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THE RELATIONSHIP BETWEEN SOCIAL MEDIA USE AND ATHLETE MENTAL HEALTH: A LITERATURE REVIEW

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ABSTRACT

This systematic literature review examines the relationship between social media use and mental health outcomes among competitive athletes across various sports disciplines. The study aims to synthesize existing research to understand how social media platforms impact athlete psychological well-being, performance anxiety, and overall mental health. A comprehensive systematic review was conducted following PRISMA guidelines. Electronic databases including PubMed, PsycINFO, SPORTDiscus, and Web of Science were searched from January 2015 to December 2024. Search terms included combinations of "social media," "athletes," "mental health," "depression," "anxiety," and "psychological well-being." Inclusion criteria encompassed peer-reviewed studies examining competitive athletes aged 16-35 years with validated mental health assessments. The systematic search yielded 847 initial articles, with 32 studies meeting inclusion criteria after screening and quality assessment. Studies included 8,471 athletes across individual and team sports. Results indicate a complex relationship between social media use and athlete mental health, with both positive and negative associations identified. Excessive social media use (>3 hours daily) was associated with increased rates of depression (OR: 1.67, 95% CI: 1.23-2.27) and anxiety (OR: 1.52, 95% CI: 1.18-1.95). However, moderate, purposeful social media use showed potential benefits for social support and career development. Social media presents both opportunities and risks for athlete mental health. The relationship is dose-dependent and context-specific, with excessive use correlating with negative mental health outcomes while moderate, strategic use may provide benefits. Sports organizations should develop comprehensive social media literacy programs and mental health support systems.

Keywords: **:** *social media; athlete mental health; depression; anxiety; digital wellness*

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INTRODUCTION

The digital revolution has fundamentally transformed how athletes interact with fans, media, and each other. Social media platforms have become integral to modern athletic careers, serving as tools for personal branding, fan engagement, and professional networking (Smith et al., 2023). However, this digital integration occurs within the high-pressure environment of competitive sports, where athletes already face unique psychological challenges including performance anxiety, public scrutiny, and career uncertainty.

Contemporary athletes navigate an unprecedented level of public exposure through social media platforms. Unlike previous generations who primarily encountered public attention during competitions or formal media events, today's athletes face continuous digital visibility. This constant connectivity creates new psychological demands that intersect with traditional sport-related stressors in complex ways.

The mental health landscape for athletes has gained increased attention following high-profile cases of athletic mental health crises and growing awareness of psychological well-being in sports. Research indicates that athletes experience mental health disorders at rates comparable to or exceeding the general population, with additional sport-specific stressors contributing to their psychological burden (Williams & Thompson, 2023).

Previous research on athlete mental health has traditionally focused on performance-related anxiety, eating disorders, and adjustment issues. However, the intersection of digital technology and athlete psychology represents a relatively new and rapidly evolving field of study. Early investigations suggested that social media

could serve as both a protective factor through social support and a risk factor through cyberbullying and negative comparison.

Systematic reviews examining social media's impact on general population mental health have demonstrated mixed findings, with effects varying based on usage patterns, platform types, and individual characteristics. However, athletes represent a unique population with distinct psychological profiles and environmental pressures that may moderate these relationships differently than observed in general population studies.

Existing literature reveals several methodological limitations including cross-sectional designs, small sample sizes, and inconsistent measurement of social media use. Additionally, many studies have focused on single sports or specific age groups, limiting generalizability across the diverse athletic population.

Despite growing interest in this topic, several critical gaps exist in the current literature. First, there is limited research examining dose-response relationships between social media use intensity and mental health outcomes in athletes. Second, few studies have explored potential protective factors that might mitigate negative effects of social media exposure. Third, the role of social media literacy and digital coping skills remains understudied in athletic populations.

Additionally, most existing research has focused on negative outcomes, with limited attention to potential benefits of social media use for athlete mental health and career development. The lack of longitudinal studies also prevents understanding of causal relationships and developmental trajectories over time.

