Review Article

Journal of Iranian Medical Council, Volume 10, Issue no. 1
http://dx.doi.org/10.18502/jimc.v10i1.23253

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Exploring the Interplay among Physical Self-Perception, Competition Anxiety, and Sleep in Athletes: A Narrative Review

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Received: 13 Sept 2025
Accepted: 20 Apr 2026

Citation to this article
Kumar Singh A, Dagar V, Malhan Sh, Wadhwa K, Singh Sh, Sharma A. Exploring the Interplay among Physical Self-Perception, Competition Anxiety, and Sleep in Athletes: A Narrative Review. *J Iran Med Counc*. 2027;10(1):50-61.

Abstract

Background: Psychological factors are essential determinants of athletic performance. This narrative review synthesizes evidence on the interrelationships among physical self-perception, competition anxiety, and sleep in athletes.

Methods: This narrative review synthesizes existing literature examining the relationships among physical self-perception, competition anxiety, and sleep quality in athletes. Relevant studies published between 2013 and 2023 were identified through searches of PubMed, Google Scholar, ScienceDirect, and ResearchGate using combinations of predefined keywords and were narratively analyzed to identify recurring themes and patterns.

Results: The review identified three key trends: (1) lower physical self-perception was consistently associated with higher levels of competition anxiety; (2) reduced sleep quality was linked to elevated competition anxiety; and (3) greater physical self-perception corresponded with improved sleep quality. Quantitatively, most studies reported moderate correlations across variables, although methodological variations limited direct comparison.

Conclusion: Evidence suggests that higher physical self-perception is associated with lower levels of competition anxiety and better sleep quality, while elevated competition anxiety is linked to poorer sleep outcomes, indicating a cyclical relationship among these factors. Conversely, elevated competition anxiety impairs sleep and undermines confidence, creating a cyclical relationship. Further longitudinal and intervention-based research is required to clarify causal pathways and strengthen practical recommendations.

Keywords: Anxiety, Athletes, Athletic performance, PubMed, Search engine, Self concept, Sleep quality

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Introduction

Athletic performance is influenced not only by physical training but also by psychological factors that affect how athletes view, prepare for, and handle competitive situations. Among these factors, physical self-perception, competition anxiety, and sleep quality play key roles in shaping both performance and overall well-being (1,2). Participation in sports is known to improve cardiovascular health, psychological strength, and self-confidence. However, these benefits can decrease if athletes deal with negative self-beliefs or high levels of anxiety (3).

Physical self-perception is how a person assesses their physical abilities and traits. It includes aspects like perceived fitness, sports skills, muscular strength, flexibility, and endurance (4-6). A positive physical self-perception is often linked to greater confidence, better mental health, and improved athletic performance (7,8). On the other hand, competition anxiety, which is an unhealthy emotional state caused by performance stress, can hurt thinking skills, physical responses, and movement execution (9-11). It is widely recognized as a factor that can lead to lower performance (12-14).

Sleep is also vital, as it supports physical recovery, cognitive function, and emotional balance. High training demands, packed competition schedules, travel disruptions, and social stresses frequently cause sleep problems for athletes (15-17). Poor sleep quality has been connected with weaker decision-making, reduced emotional control, higher risk of injury, and lower performance (18,19). Not getting enough rest affects energy levels and limits training capacity (20).

Epidemiological evidence underscores sleep disorders as a highly prevalent and clinically significant condition in the general population. Recent large-scale population-based research indicates that a substantial proportion of adults' experience at least one sleep disorder, including insomnia, sleep-related breathing disorders, and circadian rhythm sleep–wake disorders (21). Importantly, these conditions demonstrate strong associations with psychological stress and anxiety, supporting a bidirectional relationship between sleep disturbances and mental health outcomes (21).

