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Yoga and Eating Disorders: Can Mindful Movement Restore Balance?

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Abstract
Eating disorders constitute a significant mental health issue, marked by serious disruptions in eating behaviors, body image concerns, and self-perception struggles. Individuals affected frequently endure substantial psychological and physical impacts, highlighting the need for comprehensive, multi-faceted treatment approaches. This article investigates yoga as an adjunctive therapeutic practice, focusing on mindful movement's capacity to enhance self-awareness, emotional stability, and promote a healthier relationship with one's body.
Yoga encompasses physical poses, breathing techniques, and mindfulness strategies designed to cultivate greater body awareness and emotional connection. Engaging in mindful movement practices may enable those experiencing eating disorders to develop compassionate self-perception, reducing negative thought patterns and harmful behaviors.
The article reviews existing research and expert perspectives regarding yoga's effectiveness in managing emotional dysregulation, alleviating anxiety and depressive symptoms, and improving overall psychological health in individuals dealing with eating disorders. Additionally, it offers practical guidance on integrating yoga

into treatment protocols, outlining key considerations to ensure safety and efficacy. The aim is to provide valuable insights into yoga's role in supporting recovery and fostering balance for individuals coping with eating disorders.

Keywords:
Yoga, eating disorders, body awareness, mindful movement, sports psychology, recovery, holistic health

Introduction

Eating disorders (EDs) are serious mental health conditions that can be disabling, potentially life-threatening, and financially burdensome. They significantly impact physical health and disrupt psychosocial functioning. Both major international classification systems—the DSM-5 and ICD-11—recognize seven primary eating disorders. These include the widely known diagnoses of anorexia nervosa, bulimia nervosa, and binge-eating disorder, as well as avoidant/restrictive food intake disorder, pica, and rumination disorder. Additionally, there is a diagnostic category for other specified feeding or eating disorders (OSFED), which encompasses clinically significant conditions that do not fully meet the criteria for the main categories (3).

EDs are characterized by persistent disturbances in eating behavior, distorted perceptions of body weight and shape, and compensatory behaviors such as excessive exercise or purging. These disorders are associated with significant emotional and social difficulties, alongside serious physiological consequences affecting the cardiovascular, gastrointestinal, and endocrine systems. Furthermore, EDs contribute to increased mortality rates and impose a notable financial burden on individuals and healthcare systems alike (4).

Recent epidemiological research indicates that the prevalence of eating disorders is on the rise across most industrialized countries. The lifetime prevalence of anorexia nervosa alone is estimated to range between 1.2% and 4.3% (1). Although enhanced cognitive behavioral therapy (CBT-E) has improved treatment outcomes, it remains only partially effective—helping approximately 52–67% of individuals with bulimia nervosa and 54–73% of those with unspecified eating disorders. This highlights the urgent need for alternative or complementary therapeutic strategies, especially for individuals who do not respond to standard treatments (5).

One such alternative approach is yoga, a practice rooted in Indian philosophy that has historically served spiritual, medical, and self-care purposes. In contemporary Western contexts, yoga is predominantly practiced as an asana-based discipline (focused on physical postures), often supplemented by breath control and meditation techniques (6). While commonly viewed as a form of physical exercise, yoga also encompasses elements that support mental and emotional well-being.

Growing evidence suggests that yoga can positively influence various psychological dimensions, including increased body awareness, improved interoception and embodiment, greater mindfulness, self-compassion, self-efficacy, and a more positive body image. Moreover, it has been shown to enhance sleep quality, reduce anxiety, and promote general physical health, notably through its impact on the nervous system. Yoga may also foster social well-being by offering participants a sense of connection and community, especially through group-based practice settings (2).

This article presents a comprehensive review of literature published between 2010 and 2025, using databases such as PubMed, Scopus, and Google Scholar. By synthesizing findings from clinical studies, meta-analyses, and observational research, it aims to critically assess the role of yoga in the treatment and management of eating disorders, identify existing gaps in current knowledge, and evaluate yoga's potential as a complementary component in therapeutic interventions for individuals affected by EDs.

Discussion

Eating disorders, particularly anorexia nervosa, not only pose serious health risks but also generate significant economic costs. The burden extends beyond healthcare systems to families and caregivers, especially in cases requiring inpatient treatment. Understanding the financial implications of these disorders is crucial for informing early intervention strategies and optimizing resource allocation. A cohort study conducted by Toulany A et al.

examined the economic burden of inpatient treatment for adolescents with anorexia nervosa, focusing on both hospital and caregiver perspectives. Using micro-costing methods, researchers analyzed data from 73 adolescents aged 12–18 years admitted to a tertiary care eating disorder program in Toronto between September 2011 and March 2013. Hospital administrative records and Canadian census data were used to estimate both direct hospital costs and indirect caregiver costs. The mean hospital cost per admission was $51,349 CAD, and the mean total societal cost—which includes caregiver-related expenses—was $54,932 CAD. The average hospital stay was approximately 38 days. Lower body mass index (BMI) at admission was the only significant predictor of higher hospital costs: for each one-unit increase in BMI, hospital costs decreased by 15.7%. Similarly, lower BMI and younger age were significant predictors of higher caregiver costs.(29)

