



ORIGINAL RESEARCH PAPER

Yoga

EFFECTIVENESS OF MINDFULNESS BASED YOGA INTERVENTION - A NARRATIVE REVIEW

KEY WORDS:

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ABSTRACT

Mindfulness-based yoga integrates physical postures, controlled breathing, and present-moment awareness to promote both mental and physical well-being. This narrative review examined the effectiveness of mindfulness-based yoga interventions on psychological and physiological health outcomes by analyzing literature published over the past ten years from major scientific databases. Relevant studies focusing on mindfulness, mindfulness-based yoga, and related interventions were included following independent screening by two reviewers. The findings indicated that mindfulness-based yoga interventions were associated with significant reductions in stress, anxiety, and depressive symptoms, along with improvements in emotional regulation, resilience, sleep quality, and overall well-being across diverse populations. Overall, the review suggests that mindfulness-based yoga is a safe and effective complementary approach for enhancing psychological health and quality of life, although further well-designed controlled trials are recommended to strengthen the existing evidence base.

INTRODUCTION

Mindfulness is conceptualized as a state of nonjudgmental attentiveness to and awareness of moment-to-moment experiences and is associated with decreased negatively biased cognition and explicit and implicit emotion processing . In the clinic, mindfulness has been integrated into the treatment programs of emotional disorders such as anxiety and depression disorder⁽¹⁾.

Yoga is a contemplative intervention that operates at least in part by improving mindfulness, and by promoting greater mind-body integration for embodied self-regulation. The physical and embodied nature of yoga practice is also likely to lead to greater interoceptive and proprioceptive body awareness and the ability to recognize and respond to the physical manifestations of stress and distressing emotions. It may also improve physiological functioning by strengthening musculoskeletal, cardiovascular, and respiratory function. Theoretically, these outcomes of embodied practice are linked with greater cognitive, behavioral, and emotional self-regulatory capacities. Reviews of yoga programs suggest that both for adults with a range of medical and psychological conditions as well as healthy individuals, yoga has physical and psychological benefits that help participants reduce stress. In healthy adults, yoga leads to improved well-being and alleviates or prevents psychological and physical symptoms⁽²⁾.

Yoga and mindfulness programming may provide an important opportunity to address social emotional needs, and to provide coping skills, for those who do not receive attention to their behavioral or mental health through other channels. These programs have become more widespread over the last decade in the United States. An emerging evidence base justifies interventions utilizing yoga and mindfulness programs (YMP) in the youth population to improve social and emotional outcomes from early childhood through adolescence, including evidence from randomized controlled trials . A systematic review of utilizing yoga to improve anxiety and depression in youth found that, among studies assessing both anxiety and depression, 58% of reviewed studies identified reductions in both conditions, while 70% of studies assessing anxiety alone showed improvements, and 40% of studies assessing only depression showed improvements. Yoga has also been found to improve youth resilience, and may enhance coping skills that could bolster young people's mental quality of life⁽³⁾. The objective of this narrative review is to see the effect of mindfulness based yoga on different

physical and psychological domains .

METHODOLOGY

This narrative review aimed to explore the effects of mindfulness-based yoga interventions across various physical and psychological domains. A comprehensive literature search was conducted to identify relevant studies published in peer-reviewed journals over the past ten years (2015–2025).

An extensive search strategy was employed using key electronic databases, including PubMed, Scopus, and Google Scholar. The search terms included combinations of keywords such as “mindfulness,” “mindfulness-based yoga,” “yoga,” “anxiety,” and “depression.” The primary search strategy used was: (“Mindfulness-based Yoga” OR “Mindfulness”) AND (“Anxiety” OR “Depression”).