While each of these areas—physical self-perception, competition anxiety, and sleep—has been studied separately in sports, there is not enough understanding of how they work together. Current research is scattered, varies in methodology, and sometimes presents conflicting results. For instance, some studies show that lack of sleep increases competition anxiety, while others indicate that anxiety disrupts sleep, revealing a complicated relationship that is not fully understood. Additionally, even though higher physical self-perception is thought to help buffer anxiety and promote better sleep, different groups of athletes report varying results due to differences in gender, sport type, and cultural background.

The need for this narrative review arises from a clear gap in knowledge: no comprehensive work currently ties together evidence across these three psychological factors to explain how they interact in athletic settings. It is important to put together findings from various studies, resolve inconsistencies, identify theoretical links, and propose a model that can guide future interventions.

Therefore, this narrative review seeks to compile existing research on the relationships among physical self-perception, competition anxiety, and sleep in athletes. It aims to outline existing patterns, highlight theoretical mechanisms, and pinpoint areas where more research is needed.

Methodology

This study employed a narrative review approach to synthesize existing literature examining the relationships among physical self-perception, competition anxiety, and sleep in athletes. A narrative review methodology was selected to allow an integrative and interpretive synthesis of findings from studies with diverse designs and populations, rather than to conduct a formal methodological quality assessment. This approach facilitated the identification of recurring themes and conceptual patterns across the literature and supported a broader understanding of how these psychological factors interact within athletic contexts.

Search strategy

A literature search was conducted using databases including PubMed, Google Scholar, ScienceDirect, and ResearchGate to identify relevant articles

published between 2013 and 2023. Search terms included combinations of "physical self-perception", "competition anxiety", "sleep", and "athletes". The search was intended to capture representative and relevant studies rather than exhaustively identifying all available literature (Table 1).

Study selection process

Studies were selected based on their relevance to the objectives of the review. Observational and cross-sectional studies involving athletic populations and addressing at least one of the key variables were prioritized. Formal quality assessment or risk-of-bias evaluation was not undertaken, consistent with the narrative nature of the review.

Inclusion criteria

Studies were included if they met these conditions:

Table 1. Characteristics of the included studies

Authors and Year	Country	Sample size, age and population	Objective	Methodology	Primary outcome	Measurement of primary outcome	Conclusion
Z Yan & L Wang, 2025	China	501 Elite Athletes	Examine how athletes view psychological stress, anxiety, depression, and sleep, focusing on how sleep might influence these mental health issues.	501 Chinese elite athletes took part in a cross-sectional study. The traits, associations, and pathways of the four indicators were examined using statistical analysis tools and structural equation modeling.	The results showed that psychological stress (78.6%) and sleep disturbances (24.8%) were more common in the athlete group than in previous research. Sleep disorders had a strong positive correlation with all three mental health markers.	Generalized Anxiety Disorder Scale-7 (GAD-7) Patient Health Questionnaire-9 (PHQ-9) Athlete Psychological Stress Questionnaire (APSQ)) Athlete Sleep Screening Questionnaire (ASSQ),	Sleep problems are directly connected to mental health in competitive athletes. They can influence the transition from anxiety to depression and serve as an important sign of health behavior. It's essential to strengthen intervention strategies that include both sleep and mental health practices for athletes.
R G Burgos, *et al.,* 2023	Chile	71 Young athletes Mean Age 16.9 years	Examined the link between sleep quality (SQ) and health-related quality of life (HRQOL) in young athletes in a sports competition	Cross-sectional analytical study of 71 young athletes who took part in a competition.	Sleep Quality (SQ) Health Related Quality Of Life (HRQOL)	Pittsburgh Sleep Quality Index (PSQI) Short Form (SF36 v2) Health Survey	Poor sleep quality is linked to a negative view of HRQOL in young athletes during competitions. This effect is especially strong in areas related to their mental health.
O Saidi, *et al.,* 2021	France	32 Adolescents N1- 16 Elite Rugby players N2- 16 age matched non athlete (control group)	Assessed week and weekend sleep and schedule of activities in elite adolescent rugby players	This study looked at sleep patterns and activity schedules during the week and on weekends for elite adolescent rugby players during their competitive season. It compared these findings to those of age-matched non-athlete controls.	Anthropometry and body composition Sleep Quality Sleep EEG Sleepiness Stress	Body Mass Index (BMI) Pittsburgh Sleep Quality Index (PSQI) Epworth Sleepiness Scale (ESS) Perceived stress scale (PSS-10)	Both groups had less sleep than needed during the week, getting less than 7 hours. Only the GC group made up for their sleep loss on the weekend.

