchers and international institutions [39, 40, 41].

Although widely recognized digital databases such as PubMed, Scopus, Crossref, and Google Scholar were utilized for the search, it is important to acknowledge that the investigation may not have captured all relevant papers. Given the rapid advancements in this field, yearly updates will likely

be necessary as new research emerges. Additionally, any limitations of the software used, as noted by its authors, should be acknowledged.

## Conclusions

This scoping review has provided a comprehensive overview of the existing research on anxiety in women's soccer over the past decade. While the evidence suggests that psychological interventions may be effective in managing anxiety among female soccer players, the adoption of newer technologies remains limited. The review highlights the importance of refining methodologies and broadening the scope of research to better understand the unique challenges faced by female athletes in this sport.

Given the rapid developments in this field, it is crucial to update research regularly to ensure that new insights and technological advancements are incorporated. Future research should focus on implementing controlled experimental interventions to identify effective strategies for supporting female soccer players. This could help in better understanding the gender-specific pressures associated with anxiety in women's soccer and managing the psychological load experienced by female football players. Discussing mental health does not impede performance.

## References

1. FIFA Female Health Project snapshot [Internet]; 2023 [cited 2024 Jun 15]. Available from: <https://inside.fifa.com/womens-football/fifa-female-health-project-snapshot>
2. Paul RW, Sonnier JH, Johnson EE, Hall AT, Osman A, Connors GM, et al. Inequalities in the Evaluation of Male Versus Female Athletes in Sports Medicine Research: A Systematic Review. *Am J Sports Med.* 2022;51(12):3335–3342. <https://doi.org/10.1177/03635465221131281>
3. Okholm Kryger K, Wang A, Mehta R, Impellizzeri FM, Massey A, McCall A. Research on women's football: a scoping review. *Science Med Football,* 2021; 6(5):549–558. <https://doi.org/10.1080/24733938.2020.1868560>
4. Gori G, Mangan JA, editors. *Sport and the Emancipation of European Women.* Routledge; 2016. <https://doi.org/10.4324/9781315539874>
5. Harris L, Trussell DE. Professional women footballers' stories of marketing portrayals and sponsorship: "I just had to feel grateful for what I've been given." *Sport Manage Rev.* 2024;27(4):620–639. <https://doi.org/10.1080/14413523.2024.2335018>
6. Grabow H, Kühn M. You Don't Bend It Like Beckham if You're Female and Reminded of It: Stereotype Threat Among Female Football Players. *Front Psychol.* 2019;10:1963. <https://doi.org/10.3389/fpsyg.2019.01963>
7. Cooky C, Messner MA, Hextrum RH. Women Play Sport, But Not on TV. *Commun Sport.* 2013;1(3):203–230. <https://doi.org/10.1177/2167479513476947>
8. Beisecker L, Harrison P, Josephson M, DeFreese JD. Depression, anxiety and stress among female student-athletes: a systematic review and meta-analysis. *Br J Sports Med.* 2024; 58(5):278–285. <https://doi.org/10.1136/bjsports-2023-107328>
9. Bilgöe SC, Janse van Rensburg DC, Goedhart E, Orhant E, Kerkhoffs G, Gouttebauge V. Unmasking mental health symptoms in female professional football players: a 12-month follow-up study. *BMJ Open Sport Exerc Med.* 2024;10(2): e001922. <https://doi.org/10.1136/bmjsem-2024-001922>
10. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169(7):467–473. <https://doi.org/10.7326/m18-0850>
11. Harzing AW. *Publish or Perish* [Internet]; 2007 [cited 2024 Jun 15]. Available from: <https://harzing.com/resources/publish-or-perish>
12. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. *Syst Rev.* 2016;5(1):210. <https://doi.org/10.1186/s13643-016-0384-4>
13. Popay J, Roberts HM, Sowden AJ, Petticrew M, Arai L, Rodgers M, Britten N. *Guidance on the conduct of narrative synthesis in systematic Reviews. A Product from the ESRC Methods Programme. Version 1;* 2006.

14. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021; n71. <https://doi.org/10.1136/bmj.n71>
15. Abakay Z, Bicer M, Abakay U. The effects of sporting massage on motivation and situational anxiety in female footballers. *Online J Recreat Sport*. 2018;7(4):23–33. <https://doi.org/10.22282/ojrs.2018.40>
16. Ayuso-Moreno R, Fuentes-García JP, Collado-Mateo D, Villafaina S. Heart rate variability and pre-competitive anxiety according to the demanding level of the match in female soccer athletes. *Physiol Behav*. 2020;222:112926. <https://doi.org/10.1016/j.physbeh.2020.112926>
17. Basumatary SJ. Assessment of psychological traits of professional female soccer players of Delhi State. *Indian J Phys Educ Sports Med Exerc Sci*. 2014;14(1&2):38–40.
18. Borah B, Yadav A. Effect of psychoneuromuscular theory and visualization technique in reducing anxiety level of soccer female players in competition situations. *Int J Biol Sport Med Sci*. 2017.
19. Bramley O, Healy LC, Sarkar M. Mental ill-health in semi-elite women's soccer in England: a mixed-methods approach. *Int J Sport Exerc Psychol*. 2024;1–20. <https://doi.org/10.1080/1612197x.2024.2311752>
20. Broodryk A, Pienaar C, Edwards D, Sparks M. Psycho-hormonal effects of aerobic fatigue on collegiate female soccer players. *S Afr J Sci*. 2020;116(1/2). <https://doi.org/10.17159/sajs.2020/6095>
21. Broodryk A, Pienaar C, Edwards D, Sparks M. Effects of a Soccer Tournament on the Psychohormonal States of Collegiate Female Players. *J Strength Cond Res*. 2021;35(7):1873–1884. <https://doi.org/10.1519/jsc.0000000000002993>
22. Foster R, Vaisberg M, Araújo MP de, Martins MA, Capel T, Bachi ALL, Bella ZIK de JD. Relationship between Anxiety and Interleukin 10 in Female Soccer Players with and Without Premenstrual Syndrome (PMS). *Rev Bras Ginecol Obstet*. 2017;39(11):602–607. <https://doi.org/10.1055/s-0037-1606244>
23. Harrison K, Potts E, King AC, Braun-Trocchio R. The Effectiveness of Virtual Reality on Anxiety and Performance in Female Soccer Players. *Sports*. 2021;9(12):167. <https://doi.org/10.3390/sports9120167>
24. Singh, KB, Rahaman A, Yunus W. Comparative study of anxiety between manipur and sikkim women soccer players. In: *Three Day International Conference on Emerging Trends of Physical Education and Sports Science*. India: Manipur University, Canchipur; 2022. P. 562–563.
25. Madsen EE, Hansen T, Thomsen SD, Panduro J, Ermidis G, Krusturup P, et al. Can psychological characteristics, football experience, and player status predict state anxiety before important matches in Danish elite-level female football players? *Scand J Med Sci Sports*. 2020;32(S1):150–160. <https://doi.org/10.1111/sms.13881>
26. Naorem S, Farooque S, Adhikari T, Sailo L. Somatic Anxiety And Cognitive Anxiety Of Football Players: Evidence From Manipuri Women Football Player. *International Journal of Psychosocial Rehabilitation*. 2020; 31251–31254. <https://doi.org/10.53555/V24I4/400013>
27. Naorem S, Farooque S, Das S. Regional Dynamics on Anxiety Levels among Female Elite Soccer Players in Manipur and Tripura. *Am J Phys Educ Health Sci*. 2024;2(1):17–21. <https://doi.org/10.54536/ajpehs.v2i1.2543>
28. Wirth MJ. *The Impact of Pre-Performance Anxiety on VO2Peak Values in Female Collegiate Soccer Players*. Departmental Honors Projects, Hamline University [Internet]; 2017 [cited 2024 Jun 15]. Available from: <https://digitalcommons.hamline.edu/dhp/55/>
29. Kim J, Aryee LM, Bang H, Prajogo S, Choi YK, Hoch JS, Prado EL. Effectiveness of digital mental health tools to reduce depressive and anxiety symptoms in low- and middle-income countries: systematic review and meta-analysis. *JMIR Mental Health*. 2023;10: e43066. <https://doi.org/10.2196/43066>
30. Alhejaili R, Alomainy A. The use of wearable technology in providing assistive solutions for mental well-being. *Sensors*. 2023;23(17):7378. <https://doi.org/10.3390/s23177378>
31. Di Tecco A, Pistolessi F, Lazzarini B. Elicitation of anxiety without time pressure and its detection using physiological signals and artificial intelligence: a proof of concept. *IEEE Access*. 2024;12:22376–93. <https://doi.org/10.1109/access.2024.3362668>
32. Holzschneider K, Mulert C. Neuroimaging in anxiety disorders. *Dialogues Clin Neurosci*. 2011;13(4):453–61. <https://doi.org/10.31887/dcms.2011.13.4/kholzschneider>
33. Łoś K, Waszkiewicz N. Biological markers in anxiety disorders. *J Clin Med*. 2021;10(8):1744. <https://doi.org/10.3390/jcm10081744>
34. Ross PT, Zaidi NLB. Limited by our limitations. *Perspect Med Educ*. 2019;8(4):261–4. <https://doi.org/10.1007/s40037-019-00530-x>
35. Ioannidis JPA. Limitations are not properly acknowledged in the scientific literature. *J Clin Epid*. 2007;60:324–9. <https://doi.org/10.1016/j.jclinepi.2006.09.011>
36. Junge A, Prinz B. Depression and anxiety symptoms in 17 teams of female football players including 10 German first league teams. *Br J Sports Med*. 2018;53(8):471–7. <https://doi.org/10.1136/bjsports-2017-098033>
37. Kristjánsdóttir H, Jóhannsdóttir KR, Pic M, Saavedra JM. Psychological characteristics in women football players: skills, mental toughness, and anxiety. *Scand J Psychol*. 2019;60(6):609–15. <https://doi.org/10.1111/sjop.12571>
38. Puš K, Kajtna T. Prevalence of depression and anxiety symptoms among female football players and non-players. *Ann Kinesiolgiae*. 2022;12(1):15–27. <https://doi.org/10.35469/ak.2021.304>
39. Mason DO. Predictors of well-being and burnout: the case of female professional footballers in the Netherlands. *Int J Sport Exerc Health Res*. 2021;3(2):28–

32. <https://doi.org/10.31254/sportmed.3201>
40. Morton G. *Mental wellbeing risk in elite women's football: a cultural and gendered problem?* [Doctoral dissertation]. University of Essex [Internet]; 2023 [cited 2024 Jun 15]. Available from: <https://repository.essex.ac.uk/36605/1/G.Morton%20-%20Mental%20Wellbeing%20Risk%20in%20Elite%20Women%27s%20Football.pdf>
41. Fédération Internationale de Football Association (FIFA). *Health and wellbeing of female footballers in focus* [Internet]. Zurich: FIFA; 2023 [cited 2024 Aug 1]. Available from: <https://inside.fifa.com/womens-football/news/health-and-wellbeing-of-female-footballers-in-focus>.
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