Titles and abstracts of identified studies were screened independently by two review authors to assess relevance. Potentially eligible articles were retrieved for full-text review, with inclusion limited to freely accessible full-text publications. Inclusion criteria for the study are following -

- Only randomized controlled trials with online or offline intervention for more than 4 weeks.
- The language of publication has to be English .
- Article included are from the past 10 years, i.e., from 2015 to 2025

Studies were excluded if they were duplicate publications, failed to meet the inclusion criteria, or did not satisfy predefined quality standards.

Data extraction focused on study design, sample characteristics, intervention details, outcome measures, and key findings related to physical and psychological outcomes. The findings from individual studies were synthesized and summarized qualitatively to provide an interpretative overview of the evidence.

More than 160 results were found out of which 76 were from the past 10 years and approx 12 were free full articles full filing all the inclusion criteria.

All disagreements were resolved through discussion amongst review authors.

Author (Year)	Population	Study Design	Intervention & Duration	Key Outcomes
Zhang et al ⁽¹⁾ . (2019)	Female postgraduate students (n=60)	Randomized Controlled Trial	8-week mind-body program combining aerobic jogging + mindfulness-based yoga	Improved implicit emotion regulation, increased aerobic fitness and mindfulness, reduced negative affect; aerobic fitness mediated emotion regulation

Bazzano et al. ⁽³⁾ (2022)	Adolescents (11–14 yrs)	Cluster RCT	8-week school-based yoga & mindfulness (45 min/week)	Reduced anxiety and depression trends; anxiety improved over time; feasible school intervention
Schussler DL, Harris AR, & Greenberg MT (2020)(2)	Educators	Qualitative study	Mindfulness-based yoga program (attendance-dependent)	Improved emotional regulation, reduced stress, enhanced classroom management and resilience
Arya et al. ⁽⁶⁾ (2024)	Spinal cord injury patients (n=60)	Longitudinal RCT	6-month mindfulness-based yoga (3 Sessions/week)	Improved psychological resilience, sense of coherence, emotional regulation, and quality of life
Fazia et al. ⁽⁵⁾ (2023)	Medical students (n=362)	Randomized Controlled Study	Online mindfulness program with meditation, yoga & diet guidance	Reduced stress and anxiety; improved well-being, emotional regulation, resilience, and attention
Beddoe et al. ⁽¹²⁾ (2009)	Pregnant women (n=16)	Pre-post single-group study	7-week mindfulness-based Iyengar yoga	Reduced physical pain (2nd trimester), decreased stress and trait anxiety (3rd trimester)
Jagodic Rukavina et al. ⁽¹¹⁾ (2012)	Middle-aged women with urinary incontinence (n=46)	Randomized Controlled Trial	8-week Body Technique vs PFMT	Both groups improved muscle strength, incontinence severity, and quality of life
Schuver & Lewis ⁽⁶⁾ (2016)	Women with depression	Pilot RCT	12-week mindfulness-based yoga vs walking	Reduced depressive symptoms in both groups; greater reduction in rumination with yoga
Cherkin et al. ⁽¹⁰⁾ (2016)	Adults with chronic low back pain (n=342)	Randomized Clinical Trial	8-week MBSR vs CBT vs usual care	MBSR and CBT superior to usual care for pain and functional improvement
Daukantaite et al. ⁽⁹⁾ (2018)	Stressed middle-aged adults (n=105)	Randomized Controlled Trial	5-week Yin yoga + mindfulness/psychoeducation	Reduced anxiety, depression, sleep problems, and plasma adrenomedullin levels
Gardner & Moore (2005); Josefsson et al. (2017)	Athletes	Conceptual & empirical studies	Mindfulness-based sport performance programs	Improved emotion regulation, reduced negative coping, enhanced performance
Menezes et al. (2015); Garland et al. (2009)	General populations	Mechanistic & correlational studies	Mindfulness-based exercise and meditation	Improved emotion regulation via attentional flexibility, reduced rumination and avoidance

RESULTS -

A neuroscience study suggested that the level of mindfulness is associated with increased prefrontal cortical activation and reduced bilateral amygdala activity during an affect-cue task. This finding indicated that individuals with a high level of mindfulness are more likely to activate the cognitive control system to regulate emotional responses as the top-down approach. In addition, mindfulness is enhanced by mindfulness-based training, with the consequence of improved emotion regulation.