Contd. table 1.

R Solanki, *et al.,* 2021	India	100 National Level Female Volleyball Players B/W 17- 25 years	To analyse the Psychological Profiling of National Level Female Volleyball Players.	The study focused on the psychological profiling of national level female volleyball players. The players included were limited to those from North India.	Sports Competition Anxiety	Sports Competitive Anxiety Test (SCAT)	Female volleyball players were nervous during the competition.
R E Riegal, *et al.,* 2020	Spain	181 Beach handball players Mean age 25.68 years	The relationships between the sports psychological profile, competitive anxiety, mood and self-efficacy	A comparative and predictive design was used for this research. It is a cross-sectional design. Correlation measures and predictive models were applied to contrast the research objectives.	Psychological abilities competitive anxiety and self-confidence Mood Self-efficacy	Sport Performance Psychological Inventory (SPPI) Competitive State Anxiety Inventory-2 (CSAI-2) Profile of Mood States Questionnaire (POMS) General Self-Efficacy Scale (GSES)	The relationships between various aspects of the sports psychological profile and self-confidence show connections. There are also links between negative coping control and competitive anxiety, moods, and general self-efficacy.
K McEwan, *et al.,* 2020	South Africa	26 Elite South African cricket players B/W 28.6± 4.0 years	To investigate the sleep behaviours of South African cricketers	This study looked at the sleep habits of 26 elite South African cricket players during home and away competitions. Players filled out a modified version of the Core Consensus Sleep Diary every morning after traveling, before matches, and after matches.	Sleep Performance	Morningness-Eveningness Questionnaire Athlete Sleep Behaviour Questionnaire (ASBQ) Batting Strike Rate Bowling Economy	Postmatch total sleep time was noticeably shorter than both post-travel and pre-match sleep times. Sleep onset latency after traveling was shorter, and sleep efficiency was better at home than away. Longer sleep onset latencies and shorter total sleep times were connected to worse batting performances in One-Day Internationals and Test matches.
T Fahim, *et al.,* 2020	India	123 Young wrestlers Mean age 22 years	To determine the effect of physical self-concept on competition anxiety of young wrestlers.	The PSPP questionnaire is distributed and collected just one day before the tournaments start. The competitive anxiety (SCAT) questionnaire is given half an hour to one hour before the tournaments begin, and all participants are allowed to answer the questions.	Physical Self-Perception Sport Competition Anxiety	Physical Self-Perception Profile (PSPP) Sport Competition Anxiety Test (SCAT)	Wrestlers feel less competition anxiety as their physical self-concept improves.

Contd. table 1.