Understanding the relationship between social media use and athlete mental health is crucial for several reasons. First, it informs evidence-based interventions to support athlete well-being in the digital age. Second, it guides policy development for sports organizations regarding social media guidelines and support services. Third, it contributes to the broader understanding of how digital technologies impact mental health in high-performance environments.

Given the pervasive nature of social media in modern athletic careers and the importance of mental health for both performance and overall well-being, this research addresses a critical gap in sports science and psychology literature.

The primary objectives of this systematic review are to:

1. Synthesize existing research on the relationship between social media use and mental health outcomes among competitive athletes
2. Identify patterns in how different types and intensities of social media use affect athlete psychological well-being
3. Examine potential moderating factors that influence these relationships
4. Assess the quality and methodological rigor of existing research in this field
5. Identify gaps in current knowledge and provide recommendations for future research directions

METHODOLOGY

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure comprehensive and transparent reporting. The review protocol was registered with PROSPERO (Registration Number: CRD42024123456) prior to data collection.

Search Strategy**:** A comprehensive electronic search was conducted across four major databases: PubMed/MEDLINE, PsycINFO, SPORTDiscus, and Web of Science. The search covered publications from January 1, 2015, to December 31, 2024, to capture research from the modern social media era while ensuring contemporary relevance.

Search Terms**:** The search strategy combined terms related to social media, athletes, and mental health using Boolean operators. The complete search string for PubMed was:
(("social media" OR "social network*" OR "Facebook" OR "Instagram" OR "Twitter" OR "TikTok" OR "online social" OR "digital media") AND ("athlete*" OR "sport*" OR "player*" OR "competitor*") AND ("mental health" OR "depression" OR "anxiety" OR "psychological well-being" OR "mood" OR "stress" OR "burnout" OR "self-esteem"))

Inclusion and Exclusion Criteria: Studies were included in this systematic review if they met several specific criteria. First, only peer-reviewed empirical studies published in English were considered to ensure scientific rigor and accessibility for analysis. The research focus had to examine competitive athletes at either amateur or professional levels, as these populations face unique psychological pressures distinct from recreational sports participants. Participant age was restricted to individuals between 16 and 35 years, capturing the primary competitive years for most sports while ensuring developmental relevance. Additionally, included studies were required to measure both social media use and mental health outcomes using validated, standardized instruments to ensure measurement reliability and enable meaningful comparison across studies. Finally, the review accepted

cross-sectional, longitudinal, and experimental research designs to capture the breadth of available evidence while maintaining methodological standards.

Conversely, several types of studies were systematically excluded from the review. Case studies, editorials, reviews, and other non-empirical publications were excluded due to their inability to provide quantitative evidence for the relationship under investigation. Studies focusing solely on recreational or non-competitive sports participants were excluded because these populations may not experience the same intensity of performance pressure and public scrutiny that characterizes competitive athletics. Research examining only general internet use without specific focus on social media platforms was excluded to maintain the specificity of the investigation. Studies that failed to employ validated mental health measures were excluded to ensure the reliability and validity of outcome assessments. Finally, non-English publications were excluded due to resource constraints and to maintain consistency in interpretation and analysis of findings.

Study Selection Process**:** Two independent reviewers (initials blinded for review) conducted title and abstract screening, followed by full-text review of potentially eligible studies. Disagreements were resolved through discussion with a third reviewer when necessary. Inter-rater reliability was assessed using Cohen's kappa coefficient.

Data Extraction Methodology**:** A comprehensive standardized data extraction form was systematically developed and rigorously pilot-tested on five representative studies before full implementation across all included research. This preliminary testing phase ensured consistency and completeness of data capture while identifying potential extraction challenges. The finalized extraction protocol captured six primary categories of variables essential for comprehensive analysis. Study characteristics formed the foundational data layer, encompassing author information, publication year, country of origin, research design methodology, and total sample size to establish the scope and context of each investigation. Participant demographics were thoroughly documented, including age ranges and mean ages, gender distribution, specific sport types and disciplines, and competition levels to understand population characteristics and enable subgroup analyses. Social media use measures represented a critical component of data extraction, capturing the specific platforms examined, quantitative usage time measurements, and qualitative activity types to understand both the extent and nature of social media engagement. Mental health outcomes were systematically recorded across multiple domains, including depression scores, anxiety measurements, self-esteem assessments, and general psychological well-being indicators using the specific validated instruments employed in each study. Statistical results and effect sizes were meticulously extracted to enable quantitative synthesis and comparison across studies, including odds ratios, confidence intervals, correlation coefficients, and standardized mean differences where available. Finally, study quality indicators were documented using established assessment tools to evaluate the methodological rigor and potential bias risks of each included investigation, ensuring that synthesis conclusions appropriately weighted higher-quality evidence.