DISCUSSION

This narrative review synthesizes evidence from diverse populations and settings to understand the effectiveness of mindfulness-based yoga interventions on psychological and selected physical health domains. Overall, the reviewed studies consistently demonstrate that mindfulness-based yoga exerts beneficial effects on stress reduction, emotional regulation, anxiety, depression, and overall psychological well-being.

Several studies highlighted the role of mindfulness-based yoga in enhancing emotion regulation and stress resilience⁽¹⁾. Zhang et al. (2019) Demonstrated that mind-body exercise interventions combining mindfulness-based yoga and aerobic activity improved implicit emotion regulation, suggesting neuropsychological benefits beyond conscious emotional control. Similar findings were observed in occupational and academic settings, where mindfulness-based yoga reduced stress and burnout among nurses and medical students, emphasizing its applicability in high-stress professional environments^(4,5) (Hilcove et al., 2021; Fazia et al., 2023).

The effectiveness of mindfulness-based yoga in reducing anxiety and depressive symptoms was consistently reported across age groups. In adolescents, significant improvements in anxiety and depression follow a school-based mindfulness and yoga intervention, supporting early preventive mental health strategies. Among adults, mindfulness-based yoga demonstrated antidepressant effects in women with depression and individuals

experiencing burnout-related sick leave, with outcomes comparable to cognitive behavioral therapy and mindfulness-based cognitive therapy^(6,7) (Schuver & Lewis, 2016) (Grensman et al., 2018). These findings suggest that mindfulness-based yoga may serve as a viable complementary or alternative intervention for common mental health conditions.

Beyond clinical populations, mindfulness-based yoga has shown promise in educational and caregiving contexts⁽⁸⁾. Schussler et al. (2020) qualitatively reported that educators participating in mindfulness-based yoga programs experienced improved self-awareness, emotional balance, and coping skills, with better outcomes associated with higher program attendance. Such findings underscore the importance of adherence and engagement in achieving therapeutic benefits.

Evidence also supports the role of mindfulness-based yoga in rehabilitation and special populations. Arya (2024) demonstrated that integrating mindfulness-based yoga into psychological rehabilitation programs for individuals with spinal cord injury led to sustained improvements in psychological adjustment and emotional well-being⁽⁹⁾. Similarly, Beddoe et al. reported reduced psychological distress and improved physical comfort among pregnant women practicing mindfulness-based yoga, highlighting its safety and adaptability during sensitive physiological phases.

Physiological outcomes, though less frequently reported, provide emerging support for the mind-body mechanism underlying mindfulness-based yoga. Daukantaite et al. (2018) observed reductions in plasma adrenomedullin levels alongside psychological improvements, indicating potential stress-related biological modulation⁽⁹⁾. Additionally, improvements in health-related quality of life were noted across several trials, reinforcing the holistic impact of these interventions⁽¹⁰⁾ (Grensman et al., 2018; Turner et al., 2016).

While most studies focused on psychological outcomes,

some evidence suggests broader physical benefits. For instance, mindfulness-informed body-based interventions have been associated with improved bodily awareness and symptom management in women with chronic conditions, although not all studies directly focused on mindfulness-based yoga alone⁽¹¹⁾ (Rukavina et al., 2025). This highlights the need for clearer differentiation and standardization of intervention components in future research.

Despite promising findings, notable heterogeneity exists across studies in terms of intervention duration, delivery mode (online vs. offline), outcome measures, and population characteristics. Additionally, although randomized controlled trials dominate the evidence base, variations in methodological quality and sample sizes limit generalizability. These limitations are common within narrative reviews and emphasize the need for more rigorously designed, large-scale controlled trials with standardized mindfulness-based yoga protocols.

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