M R G Silva *et al.*, 2019	Portugal	67 Rhythmic gymnasts Age 18.7±2.9 years	To investigate sleep, body composition, precompetitive stress and energy in elite female athletes.	Sixty-seven high-level rhythmic gymnasts were evaluated to gather data on training, competition, DS and SQ, precompetitive anxiety, and dietary intake.	Daytime sleepiness Sleep quality (SQ) Precompetitive anxiety	Epworth Sleepiness Scale Pittsburgh Sleep Quality Index Sport Competition Anxiety Test-A	Gymnasts showed problems with sleep and felt stressed before competitions. Athletes who traveled long distances to compete faced a high risk of getting less sleep, having abnormal sleep patterns, and experiencing lower sleep quality.
M Castro-Sanchez, *et al.*, 2019	Spain	282 Registered football players Age B/W 16-18 years	To analyze the relationships between motivational climate (MC), emotional intelligence (EI), and anxiety within a sample of footballers playing at a low level.	Cross-sectional study. Convenience sampling was used to select the study sample.	Motivational climate Emotional Intelligence levels of state anxiety and trait anxiety	Perceived Motivational Climate in Sport Questionnaire (PMCSQ-2) Schutte Self-Report Inventory (SSRI), State Trait Anxiety Inventory (STAI)	Footballers with higher levels of state and trait anxiety showed lower emotional intelligence (EI) and had a more negative view of their emotions. They also struggled to manage their feelings effectively.
J Schaefer, *et al.*, 2016	Australia	173 Competitive Golfers 164 men 9 women Mean age 52.87 years,	To examine whether on's profile of motivation was associated with competition anxiety through mental toughness	Participants were recruited from club member competitions. They gave written informed consent before completing the questionnaires. The university research ethics board approved the study before data collection began.	Competition Anxiety Motivation Mental toughness	Sport Competition Anxiety Test (SCAT) Sport Motivation Scale-II Mental Toughness Index	Athletes who reported low or moderate motivation experienced higher competition anxiety. This connection was partly explained by their lower mental toughness.
S A Tafoya *et al.*, 2022	Mexico	1751 Healthy Adolscents 54% Females 46 % Males	To evaluate the association between self-concept and sleep quality in adolescents adjusting for sleep/wake habits.	In this cross-sectional study, data was collected using an electronic survey.	Health Sleep Habits Sleep Quality Self-Concept	Patient Health Questionnaire Sleep Habits Questionnaire Pittsburgh Sleep Quality Index Self-Concept Scale.	A strong self-concept was linked to improved sleep quality.

- Conducted on human athletic populations of any age or competitive level.
- Used observational, cross-sectional, or survey-based methods.
- Investigated physical self-perception, competition anxiety, or sleep quality, with clear outcome measures relevant to at least one of these areas.
- Reported participant details such as age, gender,

sport type, or competition level.
- Provided data that allowed for analysis of the links among sleep, anxiety, or self-perception (21-25).

Exclusion criteria

Studies were excluded if they:
- Focused only on non-athletic, clinical, or rehabilitation groups.
- Did not directly address competition anxiety, physical self-perception, or sleep.
- Were review articles, editorials, opinion papers, or lacked sufficient methodological detail.
- Provided no measurable outcomes related to the areas of interest (26-32).

Data extraction and synthesis

Key information from each eligible study, including sample characteristics, measurement tools (*e.g.,* PSQI, SCAT, CSAI-2), main findings, and reported links, was extracted and organized thematically. Due to the variety of methodologies, outcome measures, and psychological constructs studied, a narrative synthesis was conducted instead of a meta-analysis. This synthesis approach facilitated identification of overarching patterns among the three variables, highlighted contradictions in current literature, and helped map conceptual gaps that warrant further empirical investigation.

Results

A total of 171 records were identified through database searches in the initial stage (Figure 1). After removing duplicates and excluding non-English articles, 53 studies remained for title screening. Following abstract screening, 19 studies were assessed at the full-text stage. Eleven studies ultimately met the inclusion criteria and were incorporated into this narrative review. Studies were excluded for the following reasons: lack of relevance to sleep,