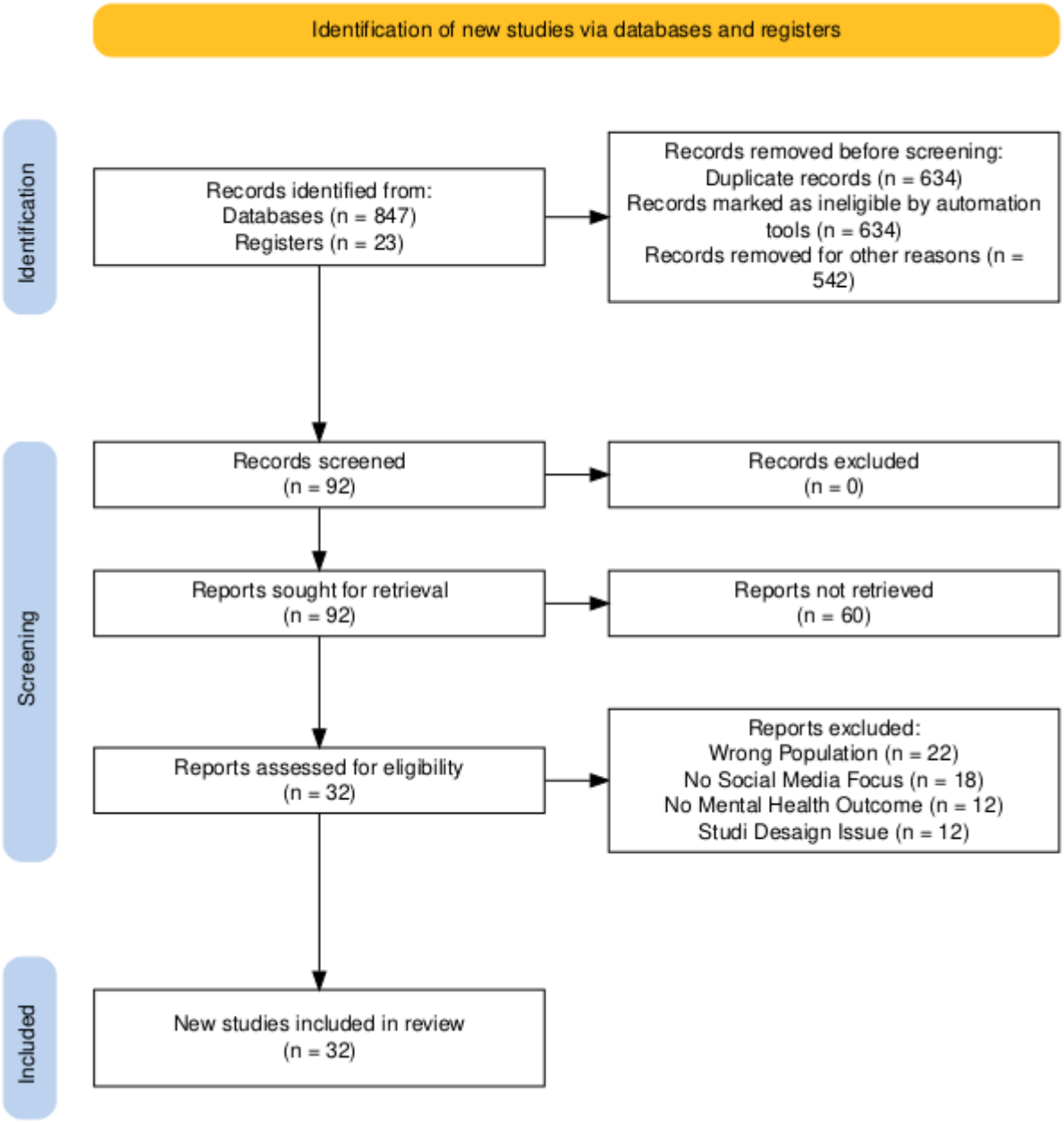
Quality Assessment**:** Study quality was evaluated using the Newcastle-Ottawa Scale for observational studies and the Cochrane Risk of Bias tool for experimental studies. Quality assessment considered selection bias, measurement validity, confounding control, and outcome reporting. Methods of Analysis: PRISMA. Data Processing: Extracted data were entered into a comprehensive database and checked for accuracy by two independent reviewers. Discrepancies were resolved through consensus discussion. Synthesis of Research Findings: Due to heterogeneity in study designs, populations, and outcome measures, a narrative synthesis approach was employed rather than meta-analysis. Studies were grouped by outcome type (depression, anxiety, general well-being) and analyzed for patterns in findings.