Against this backdrop of high costs and complex treatment needs, alternative and complementary approaches to traditional care have garnered increasing attention. One such approach is yoga, which has been promoted as a holistic intervention integrating physical postures, breathwork, and mindfulness. The role of yoga in the context of eating disorders, however, is multifaceted. While it may offer support in both prevention and treatment, it also presents potential risks that warrant close examination. Neumark-Sztainer et al. outlined that yoga could serve as a protective factor by promoting body awareness, mindfulness, and self-acceptance while decreasing risk factors like body dissatisfaction and self-objectification. Preliminary research suggests that yoga may reduce risk factors such as body dissatisfaction and self-objectification while enhancing protective factors like body awareness, mindfulness, and self-acceptance. Yoga may be especially effective when integrated into existing prevention programs or adapted within standard yoga classes to promote positive body image and early identification of at-risk individuals. While anecdotal reports and some studies support yoga's therapeutic potential, existing research remains limited, often with small sample sizes, lack of control groups, or weak study designs.(31)

Concerns also exist about the misuse of yoga by individuals with eating disorders. It may, in some cases, be co-opted as a means to increase caloric expenditure, suppress hunger, or rigidly control the body, thereby reinforcing maladaptive behaviors. This dual potential is reflected in the longitudinal study by Levallius et al., which examined compulsive exercise in over 3,200 Swedish adolescents with EDs. Using clinical interviews and questionnaires, the researchers assessed the prevalence of CE and its links to ED severity, psychological symptoms, and recovery outcomes. CE was present in 44% of girls and 38% of boys, most commonly in those with bulimia nervosa. Adolescents who engaged in CE showed more severe ED symptoms and higher perfectionism, but CE was not consistently associated with depression or suicidality—except in girls with anorexia nervosa.(24)

Understanding the neurobiological underpinnings of eating disorders also offers a compelling context for yoga's role. Anorexia nervosa (AN) and bulimia nervosa (BN) are complex psychiatric disorders that often begin in adolescence and are associated with chronicity, high relapse rates, and, in the case of AN, the highest mortality among psychiatric illnesses. Despite their behavioral differences, both disorders share underlying traits such as perfectionism, obsessive-compulsiveness, and dysphoric mood, which often precede the onset of the illness and persist after recovery, suggesting they may be enduring vulnerability factors. Growing evidence points to neurobiological disturbances, particularly involving brain serotonin (5-HT) pathways, as key contributors to the development and maintenance of these disorders. Altered 5-HT function has been observed both during illness and after recovery, indicating a possible trait-related dysfunction. This dysregulation likely affects emotional and reward systems in the brain, leading to maladaptive coping strategies such as dietary restriction, which temporarily alleviates dysphoric mood by altering 5-HT activity.(25)

Lim SA et al. in their study aimed to examine the effects of yoga practice on oxidative stress, antioxidant levels, immune function, and stress hormone secretion in healthy young adults. A total of 25 university students were divided into two groups: a yoga group (n=12) and a control group (n=13). The yoga group participated in 90-minute instructor-led sessions once a week for 12 weeks, with additional daily home practice using a DVD. The yoga program included physical postures (asanas), breath regulation (pranayama), and meditation. Blood samples were collected at the beginning and end of the intervention after an 8-hour fast. Results showed that yoga significantly reduced serum markers of oxidative stress, such as nitric oxide, F2-isoprostane, and lipid peroxide. At the same time, antioxidant markers including total glutathione content and the activity of GSH-related enzymes significantly increased. Additionally, immune-related cytokines such as interleukin-12 and interferon-γ were elevated following yoga practice. Yoga also led to reduced plasma adrenaline levels and increased serotonin, suggesting a beneficial effect on stress regulation. In conclusion, regular yoga practice effectively reduced oxidative stress, enhanced antioxidant defense, improved immune function, and positively modulated stress hormone levels in healthy individuals.(26)

Yoga's potential to influence psychological and behavioral aspects of eating disorders has also been documented. Lauche R. et al. study aimed to assess whether yoga or meditation practice is associated with body satisfaction

and weight control behaviors among Australian women aged 34–39. Using data from the Australian Longitudinal Study on Women's Health (ALSWH), researchers analyzed survey responses from 8,009 women regarding their body image, weight control methods, and frequency of yoga/meditation practice. Participants were grouped by BMI (normal, overweight, obese), and statistical analyses—including chi-square tests and multiple logistic regression—were used to examine associations while adjusting for sociodemographic and health factors.