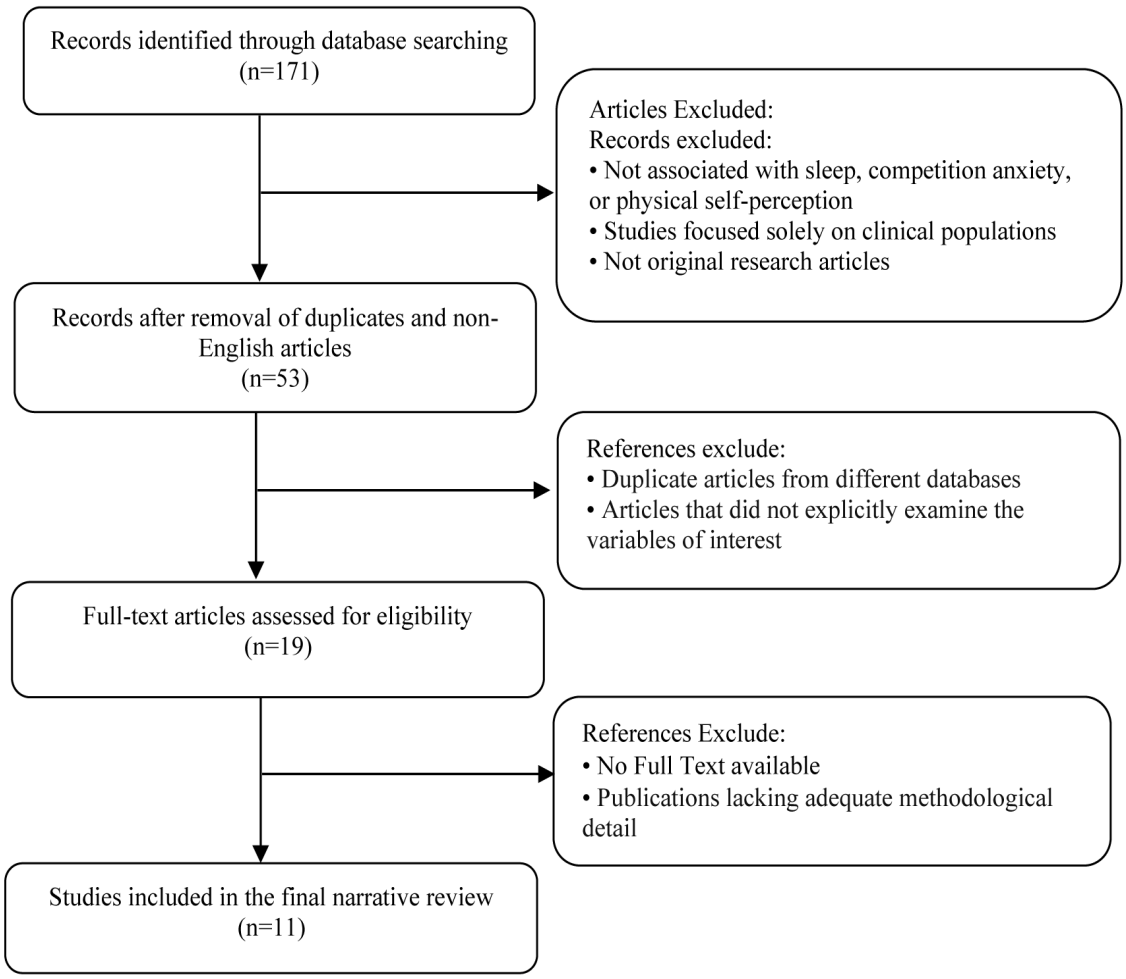


Figure 1. Flow chart of literature research.

competition anxiety, or physical self-perception; focus on clinical rather than athletic populations; absence of full text; inadequate methodological detail; or being non-original articles.

Physical self-perception and competition anxiety

Several studies examined the relationship between physical self-perception and competition anxiety in athletes.

In collegiate wrestlers, physical self-perception was assessed using validated physical self-concept scales, and competition anxiety was measured using the Sport Competition Anxiety Test (SCAT). Athletes with lower perceived physical competence demonstrated significantly higher competition anxiety, with reported inverse correlations ranging from $r=-0.34$ to -0.48 ($p<0.05$) (1).