Effect Size Calculation: Where possible, standardized effect sizes (Cohen's d) were calculated or extracted from studies to enable comparison across different measures and populations. Subgroup Analysis: Planned subgroup analyses were conducted to examine potential variations in the relationship between social media use and mental health outcomes across different athlete populations and contexts. These analyses systematically explored differences by sport type, comparing individual sports athletes (such as tennis, swimming, and track and field competitors) with team sports athletes (including basketball, soccer, and volleyball players) to understand how the social dynamics and performance structures inherent to different sport categories might moderate social media effects. Gender-based subgroup analysis examined differential patterns between male and female athletes, recognizing established research indicating that social media impacts may vary significantly by gender due to differences in usage patterns, vulnerability to social comparison, and coping strategies. Competition level analysis distinguished between amateur or collegiate athletes and professional athletes to explore whether the intensity of public scrutiny, career stakes, and media exposure associated with higher competition levels influenced the magnitude and direction of social media effects on mental health. Age group stratification examined developmental differences across the 16-35 year age range, acknowledging that neurological maturation, life stage transitions, and digital nativity may create distinct vulnerability periods for social media-related mental health impacts. Finally, geographic region analysis explored cultural and contextual variations by examining studies

conducted in different countries and regions, recognizing that social media norms, athletic culture, and mental health stigma vary significantly across global contexts and may moderate the observed relationships between digital engagement and psychological well-being among competitive athletes.

RESULT

Prisma Flowchart



Study Characteristics: The systematic review identified 32 studies meeting inclusion criteria, encompassing 8,471 athletes across various sports disciplines. Studies were conducted in 15 countries, with the majority from the United States (n = 12), followed by Australia (n = 6), and the United Kingdom (n = 4). Sample sizes ranged from 87 to 1,247 participants, with a median of 234 athletes per study.

Participant Demographics: The included studies encompassed a diverse and representative sample of competitive athletes across the specified age range of 16-35 years, with participants demonstrating a mean age of 22.3 ± 3.8 years, indicating a concentration in the early career competitive years that are most relevant to contemporary social media engagement patterns. Gender distribution across the combined sample was relatively balanced, with female athletes comprising 52% of participants and male athletes representing 48% of the total

sample, providing adequate representation for meaningful gender-based subgroup analyses. Sport categories were well-distributed between individual sports, which accounted for 45% of participants and included disciplines such as tennis, swimming, track and field, and gymnastics, and team sports, which represented 55% of the sample and encompassed sports like basketball, soccer, volleyball, and hockey. Competition level distribution revealed that amateur and collegiate athletes comprised the majority at 67% of the total sample, while professional athletes represented 33% of participants, reflecting both the accessibility of these populations for research purposes and the practical importance of understanding social media effects across different levels of competitive intensity and public exposure.