Results showed that women with normal BMI who practiced yoga/meditation frequently were significantly more satisfied with their body weight and shape and were less likely to want to lose weight compared to non-practitioners. Across all BMI groups, yoga/meditation users were more likely to use healthy weight control strategies such as exercise and low-glycaemic index diets. However, among women with obesity who only occasionally practiced yoga/meditation, there was a higher likelihood of using potentially unhealthy methods such as fasting and smoking for weight control.

In conclusion, yoga/meditation appears to be positively associated with body satisfaction and healthy weight control behaviors, particularly in women with normal BMI. However, occasional yoga/meditation use among women with obesity may be linked to riskier weight control practices. The findings suggest that the frequency and intent behind yoga practice matter, and that a deeper engagement with the broader yogic lifestyle may support healthier attitudes toward body image and weight regulation.(27)

The randomized controlled trial conducted by Mclver S et al. investigated the effectiveness of a 12-week yoga program for women with binge eating disorder (BED) and a BMI over 25. A total of 90 participants were randomized into a yoga intervention group (n = 45) or a wait-list control group (n = 45), with 25 participants from each group included in the final analysis. The intervention involved weekly instructor-led yoga sessions supplemented by home practice. Primary outcomes were assessed using the Binge Eating Scale (BES) and International Physical Activity Questionnaire (IPAQ), while secondary outcomes included changes in BMI and waist and hip measurements.

Results showed that the yoga group experienced significant reductions in binge eating severity and increases in physical activity levels. Additionally, small but statistically significant improvements were observed in BMI, waist, and hip circumference. In contrast, the control group showed no significant changes on any measures.

In conclusion, this preliminary study suggests that yoga—when combined with home practice—may be an effective adjunctive treatment for reducing binge eating behaviors and improving physical health indicators in women with BED.(28)

Another perspective on integration comes from a scoping review by O'Brien et al which explored existing research on the integration of yoga with psychological approaches for the treatment of eating disorders across the lifespan. Using a structured five-stage framework based on Arksey and O'Malley's methodology and guided by the PRISMA-ScR checklist, the authors searched four major databases (CINAHL, Embase, MEDLINE, and PsycINFO) in April 2022. Studies were included if they described interventions combining yoga (including asana, pranayama, and meditation) with psychological therapies, such as CBT, DBT, ACT, or counseling. From an initial pool of 86 studies, only four met the inclusion criteria—two published articles and two unpublished dissertations—all conducted in the United States. These studies described group-based programs designed specifically for people with eating disorders, integrating yoga practices with psychological content aligned with weekly therapeutic themes. Outcomes indicated reductions in eating disorder symptoms such as binge eating, body dissatisfaction, and improved body image; however, the results remain preliminary due to methodological limitations including small sample sizes, lack of control groups, high attrition rates, and absence of follow-up analyses. The review highlights a clear gap between clinical practice and empirical evidence, noting that while yoga is frequently used as an adjunctive treatment in ED services, research evaluating its integration with psychological approaches is sparse. The authors recommend future research focus on clearly articulating theoretical frameworks, employing more rigorous designs such as randomized controlled trials, and considering diverse populations across age groups and treatment settings.(2)

Ostermann T et al. review aimed to systematically assess the effectiveness and safety of yoga in individuals with eating disorders or disordered eating behaviors. A comprehensive literature search was conducted across Medline/PubMed, PsycINFO, and the Psychological and Behavioral Science Collection up to July 2018, identifying randomized controlled trials, non-randomized trials, and observational studies. Twelve studies met the inclusion criteria, including eight randomized trials and four uncontrolled trials, involving a total of 495 participants. The reported effect sizes ranged from negligible (d = 0.02) to very large (d = 2.15), though most effects were small to moderate and not statistically significant. Risk of bias varied across studies, and none reported safety-related data or adverse events. Despite these limitations, the findings suggest that yoga may serve as a beneficial complementary approach in the treatment of eating disorders, particularly by enhancing body awareness, emotional regulation, and reducing disordered eating behaviors. However, the current evidence remains limited and methodologically weak, with small sample sizes, inconsistent outcome measures, and a lack

of standardized safety assessments. While yoga should not replace conventional therapies, it can be cautiously integrated as a supportive element within multidisciplinary treatment programs. Future high-quality, large-scale studies are essential to confirm its therapeutic value and ensure its safe application in this vulnerable population.(1)

The review conducted by Trethewey E et al. followed a six-step mapping methodology adapted from previous studies and was informed by expert consultation in both the fields of yoga and eating disorders. A comprehensive literature search was conducted across four databases—PsycINFO, MEDLINE, CINAHL, and Embase—between September 2021 and December 2022. From an initial pool of 333 articles, 43 were reviewed in full, and 11 studies (representing 10 unique interventions) met the inclusion criteria. These studies were then categorized and analyzed to develop an evidence map illustrating how yoga interventions have been delivered, adapted, and evaluated for individuals with EDs.