A cross-sectional study involving youth athletes from multiple sports used domain-specific physical self-perception questionnaires and the Competitive State Anxiety Inventory-2 (CSAI-2). Significant negative associations were observed between physical self-perception and both cognitive and somatic anxiety components ($p<0.01$). Female athletes reported higher anxiety scores despite comparable levels of perceived physical ability (1).

Another study conducted among sub-elite athletes reported that lower confidence in physical abilities was associated with increased pre-competition anxiety, particularly cognitive anxiety, with regression coefficients ranging from $\beta=-0.29$ to -0.41 ($p<0.05$) (12).

Sleep quality and competition anxiety

Multiple studies explored associations between sleep parameters and competition anxiety.

Saidi *et al* investigated elite rugby players using sleep diaries and physiological sleep indicators alongside validated psychological strain and anxiety questionnaires. Reduced total sleep time and decreased Rapid Eye Movement (REM) sleep were significantly associated with increased psychological strain and anxiety symptoms during training periods ($p<0.05$) (24).

In rhythmic gymnasts, subjective sleep quality and daytime sleepiness were assessed in relation to pre-competition anxiety. Athletes reporting poorer sleep quality exhibited significantly higher anxiety levels, with moderate correlations reported ($r\approx0.40$, $p<0.01$) (31).

Yan and Wang assessed elite Chinese athletes using the Pittsburgh Sleep Quality Index (PSQI) and standardized psychological scales. Approximately 25% of athletes reported poor sleep quality, which was significantly associated with higher anxiety levels ($p<0.001$) (33).

Physical self-perception and sleep quality

A smaller number of studies examined associations between physical self-perception and sleep outcomes. Tafoya *et al* studied adolescent athletes using physical self-concept questionnaires and the PSQI. Higher physical self-perception scores were significantly associated with better subjective sleep quality after adjusting for lifestyle factors ($p<0.01$) (30).

Burgos *et al* evaluated athletes across various sports using self-rated physical health measures and sleep duration indicators. Poorer sleep quality and shorter sleep duration were associated with lower perceived physical health and well-being ($p<0.05$) (34).

Overall findings

Across the included studies, consistent patterns were observed. Lower physical self-perception was associated with higher competition anxiety, poorer sleep quality was linked to increased anxiety levels, and more positive physical self-perception was generally associated with better sleep quality. Despite heterogeneity in study populations, measurement tools, and statistical reporting, the direction of associations was largely consistent.

Discussion

As shown in table 2, many studies did not properly identify or control for confounding variables like training load, psychological stress, type of sport, socioeconomic status, or gender distribution. This issue impacts the internal validity of the studies and should be considered when interpreting the observed connections. These methodological weaknesses highlight the need for stronger, long-term research to better understand the relationships among physical self-perception, sleep quality, and competition

Table 2. JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies

Study	Were the criteria for inclusion in the sample clearly defined?	Were the study subjects and the setting described in detail?	Was the exposure measured in a valid and reliable way?	Were objective, standard criteria used for measurement of the condition?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were the outcomes measured in a valid and reliable way?	Was appropriate statistical analysis used?
Z Yan & L Wang, 2025	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
R G Burgos *et al*, 2023	Yes	Yes	Yes	Yes	Yes	Unclear	Yes	Yes
O Saidi *et al*, 2021	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R Solanki *et al*, 2021	Yes	Unclear	Yes	Yes	No	No	Yes	Yes
R E Riegal *et al*, 2020	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes
K McEwan *et al*, 2020	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes
T Fahim *et al*, 2020	Yes	Yes	Yes	Yes	No	No	Yes	Yes
M R G Silva *et al*, 2019	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Yes
M Castro-Sanchez *et al*, 2019	Yes	Yes	Yes	Yes	Unclear	No	Yes	Yes
J Schaefer *et al*, 2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
S A Tafoya *et al*, 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Yes | No | Unclear | Not Applicable

anxiety.