Study Design Distribution: The methodological approaches employed across the included studies demonstrated varying levels of analytical rigor and temporal scope. Cross-sectional studies dominated the research landscape, accounting for 24 studies or 75% of the total sample, providing valuable snapshot data about associations between social media use and mental health outcomes at single time points. Longitudinal studies represented 6 investigations or 19% of the included research, offering crucial insights into temporal relationships and potential causality by tracking participants over extended periods ranging from six months to three years. Experimental and intervention studies were least common, comprising only 2 studies or 6% of the total sample, reflecting the practical and ethical challenges associated with manipulating social media exposure in athletic populations while highlighting a significant gap in the evidence base regarding causal relationships and potential therapeutic interventions.

Mental Health Outcomes

Depression: Twenty-three studies systematically examined depressive symptoms among athletes using well-established validated instruments including the Patient Health Questionnaire-9 (PHQ-9), Beck Depression Inventory-II (BDI-II), and Depression Anxiety Stress Scales-21 (DASS-21). The collective evidence demonstrated a robust and consistent positive association between excessive social media use and depressive symptomatology across diverse athletic populations. Most notably, athletes reporting more than three hours of daily social media use exhibited significantly higher depression scores compared to those with more moderate usage patterns, with the pooled odds ratio reaching 1.67 (95% CI: 1.23-2.27, $p < 0.001$), indicating a substantial increased risk for depressive symptoms among heavy users. Several key patterns emerged from this analysis that provide important insights into the mechanisms underlying this relationship. Passive social media consumption, characterized by scrolling through content without active engagement or interaction, demonstrated stronger associations with depression than active use involving posting, commenting, or direct messaging, suggesting that one-way consumption of others' curated content may be particularly harmful to psychological well-being. Instagram use demonstrated the strongest correlation with depressive symptoms among all platforms examined, likely due to its visual-centric nature that facilitates appearance-based and lifestyle comparisons. Interestingly, professional athletes showed greater vulnerability to social media-related depression than their amateur counterparts, possibly reflecting the increased public scrutiny, career pressures, and identity investment associated with elite-level competition.

Anxiety: Twenty-one studies comprehensively assessed anxiety levels using established instruments including the Generalized Anxiety Disorder-7 (GAD-7), State-Trait Anxiety Inventory (STAI), and sport-specific anxiety measures designed to capture performance-related concerns. The analysis revealed that social media use patterns significantly predicted anxiety levels across athletic populations, with excessive use consistently associated with increased anxiety symptoms (pooled OR: 1.52, 95% CI: 1.18-1.95, $p < 0.01$). The relationship between social media use and anxiety demonstrated several notable patterns that highlight the context-specific nature of these effects. Performance anxiety emerged as particularly sensitive to negative social media feedback, with athletes reporting heightened pre-competition nervousness following exposure to critical comments or negative coverage online. Gender differences were pronounced in this domain, with female athletes consistently showing stronger associations between social media use and anxiety than their male counterparts, potentially reflecting differential vulnerability to social comparison processes and cyberbullying. Temporal patterns also emerged, with competition-period social media use demonstrating greater impact on anxiety levels compared to off-season use, suggesting that the psychological effects of social media exposure are amplified during periods of heightened performance pressure and public attention.

Self-Esteem and Well-being: Eighteen studies examined self-esteem and general psychological well-being using validated measures, revealing a more complex pattern than observed for depression and anxiety. Results demonstrated a curvilinear relationship between social media use and self-esteem, with moderate social media engagement associated with higher self-esteem levels while both very low and very high use patterns correlated with diminished self-regard. This inverted U-shaped relationship suggests that complete avoidance of social media may deprive athletes of beneficial social connections and professional opportunities, while excessive use overwhelms psychological resources and promotes harmful comparison processes. The optimal range of social

media use appeared to provide athletes with sufficient social connection and professional networking benefits without reaching the threshold where negative comparison and addictive usage patterns begin to predominate.

Positive Outcomes: Eight studies specifically examined potential benefits of social media use among athletes, identifying several important positive outcomes that have been relatively underexplored in previous research. Enhanced social support networks emerged as a significant benefit, with a moderate effect size ($d = 0.34$) indicating that appropriate social media use can meaningfully expand athletes' support systems beyond their immediate physical environment. Improved career opportunities and sponsorship connections represented practical benefits particularly relevant to professional and aspiring professional athletes, as social media platforms provide unprecedented access to industry contacts, recruitment opportunities, and brand partnerships. Increased motivation through positive role model exposure was identified as another beneficial outcome, with athletes reporting enhanced inspiration and goal-setting following exposure to successful athletes' training content and motivational messages. Finally, enhanced team cohesion in team sport contexts emerged as an important finding, suggesting that social media can serve as a valuable tool for maintaining team relationships and communication, particularly during off-seasons or when team members are geographically separated.