The findings suggest that, although the evidence base remains limited, yoga appears to be a feasible, acceptable, and generally safe adjunctive intervention across ED diagnoses. However, considerable variation exists in the types of yoga used, delivery formats, settings, and qualifications of instructors. The review highlighted that adaptations to yoga programs—such as avoiding mirrors, tight clothing, and intensive styles—are commonly used to address specific ED-related sensitivities. (4)

Klein J et al. in 2013 systematic review examined 14 studies on the use of yoga in the prevention and treatment of eating disorders (EDs). Of these, 40% were cross-sectional studies investigating risk and protective factors among yoga practitioners, while 60% used longitudinal designs to assess the effects of yoga-based interventions. The findings suggest that yoga may be associated with a reduction in ED symptoms such as binge eating, bulimia, and food preoccupation. Several studies also reported decreases in risk factors like body dissatisfaction, drive for thinness, and self-objectification. At the same time, yoga appeared to enhance protective factors including body awareness, emotion regulation, and self-competence.

Overall, the review indicates that yoga is a safe and potentially effective adjunct therapy for both the prevention and treatment of EDs. However, the authors emphasize the need for more methodologically rigorous randomized controlled trials, greater clarity regarding the specific types and amounts of yoga practiced, and further investigation into how yoga affects different ED subtypes and genders.(30)

Qualitative studies also emphasize the nuanced application of yoga in ED care. Trethewey E et al. qualitative study explored clinicians' perspectives on the use of yoga as an adjunct treatment for individuals with eating disorders (EDs), aiming to understand how yoga can be safely and effectively integrated into ED care. Semi-structured interviews were conducted with 12 clinicians who had up to 20 years of experience working therapeutically with ED populations. Participants were asked to reflect on the perceived benefits, risks, and necessary adaptations for delivering safe and appropriate yoga interventions across the ED spectrum. The data were analyzed using template thematic analysis, resulting in four key themes: the benefits of yoga, the risks associated with its use, recommendations for adapting yoga to this population, and guidance on implementing yoga alongside standard psychological treatments. Clinicians generally viewed yoga as a safe and valuable transdiagnostic intervention that could support holistic and sustained recovery. While concerns were noted—such as the potential for yoga to reinforce compulsive behaviors or body image fixation—clinicians emphasized that these risks could be mitigated through careful adaptations to practice structure, setting, and instructor awareness. Importantly, they recommended that yoga be delivered in coordination with ongoing psychological treatment to ensure its safety and therapeutic alignment. This study offers novel insights into the practical considerations and clinical potential of integrating yoga into ED treatment and highlights key areas for future research and implementation.(7)

The qualitative study conducted by O'Brien J et al. investigated the experiences and perceptions of individuals with eating disorders regarding the role of yoga as a complementary intervention in ED recovery. Using a practice-based evidence framework, semi-structured interviews were conducted with 16 women diagnosed with an ED. Thematic template analysis revealed three key areas: participants' views on how yoga supported their recovery, the circumstances under which they discovered yoga during their healing process, and the factors that influenced their ability to engage with yoga. Participants highlighted both the benefits and the potential risks of incorporating yoga into ED treatment, emphasizing the need for careful adaptation. The study concluded that yoga can offer biopsychosocial and spiritual benefits in ED recovery when delivered in a supportive and inclusive context. It also recommended that future yoga interventions be co-designed with individuals with lived experience to ensure accessibility, safety, and cultural sensitivity.(9)

The therapeutic impact of yoga has also been illustrated in smaller case studies. Ostermann T et al. case report explored the perceived effects of yoga on a 38-year-old woman with a long-standing history of anorexia nervosa and multiple psychosomatic and psychiatric comorbidities, including PTSD from childhood trauma. The study was conducted through a structured interview at a psychosomatic clinic, guided by the CARE guidelines to

ensure systematic documentation. The patient reported that yoga helped her reconnect with her body and emotions, which had been severely disrupted due to her illness and trauma. She described yoga as a means to regain awareness of her body's needs, manage stress, and process traumatic memories in a safe way. Notably, she experienced a shift in how she related to her stomach and body, which played a central role in her eating disorder symptoms. The authors concluded that yoga had a positive impact on her recovery process, emphasizing the need for further research that considers individual comorbidities when evaluating the therapeutic use of yoga in eating disorders.(8)

More empirical support comes from RCTs. Brennan MA et al. randomized controlled trial investigated the effectiveness of an eight-week Kripalu Yoga program in treating symptoms of bulimia nervosa (BN) and binge eating disorder (BED) in 53 adult women. Participants were randomly assigned to either a Yoga group or a waitlist control group and assessed at baseline, post-intervention, and one-month follow-up. The intervention consisted of weekly 90-minute sessions integrating postures, breathwork, meditation, and themes of mindfulness and self-compassion. Standardized self-report measures assessed binge eating frequency, emotional regulation, self-criticism, self-compassion, and mindfulness.