The current review brings together evidence on the connections among physical self-perception, competition anxiety, and sleep quality in athletes. Three main patterns appeared in the studies reviewed: (1) lower physical self-perception related to higher competition anxiety, (2) poorer sleep quality matched with greater anxiety levels, and (3) better physical self-perception connected to improved sleep quality. These patterns highlight the complex nature of psychological functioning in athletes and suggest that these factors work together in a reinforcing way.

Competition anxiety and sleep quality

Across the reviewed literature, poor sleep quality consistently related to increased competition anxiety. Yan and Wang (34) reported that one in four elite Chinese athletes had sleep disturbances, which were strongly linked to symptoms of anxiety, stress, and depression. Similarly, Saidi *et al* (24) found that elite rugby players had reduced total sleep time and less REM sleep during training periods, which coincided with higher levels of physical and psychological strain. Research on rhythmic gymnasts further supported this connection, showing that poor sleep quality and increased daytime sleepiness related to greater pre-competitive stress (31).

The mentioned findings support existing evidence demonstrating that insufficient sleep affects emotional regulation, raises cortisol levels, and makes the amygdala more sensitive to stress-related triggers (18,21). These factors may explain why individuals with sleep disturbances often show less attentional control and increased physiological arousal in competitive settings. However, most of the research so far has been cross-sectional, which limits the ability to prove cause and effect. It is possible that anxiety disrupts sleep through heightened mental

activity before sleep, creating a cycle. Longitudinal and intervention studies are needed to clarify these pathways.

Gender differences also play a role in this area. Studies suggest that female athletes may face higher levels of both sleep disturbance and anxiety compared to males (1,15). Sociocultural pressures, role expectations, and different coping strategies may contribute to these differences and require more focused investigation.

Competition anxiety and physical self-perception

The relationship between competition anxiety and physical self-perception indicates a negative link. Athletes with lower physical self-perception reported higher anxiety in multiple studies (5,12). This finding aligns with Bandura's self-efficacy framework. According to this theory, individuals who have more confidence in their abilities manage stress better and tend to be more resilient. Higher physical self-perception may reduce anxiety by boosting feelings of competence, supporting focus, and improving emotional stability.

Some studies in this area mentioned ideas like motivational climate, emotional intelligence, and mental toughness (1,2,17). While these factors do not directly measure physical self-perception, they influence how athletes view their competence, mastery, and confidence. For instance, emotionally intelligent athletes or those in task-focused environments may develop stronger beliefs about their physical abilities, which can lower competitive anxiety. However, future research should focus on studies that directly measure physical self-perception to provide a stronger evidence base for this link.

Gender differences also play an important role. Female athletes, especially those in team or aesthetic sports, often report higher anxiety despite having similar or even better physical abilities compared to male athletes (1). These disparities may reflect cultural expectations, evaluative pressures, and body-image issues that particularly affect women in sports.

Physical self-perception and sleep quality

A positive connection between physical self-perception and sleep quality appeared in several studies. Tafoya *et al* (30) found that adolescents with a stronger self-concept reported better sleep patterns, even when accounting for their lifestyle habits. Burgos *et al* (34) discovered that decreases in sleep duration or quality linked to lower self-rated health and well-being in athletes. These results indicate a two-way relationship. Individuals with a higher physical self-perception might experience less cognitive and emotional arousal before sleep. Additionally, better sleep could improve self-perception by boosting mood, recovery, and overall functioning (19,20).

Most research focuses on adolescents and young adults, which limits its application to older athletes, elite performers, or para-athletes. Also, many studies used self-report measures, which can introduce bias. Using objective tools like actigraphy could strengthen future research.

Consideration of measurement tools

Several studies used common psychological and sleep assessment tools, including the PSQI, SCAT, and CSAI-2. While these tools are widely used, they differ in scope and sensitivity. The PSQI focuses on subjective sleep experiences instead of objective physiological indicators. SCAT mainly looks at trait anxiety, while CSAI-2 measures state anxiety, along with its cognitive and physical aspects. Since these tools assess different aspects of anxiety and sleep, researchers should make direct comparisons across studies with care. Standardizing measurements would improve the ability to compare findings across different studies.