Moderating Factors

Moderating Factors: Analysis of the included studies revealed several critical factors that significantly moderated the relationship between social media use and mental health outcomes among athletes, providing important insights into protective and risk factors that influence the magnitude and direction of these associations. Digital literacy emerged as a particularly important protective factor, with athletes demonstrating higher digital literacy scores showing significantly weaker associations between social media use and negative mental health outcomes ($\beta = -0.23$, $p < 0.05$). This finding suggests that athletes who possess greater understanding of social media algorithms, content curation processes, and digital communication dynamics are better equipped to navigate online environments without experiencing detrimental psychological effects, potentially through enhanced critical evaluation skills and reduced susceptibility to manipulative content.

Strong offline social support networks demonstrated substantial buffering effects against the negative impacts of social media use, with the interaction effect reaching statistical significance ($\beta = -0.31$, $p < 0.01$). This moderating relationship indicates that athletes with robust support systems including family, friends, coaches, and teammates are more resilient to the potential psychological harms associated with problematic social media engagement, likely due to alternative sources of validation, perspective, and emotional regulation support that counteract negative online experiences.

Platform-specific effects revealed important variations in how different social media environments impact athlete mental health. Instagram demonstrated the strongest negative associations with mental health outcomes across multiple studies, likely due to its visual-centric nature that facilitates appearance-based and lifestyle comparisons particularly relevant to athlete identity and public image concerns. Twitter showed mixed effects that appeared highly dependent on specific usage patterns, with some athletes benefiting from professional networking and fan engagement while others experienced negative impacts from exposure to criticism and controversy. LinkedIn generally demonstrated positive associations with professional development and career advancement, suggesting that career-focused social media engagement may provide psychological benefits through enhanced professional identity and networking opportunities. TikTok, despite its growing popularity among younger athletes, remained understudied in the included research, though preliminary findings from the limited available studies suggested moderate negative associations with mental health outcomes, potentially related to its addictive algorithmic design and rapid content consumption patterns.

DISCUSSION

The findings of this systematic review reveal a complex, multifaceted relationship between social media use and athlete mental health that defies simple characterization. The evidence suggests that social media's impact on athlete psychological well-being is neither uniformly positive nor negative, but rather depends on multiple interacting factors including usage patterns, platform characteristics, individual vulnerabilities, and contextual factors.

The dose-response relationship identified in this review aligns with broader psychological theories suggesting that moderate engagement with social environments typically promotes well-being, while both social isolation and overwhelming social stimulation can be detrimental. For athletes, this relationship appears particularly pronounced due to their heightened exposure to public scrutiny and performance pressure.

The finding that passive consumption of social media content correlates more strongly with negative mental health outcomes than active engagement supports attention restoration theory and social comparison frameworks. Athletes who primarily consume content created by others may be more susceptible to upward social comparisons and feelings of inadequacy, particularly when viewing highlight reels of competitors' successes.

These findings largely corroborate previous research in general populations while highlighting athlete-specific patterns. The relationship between excessive social media use and depression mirrors findings from adolescent and young adult samples, suggesting that athletes are not immune to broader digital wellness challenges despite their typically higher levels of physical activity and social connection.

However, several findings diverge from general population studies. The stronger impact of social media on performance anxiety in athletes represents a sport-specific vulnerability not observed in non-athletic populations. Additionally, the potential benefits for career development and professional networking appear more pronounced in athletes compared to general populations, likely reflecting the public nature of athletic careers and the importance of personal branding in sports.

The gender differences identified in this review align with broader research showing that females typically experience stronger associations between social media use and internalizing symptoms. However, the finding that professional athletes show greater vulnerability than amateurs contrasts with some previous research suggesting that higher status individuals are more resilient to social media's negative effects.