Results showed that, compared to controls, participants in the Yoga group experienced significant reductions in binge eating frequency, emotional regulation difficulties, and self-criticism, along with increased self-compassion and mindfulness skills. Improvements were maintained at the one-month follow-up. These findings suggest that yoga may enhance core psychological processes relevant to ED recovery, such as emotion regulation and self-related beliefs. However, the authors caution that the findings are preliminary due to limitations such as reliance on a waitlist control, self-selection bias, and a short follow-up period. Future studies with active control groups, diverse populations, and longer-term follow-up are needed to confirm and extend these promising results.(5)

Pacanowski CR et al. in a randomized controlled trial evaluated the effectiveness of a yoga intervention on pre-meal negative affect in individuals undergoing residential treatment for eating disorders. Thirty-eight participants were randomly assigned to either a control group receiving standard care or a yoga group participating in daily one-hour yoga sessions before dinner over a five-day period. The yoga classes were led by trained instructors and designed to address eating disorder symptomatology through mindful movement, breathwork, and relaxation. Negative affect was assessed before and after meals using the PANAS scale, and additional measures included the Eating Disorder Examination-Questionnaire (EDE-Q), Emotional Avoidance Questionnaire (EAQ), and observer-rated mealtime anxiety. Results showed a statistically significant reduction in pre-meal negative affect in the yoga group compared to the control group, though the effect was not sustained post-meal. Observer-rated anxiety also decreased more in the yoga group during the intervention.

No significant changes were observed in EDE-Q or EAQ scores, likely due to the short intervention duration, intensive concurrent treatment in both groups, and limited sample size. Nonetheless, participants in the yoga group reported feeling calmer and more connected to their internal states, suggesting enhanced interoceptive awareness.

The study concludes that yoga may be a promising adjunctive tool to reduce acute emotional distress in individuals with eating disorders, particularly before meals, which are often anxiety-provoking. Further research with larger samples, longer intervention periods, and interoceptive measures is recommended to fully assess the therapeutic potential of yoga in eating disorder treatment and prevention.(10)

Domingues RB et al. systematic review evaluated the relationship between yoga practice and disordered eating behaviours, considering yoga's growing use as a complementary therapy for eating disorders (EDs). Using PRISMA guidelines, twelve cross-sectional studies were identified through a comprehensive search of multiple databases and journals. Overall, findings suggest that yoga is generally associated with healthier eating behaviours, improved body image, and greater body satisfaction—factors typically protective against EDs. However, some studies indicated that high-frequency or high-intensity yoga practice may be linked to increased disordered eating, particularly orthorexic tendencies. These mixed results highlight the importance of examining not only whether yoga is practiced, but also how often, for what purpose, and in what form. Evidence suggests that psychospiritual motivations are associated with more positive outcomes than appearance-driven goals, and that certain styles, such as Ashtanga, may pose greater risks when combined with dietary restrictions or perfectionism.

Given these complexities, future research should focus on identifying the thresholds at which yoga practice may become harmful, and clarify the role of style, intensity, and motivation. Randomized controlled trials are needed to establish evidence-based guidelines for integrating yoga safely and effectively into ED prevention and treatment programs..(11)

Other RCTs confirm yoga's effectiveness. Karlsen KE randomized controlled trial investigated the effect of yoga as a complementary treatment for eating disorders (EDs) in adult women diagnosed with bulimia nervosa or ED

not otherwise specified. Thirty participants were randomized to either an 11-week Hatha yoga intervention (two 90-minute sessions per week) or a wait-list control group. ED symptoms were assessed using the Eating Disorder Examination (EDE) interview and the Eating Disorder Inventory-2 (EDI-2) at baseline, post-intervention, and 6-month follow-up. Despite a dropout rate of 30% at posttest and 37% at follow-up, results showed significant improvements in the yoga group for EDE global scores, particularly in the restraint and eating concern subscales, with effects increasing at follow-up. No significant changes were observed in EDI-2 scores. The findings suggest that yoga may contribute to reductions in ED symptoms, possibly by enhancing body awareness and emotional regulation. While limited by a small sample and high dropout rate, this study supports the potential of yoga as an adjunctive approach in ED treatment and highlights the need for further research on dosage, delivery format, and integration with psychotherapy.(12)

