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Research Article

Yoga As A Holistic Intervention For Improving Sleep And Mental Health: Evidence-Based Review

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Abstract

Sleep disturbance and mental health conditions like stress, anxiety, and depression are very common and frequently co-occurring conditions that have an impact on general wellbeing and quality of life. Yoga, a mind-body practice that incorporates meditation, breathing exercises (pranayama), and physical postures (asana), is being investigated more and more as a non-pharmacological sleep and mental health aid. The purpose of this study is to compile the most recent data on the effects of yoga on psychological health and sleep quality from systematic reviews and randomized controlled trials (RCTs). Up until November 2025, searches were performed using terms associated with yoga, sleep, and mental health in PubMed, Embase, the Cochrane Library, and PsycINFO. Most studies show that yoga therapies significantly enhance subjective sleep quality (measured by PSQI and ISI) and reduce feelings of anxiety and depression, especially in women, older persons, and clinical populations. Reduced physiological arousal, autonomic nervous system modulation, lower cortisol levels, and improved mindfulness and relaxation are some of the suggested explanations. All things considered, yoga seems to be a secure and helpful supplemental treatment for enhancing sleep and mental health results. To prove long-term effectiveness, however, additional thorough studies using standardized procedures and objective sleep measurements are required.

Keywords: Yoga, Sleep Quality, Mental Health, Depression, Anxiety, Mind–Body Therapy

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Introduction

Sleep is essential for preserving both mental and physical well-being. Increased stress, anxiety, and depressive symptoms are closely linked to inadequate or poor-quality sleep. There is a reciprocal relationship between sleep and mental health since mental health conditions can also interfere with appropriate sleep architecture. Despite their potential efficacy, traditional therapies like medication and cognitive-behavioral

therapy (CBT) may have drawbacks including adverse effects, high costs, or restricted accessibility.

Yoga is an age-old Indian practice that combines meditation, controlled breathing, and physical movement to encourage self-awareness and relaxation. According to recent studies, yoga can promote mood and emotional control, lower stress hormone levels, and improve autonomic balance. In the last ten years, an increasing number of research have looked at yoga as a

supplemental strategy to enhance mental health and sleep in both clinical and non-clinical groups. This study summarizes current data from systematic reviews and clinical trials assessing the effects of yoga on psychological health and sleep quality.

Objectives

1. To review and summarize existing evidence on the effects of yoga on sleep quality.
2. To evaluate the impact of yoga interventions on mental health outcomes such as depression, anxiety, and stress.
3. To discuss potential physiological and psychological mechanisms underlying these effects.
4. To identify limitations and areas for future research.

Methods

The databases PubMed, Cochrane Library, Embase, and PsycINFO were used to perform a narrative evaluation of the literature. Combinations of "yoga," "asana," "pranayama," "sleep," "insomnia," "PSQI," "mental health," "depression," "anxiety," and "stress" were among the search terms. Randomized controlled trials (RCTs), quasi-experimental research, and systematic reviews assessing the effects of yoga therapies on sleep or mental health outcomes were the inclusion criteria. Included were English-language studies published up until November 2025. Information about the study's design, demographic, yoga type, length, frequency, and main results were extracted. The Cochrane Risk of Bias tool for RCTs and AMSTAR-2 for systematic reviews were used to assess quality.

Results

Yoga and Sleep Quality

Subjective sleep measurements including the Pittsburgh Sleep Quality Index (PSQI) and Insomnia Severity Index (ISI) have significantly improved with yoga therapies lasting 6–12 weeks with 2–5 sessions per week. Yoga considerably improved women's sleep quality as compared to standard treatment, according to a 2020 meta-analysis of 19 trials. Studies involving cancer survivors, insomnia sufferers, and elderly folks have revealed similar outcomes. In most populations, yoga had a small but clinically significant impact on sleep latency, length, and efficiency.

Yoga and Mental Health

Numerous meta-analyses and systematic reviews show that yoga reduces anxiety and depression symptoms in a mild to moderate way. When compared to inactive controls, yoga was found to be effective in lowering anxiety in a 2018 meta-analysis by Cramer et al. Recent studies have demonstrated that practicing yoga improves mood, stress perception, and general well-being. The advantages seem to be on par with previous physical activity therapies, indicating that the effects are a result of both mindfulness and physiological relaxation.

Mechanisms of Action

Numerous physiological and psychological processes are thought to be responsible for yoga's positive effects on sleep and mental health:

- **Autonomic modulation:** Yoga promotes relaxation and better sleep initiation by increasing parasympathetic activity and decreasing sympathetic over activation.
- **Neuroendocrine regulation:** Stress and anxiety are lessened by balanced HPA-axis activity and lower cortisol levels.
- **Emotional control and mindfulness:** Meditative practices increase emotional resilience, lessen rumination, and increase self-awareness.
- **Inflammation and brain function:** Yoga may lower pro-inflammatory markers and encourage alterations in brain areas linked to emotion control and attention.

Discussion

Evidence from RCTs and meta-analyses indicates that yoga is beneficial for enhancing the quality of sleep and reducing anxiety and depressive symptoms. Although generalization is difficult due to the variety of yoga types, such as Hatha, Iyengar, and mindfulness-based yoga, common components like breathing control and meditation seem to produce consistent benefits.

Despite encouraging results, the robustness of inferences is limited by small sample sizes, brief intervention periods, heterogeneity in study design, and dependence on self-reported outcomes. Actigraphy and polysomnography are two objective sleep metrics that have been utilized in few research. Furthermore, the sustainability and long-term adherence to yoga's advantages are yet poorly understood.

Conclusion

Yoga has been shown to improve mental health and sleep quality in a variety of demographics. It provides a convenient, affordable, and safe supplement to traditional treatments for mood and sleep disorders. To develop firm clinical recommendations, future research should include rigorous techniques, standardized yoga protocols, and objective outcome measures.

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