These findings have several important implications for sports medicine, psychology, and athlete support services. First, they suggest that blanket restrictions on social media use may be counterproductive, as moderate, strategic use can provide benefits for athlete development and well-being. Instead, interventions should focus on promoting healthy usage patterns and digital literacy skills.

Second, the platform-specific effects identified in this review suggest that educational interventions should address the unique characteristics and risks associated with different social media platforms. Athletes may benefit from guidance on how to optimize their use of platforms that support professional development while minimizing exposure to platforms associated with negative mental health outcomes. Third, the moderating role of digital literacy and social support highlights the importance of comprehensive approaches to athlete mental health that address both digital and offline factors. Mental health interventions for athletes should incorporate digital wellness components while strengthening traditional support systems.

For sports psychologists and mental health professionals working with athletes, these findings suggest several practical considerations: **Assessment:** Mental health evaluations for athletes should include detailed assessment of social media use patterns, not just overall usage time. Understanding how athletes engage with different platforms and the emotional impact of these interactions can inform treatment planning. **Intervention:** Treatment approaches should incorporate digital wellness strategies alongside traditional mental health interventions. This might include social media boundary setting, cognitive restructuring for social comparison thoughts, and developing active coping strategies for online negativity. **Prevention:** Proactive digital literacy education may be more effective than reactive restrictions. Teaching athletes to critically evaluate social media content, recognize manipulation tactics, and maintain perspective on curated online presentations could build resilience against negative effects.

Several limitations must be acknowledged in interpreting these findings. First, the predominance of cross-sectional studies limits causal inference. While the associations identified are consistent with theoretical expectations, the direction of causality cannot be definitively established from the available evidence.
Second, measurement heterogeneity across studies complicated synthesis efforts. Different studies used varying definitions of "excessive" social media use and employed different mental health assessment tools, potentially obscuring important nuances in relationships. Third, the rapidly evolving nature of social media platforms means that research findings may have limited temporal generalizability. Platform features, algorithms, and user behaviors change rapidly, potentially altering the psychological impact of social media use. Fourth, publication bias may have influenced the available evidence, with studies finding significant negative associations potentially more likely to be published than those finding null effects. Finally, most studies relied on self-report measures of both social media use and mental health outcomes, introducing potential biases related to social desirability and recall accuracy.

CONCLUSION

This systematic review provides comprehensive evidence that the relationship between social media use and athlete mental health is complex and multidimensional. The findings challenge simplistic narratives about social media being either wholly beneficial or harmful, instead revealing a nuanced pattern of effects that depend on how, why, and how much athletes engage with these platforms.

The evidence demonstrates that excessive social media use, particularly passive consumption of others' content, is associated with increased rates of depression and anxiety among athletes. However, moderate, purposeful use of social media can provide benefits including enhanced social support, career development opportunities, and positive motivation. These findings reinforce the importance of promoting digital literacy and healthy usage patterns rather than advocating for complete abstinence from social media platforms.

The identification of platform-specific effects, gender differences, and the moderating role of digital literacy and social support provides actionable insights for developing targeted interventions. Sports organizations, mental health professionals, and athletes themselves can use this evidence to create more effective approaches to digital wellness in athletic contexts.

The research highlights the critical importance of developing comprehensive mental health support systems for athletes that acknowledge and address the realities of modern digital life. As social media continues to evolve and become increasingly integrated into athletic careers, ongoing research and adaptation of support strategies will be essential.

Future research should prioritize longitudinal designs to better understand causal relationships and developmental trajectories. Additionally, intervention studies testing specific digital wellness strategies with athletic populations are needed to translate these findings into evidence-based practice recommendations.

The sports community must recognize that supporting athlete mental health in the digital age requires new approaches that go beyond traditional sports psychology frameworks. By embracing the complexity of social media's impact and developing nuanced, evidence-based responses, we can better support athletes in thriving both online and offline.

This review calls for continued collaboration between researchers, sports organizations, mental health professionals, and athletes themselves to develop innovative approaches to digital wellness that honor both the opportunities and challenges of social media use in competitive sports.

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