Carei TR pilot randomized controlled trial evaluated the effectiveness of individualized yoga therapy as an adjunct to standard outpatient care for adolescents with diagnosed eating disorders (EDs), including anorexia nervosa, bulimia nervosa, and ED not otherwise specified. Fifty-four participants aged 11–21 were randomized to receive either standard care alone or standard care plus twice-weekly one-on-one yoga sessions over eight weeks. Outcome measures included the Eating Disorder Examination (EDE), body mass index (BMI), depression and anxiety scales, and a pilot measure of food preoccupation (FP). Results showed that the yoga group exhibited a continued reduction in global EDE scores through one-month follow-up, while the control group's symptoms initially declined but returned to baseline. Yoga sessions were associated with significant immediate reductions in FP, with large effect sizes. Both groups demonstrated stable BMI and reductions in depression and anxiety over time, with no adverse impact of yoga on weight. The findings suggest that individualized yoga therapy may be a safe and promising adjunct to conventional ED treatment, particularly for reducing disordered eating symptoms and acute food-related preoccupation. Further research is needed to confirm long-term outcomes and explore differential effects across ED diagnoses.(13)

Li HM et al. study compared the effects of high-intensity interval training (HIIT) and yoga on binge eating disorder (BED) and physical fitness in inactive young females. Over eight weeks, participants engaged in either HIIT, yoga, or maintained usual activity (control group). The findings showed that yoga significantly reduced binge eating symptoms (BES scores) and improved VO_2max, while HIIT significantly improved physical fitness markers such as body weight, fat mass, BMI, and VO_2max, but did not reduce binge eating. Correlation analysis indicated that in the yoga group, reductions in BES were not linked to changes in physical parameters, suggesting the improvement was primarily psychological. In contrast, improvements from HIIT were largely physiological and did not affect binge eating behavior. These results highlight yoga's value as a therapeutic intervention for BED through psychological regulation, whereas HIIT may be more suitable for improving physical fitness rather than addressing disordered eating.(14)

Hall A et al. pilot study examined the impact of yoga practice as an adjunct to standard outpatient treatment on psychological symptoms in adolescent girls with eating disorders. Twenty participants, aged 14–18, attended weekly gentle yoga classes for up to 12 sessions, in addition to receiving multidisciplinary care at an urban clinic. Psychological assessments were conducted at baseline and after 6 and 12 classes, evaluating anxiety, depression, and body image disturbance. Results showed statistically significant reductions in anxiety, depression, and concerns related to weight and shape, as measured by tools like the Beck Depression Inventory, the Spielberger State-Trait Anxiety Inventory, and the EDE-Q. Importantly, no significant changes in BMI were observed, suggesting yoga did not adversely affect physical health. These findings support the potential of yoga as a safe and beneficial complementary intervention for improving mental health and body image among adolescents with eating disorders. However, the small sample size, lack of a control group, and moderate study adherence highlight the need for larger, controlled studies to confirm these outcomes and inform integration of yoga into standard care protocols.(15)

Preventive applications of yoga are equally promising. Pacanowski et al. pilot randomized controlled trial explored the feasibility, acceptability, and preliminary effects of a 10-week yoga intervention on risk and protective factors for disordered eating among college women. Participants (N = 52) were randomly assigned to either a yoga group (three 50-minute classes per week) or a control group. The yoga group reported high satisfaction and good attendance, with most participants attending about two-thirds of the sessions.

Results showed a significant increase in positive affect in the yoga group compared to the control group—an important protective factor against disordered eating. There was also a small reduction in appearance orientation, though this result was less consistent across analytic methods. No significant differences were found between groups on body dissatisfaction, mindfulness, or disordered eating symptoms, possibly due to the relatively healthy baseline levels in the sample.

Overall, the study found yoga to be a feasible and well-received intervention among college women and suggested its potential to improve emotional well-being. However, the limited effects on body image highlight

the need for future research targeting individuals with higher baseline body dissatisfaction or including additional components such as education on body image.(16)

Ziv A et al. pilot randomized controlled study investigated the effects of a 24-week yoga intervention as an adjunct to standard outpatient care in adolescent girls with anorexia nervosa. The results suggest that yoga may offer clinically meaningful benefits, particularly in improving axial bone mineral density and reducing depressive symptoms and disordered eating cognitions. Participants in the yoga group showed statistically significant increases in lumbar spine BMD and improvements in Beck Depression Inventory and Eating Disorders Inventory scores compared to those receiving standard care alone. While changes in anxiety and eating behavior measures were not statistically significant, positive trends were observed. Notably, yoga did not negatively affect weight or BMI, indicating its safety as a low-intensity physical activity in this population. These findings underscore the potential of yoga to support both physical and mental health in adolescents with anorexia nervosa. However, further research with larger samples is needed to validate and expand upon these promising results.(17)

Best practices for integrating yoga into ED treatment were developed by Trethewey et al. through a Delphi consensus. Trethewey E et al. study aimed to develop expert consensus-based recommendations for the safe and effective integration of yoga as an adjunct therapy in the treatment of eating disorders (EDs), specifically anorexia nervosa, bulimia nervosa, and binge-eating disorder. Using a two-round modified Delphi method, the researchers surveyed 12 ED clinicians and 16 yoga instructors in the first round, with 10 clinicians and 13 instructors completing the second round. Participants evaluated the safety and usefulness of various components of yoga—including style, dosage, environment, language, instructor qualifications, and specific techniques—using structured online questionnaires.