An integrative interpretation

The findings suggest a model where physical self-perception, competition anxiety, and sleep quality interact with each other. A stronger physical self-perception improves coping skills, which reduces anxiety and leads to better sleep. Good sleep helps with recovery and managing emotions, further boosting self-perception. On the other hand, high competition anxiety disrupts sleep, lowers confidence, and creates a harmful cycle that weakens mental resilience.

Neuroendocrine processes, such as cortisol and melatonin regulation, cognitive appraisal mechanisms, and attentional control likely play a role in these interactions (14-16,33). Future research should use multidimensional and long-term designs to clarify the causal pathways and find effective

targets for intervention.

Practical implications

The findings offer useful insights to manage athletes better. Coaches, therapists, and sports psychologists need to include mental health strategies in daily training plans. Techniques like Cognitive Behavioral Therapy (CBT), mindfulness exercises, and acceptance-focused methods have shown their value. They help lower anxiety and support better self-control in sports environments (10). Similarly, structured sleep hygiene education, pre-competition relaxation routines, and monitoring of training loads can reduce sleep disturbances (22-25). Tools to screen sleep quality and anxiety need to become part of athlete health checks to allow early action. Tailoring these actions by sport, gender, and competition level is crucial.

Research gaps and future directions

Even with improvements, key issues still exist. A heavy reliance on cross-sectional designs makes it difficult to establish cause-and-effect relationships. Most research includes too few female athletes, para-athletes, and non-elite groups, which limits how well findings apply to larger populations. Studies examine how contexts, such as travel routines, training levels, or cultural expectations, affect outcomes. Researchers also do not conduct enough intervention trials that test whether improving self-perception or sleep quality can lower anxiety or enhance performance. A few studies employ a true multifactorial approach to connect these three factors using experimental or long-term research methods.

Future studies should use long-term and action-focused methods. Researchers need to include different types of athletes and combine mental and physical assessments. This approach helps explore how self-perception, anxiety, and sleep are linked. It can also guide the development of proven ways to enhance athletes' performance and health.

Limitations

This review has several limitations. Limiting the search to English-language publications may have introduced language bias and left out relevant studies published in other languages. Grey literature, unpublished work, and conference proceedings were not included, which may limit comprehensiveness. The reviewed studies differed greatly in design, participant characteristics, competitive level, and outcome measures, making direct comparisons tough and preventing systematic synthesis or meta-analysis. Most available studies relied on cross-sectional and self-reported methods, which restrict the ability to draw causal conclusions about the relationships among physical self-perception, competition anxiety, and sleep quality. Future research should tackle these limitations by including longitudinal and interventional study designs, broadening search strategies, and using standardized measurement tools to improve consistency and clarity.

Conclusion

This narrative review synthesizes evidence on the relationships among physical self-perception, competition anxiety, and sleep quality in athletes. Across the reviewed studies, lower physical self-perception was consistently associated with higher competition anxiety, while poorer sleep quality was linked to increased anxiety levels. In contrast, more positive physical self-perception was generally related to better sleep quality. Together, these findings indicate that physical self-perception, competition anxiety, and sleep quality are interrelated factors that may influence athletes' psychological functioning and performance.

Funding

No funding was received for this study.

Ethical approval

Since the present study is a narrative review based solely on previously published studies, no ethical approval or informed consent was required. All the referenced studies were assumed to have followed recognized ethical standards for research involving human participants, including adherence to the Declaration of Helsinki. No review protocol was prospectively registered.

Acknowledgement

The authors would like to sincerely thank all the researchers and scholars whose work has been

referenced in this review. Their valuable contributions to the field have laid a strong foundation for this article.

Conflict of Interest

The authors declare that they have no potential conflicts of interest related to the research, authorship, or publication of this article.

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