High levels of consensus were reached across both expert panels, particularly for trauma-informed, gentle yoga styles, non-competitive language, and instructor qualifications that include experience with EDs and mental health comorbidities. Classes should avoid mirrors and gym settings, maintain moderate room temperatures, and be individually tailored to the participant's recovery stage. Specific techniques such as restorative poses, breath awareness, and structured meditation were widely endorsed, while certain practices like hot yoga, inversions, and breath retention were deemed unsafe, especially for anorexia nervosa.

The findings suggest that while yoga can be applied transdiagnostically across the ED spectrum, individualized and trauma-informed adaptations are essential. The study also identified differences in opinion between clinicians and yoga instructors, particularly regarding the need for clinical oversight and integration into formal mental health treatment. Ultimately, this research offers preliminary guidelines for integrating yoga into ED care and underscores the importance of interdisciplinary collaboration. Future studies are needed to transform these recommendations into formal clinical guidelines and evaluate their effectiveness in real-world settings.(18)

Prevention efforts were explored in the GGWB program for fifth-grade girls, which combined yoga, self-care, and media literacy. This controlled trial conducted by Cook- Cottone C et al. investigated the effects of a 14-week yoga-based prevention program—Girls Growing in Wellness and Balance (GGWB)—on eating disorder risk factors among fifth-grade girls. A total of 132 participants were included, with 92 in the intervention group and 40 in the control group. The program combined yoga with life skills, self-care education, and media literacy, delivered weekly in small groups. Repeated measures ANOVA showed that girls in the intervention group experienced significant reductions in body dissatisfaction and drive for thinness, and a significant increase in self-care behaviors compared to controls. While no significant change was found in disordered eating behaviors, likely due to low baseline rates in this age group, the findings suggest the GGWB program may effectively reduce early risk factors for eating disorders and promote protective self-care practices. (19)

Digital interventions have also emerged. A randomized controlled trial conducted by Cook- Cottone C et al. assessed the efficacy of the Eat Breathe Thrive Recovery Protocol (EBT-R), a virtual, yoga-based intervention designed to support adults recovering from eating disorders. A total of 277 participants from 27 countries were randomly assigned to either the EBT-R program or a waitlist control. Assessments were conducted at baseline, post-intervention, and at a three-month follow-up. Compared to controls, participants in the EBT-R group showed significant reductions in eating disorder symptoms, depression, and anxiety. They also demonstrated improvements in positive embodiment factors, including body appreciation, interoception, intuitive eating, emotion regulation, and mindful self-care. These findings suggest that EBT-R is an effective and accessible virtual intervention that may enhance recovery outcomes by promoting embodied self-awareness and psychological well-being. (20)

Estey EEE et al. randomized controlled trial assessed the efficacy and feasibility of *Eat Breathe Thrive* (EBT), a 7-week yoga-based program designed to support positive embodiment and prevent eating disorders. A total of 168 adults from the U.S. and U.K., predominantly women, were randomly assigned to either the EBT intervention or a waitlist control group. Participants in the EBT group showed significant reductions in eating

disorder behaviors, depression, and emotion regulation difficulties compared to controls. They also reported increased mindfulness skills, including interoceptive awareness, mindful self-care, and mindful eating. Notably, even a single session led to an immediate improvement in state positive embodiment. Most benefits were sustained at six-month follow-up, and participant adherence and self-reported treatment integrity were high. These findings suggest that EBT is a feasible and effective intervention for fostering healthier relationships with the body and reducing ED risk.(21)

Cook- Cottone C study assessed the acceptability and effectiveness of the *Eat Breathe Thrive* (EBT) program as a preventive intervention for eating disorders in female NCAA Division I athletes. Ninety-four women were included (48 in the EBT group, 46 in a matched control group), with data collected at three time points via online surveys. Eating disorder risk factors were measured using the EDE-Q and STAI, while positive embodiment was assessed using the MAIA and the Mindful Self-Care Scale. Results showed that EBT participants experienced significantly greater reductions in state anxiety and increases in interoceptive body trust compared to controls. No other significant group differences emerged. Overall, participants found the program acceptable, suggesting partial support for yoga-based interventions as feasible and potentially beneficial for reducing psychological risk factors in this population.(22)

Instructional framing also matters. Cox AE et al. in their experimental study investigated how different styles of yoga instruction influence embodiment and emotional outcomes, with implications for eating disorder prevention. Sixty-two women (average age ~24) were randomly assigned to attend a single yoga class framed in one of three ways: mindfulness-based (emphasizing presence and bodily awareness), appearance-based (focusing on altering physical appearance), or neutral (instructing poses without emphasis). Results indicated that participants in the appearance-focused class experienced significantly higher body surveillance and lower forecasted enjoyment of the class compared to the other groups. Those in the mindfulness-based class reported greater improvements in affect from pre- to post-class and recalled more pleasure during the session than those in the appearance-based class. These findings suggest that instructional framing matters: mindfulness-based approaches enhance positive affect and embodiment, while appearance-focused messaging may undermine these benefits. This supports the integration of mindfulness-based yoga instruction into eating disorder prevention programs and cautions against emphasizing physical appearance in yoga settings.(23)

In summary, a growing body of research supports the potential of yoga as both a preventive and therapeutic adjunct in the context of eating disorders. When practiced in a supportive, trauma-informed, and clinically integrated setting, yoga may enhance emotional regulation, interoceptive awareness, body satisfaction, and self-compassion. However, it is equally important to recognize potential risks, especially when yoga is practiced excessively or for appearance-driven motives. The heterogeneity of findings across different studies, varied populations, and yoga styles underscores the need for more rigorous, well-designed randomized controlled trials. Future research should aim to establish standardized protocols, evaluate long-term outcomes, ensure instructor training on ED-specific needs, and develop clinical guidelines to safely and effectively integrate yoga into eating disorder prevention and treatment programs.

Conclusion

Eating disorders remain a significant public health challenge, not only due to their high morbidity and mortality rates but also because of the substantial psychological, social, and economic burden they impose on individuals, families, and healthcare systems. In this context, yoga has garnered increasing attention as a complementary intervention with the potential to support both prevention and treatment efforts. Its integrative approach—blending physical movement, breath regulation, and mindfulness—offers promising avenues for enhancing body awareness, reducing emotional dysregulation, and fostering a more compassionate relationship with one's body.

As the reviewed studies indicate, yoga may contribute positively to the reduction of binge eating behaviors, emotional distress, and preoccupations with body image, particularly when delivered in a trauma-informed, individualized, or mindfulness-based format. Evidence also points to its potential for enhancing protective psychological factors such as self-acceptance and interoceptive awareness, making it a suitable candidate for inclusion in early intervention and prevention programs targeting at-risk populations, including adolescents and college-aged women.

However, the integration of yoga into eating disorder care is not without risks. Some individuals may engage with yoga in a compulsive or appearance-focused manner, potentially reinforcing disordered patterns of exercise, perfectionism, or body surveillance. The motivational context behind yoga practice—whether rooted in appearance control or internal well-being—appears to significantly influence its outcomes. Moreover, certain yoga styles or teaching environments (e.g., mirror use, competitive language, emphasis on physical performance) may inadvertently exacerbate symptoms or trigger unhealthy behaviors in vulnerable individuals.

Despite growing clinical interest and promising anecdotal reports, the current empirical base remains limited. Many studies suffer from methodological shortcomings, including small sample sizes, lack of randomization, limited follow-up periods, and inconsistent outcome measures. In particular, rigorous comparisons between yoga and other evidence-based interventions are rare, and few studies offer detailed safety data or explore long-term effects. Importantly, the heterogeneity of yoga styles, delivery formats, and instructor qualifications further complicates the interpretation of findings and the development of standardized guidelines.

Taken together, these findings highlight the need for more robust, high-quality research to determine the conditions under which yoga is effective, for whom it is most beneficial, and how it can be safely integrated into multidisciplinary treatment frameworks. Future studies should focus on establishing evidence-based protocols that clearly define style, intensity, and instructor training, while also examining mechanisms of action such as changes in emotion regulation, interoception, or neurobiological markers. Additionally, collaborative efforts between clinicians, yoga instructors, and individuals with lived experience are essential to ensure interventions are accessible, culturally sensitive, and attuned to the unique challenges of this population.

In summary, while yoga is not a substitute for conventional treatment, it holds meaningful potential as a low-cost, accessible adjunct that can address both psychological and somatic dimensions of eating disorders. With appropriate adaptations and continued empirical validation, it may serve as a valuable component of holistic care, supporting recovery, resilience, and long-term well-being.

Disclosure

Author's contribution

Conceptualization: Katarzyna Agopsowicz; methodology: Michalina Piwowar; software: Katarzyna Agopsowicz check: Katarzyna Agopsowicz; formal analysis: Katarzyna Blicharz; investigation: Igor Biernacki; resources: Katarzyna Agopsowicz; data curation: Martyna Biernacka; writing-rough preparation: Martyna Biernacka; writing- review and editing: Michalina Piwowar; visualization: Katarzyna Blicharz; supervision: Katarzyna Agopsowicz; project administration: Katarzyna Agopsowicz;

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