

Online Yoga Interventions for Stress Reduction: A Narrative Review of Evidence From 2017 To 2026

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ABSTRACT

Background: Stress is a significant public health issue that is linked to psychological and physiological complications. Yoga is becoming an easy-to-access non-pharmacological method of stress reduction and has been identified as such in online yoga.

Objective: To provide a narrative review of stress reduction from 2017-2026 across various population groups with an online yoga intervention.

Methods: The narrative literature review was performed by searching the PubMed, Scopus, DOAJ, and other peer-reviewed databases. Studies were included if they focused on online, tele-yoga, app-based or digitally delivered yoga and measured stress, anxiety, psychological or mental health outcomes.

Results: Evidence from randomized trials, pilot studies, feasibility studies, and systematic reviews suggests that online yoga may reduce perceived stress, anxiety, burnout, and psychological distress, particularly among students, healthcare workers, adults with stress, and individuals with chronic or post-COVID conditions. However, study designs, intervention duration, delivery format, and outcome measures varied substantially.

Conclusion: Online yoga appears to be a feasible and accessible adjunctive approach for stress reduction. More standardized protocols, larger trials, quality appraisal, and long-term follow-up studies are needed.

Keywords: Online Yoga, Tele-yoga, Stress, Psychological, Stress Management, Digital Health

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INTRODUCTION

Stress is a major public health concern affecting individuals across age groups, occupations, and socio-cultural backgrounds. Persistent stress is associated with psychological outcomes such as anxiety, depression, emotional dysregulation, and physiological consequences including impaired immune functioning and increased cardiovascular risk. The effects of the constant stress on the body are both psychological and physiological and can be seen as anxiety, depression, and emotional dysregulation, and physiological, such as poor immune functions and heart diseases. The increasing burden of stress-related disorders highlights the need for effective and accessible stress-management interventions. A recent systematic review and meta-analysis found that yoga interventions were associated with reductions in perceived stress among adults experiencing stress [1].

In recent years, yoga has gained significant attention as an all-encompassing way of dealing with stress, which is a combination of physical activity, breathing exercises, and meditative awareness. Evidence suggests that yoga-related activities are most likely to reduce the symptoms of psychological distress in patients with traumatic experiences because it can be used to control emotions and become resilient [2]. Further, emerging evidence confirms that yoga programs not only reduce the perceived stress, but also enhance the emotional stability and well-being, which proves the effectiveness of using the yoga programs as a multidimensional treatment strategy. Cross-sectional evidence collected during the COVID-19 lockdown found associations between yoga practice, lower perceived stress, and better well-being [3].

In addition to its own advantages, yoga has been more and more integrated into more comprehensive psychological treatment models. Yoga has also been combined with psychologically evidence-based interventions, such as cognitive-behavioral, as these techniques may be able to operate through complementary cognitive, emotional and physiological mechanisms. Hatha yoga has been integrated with evidence-based psychological treatments for common mental disorders, although the evidence varies across intervention combinations and clinical populations [4]. This integrative model reflects a growing shift in mental health care as a trend towards the incorporation of traditional modes of therapy with mind-body therapies in enhancing the results of therapy.

The flexibility of yoga practice also explains the increased use of yoga in mental health care by its versatility. Yoga has been proposed as a potentially useful component of future mental-health care because of its broad applicability, relatively low cost, and generally low risk when appropriately delivered [5]. Additionally, there is systemized information regarding the usefulness of yoga in reducing depressive symptoms in mentally ill patients which renders it clinically applicable in addition to the overall wellness application of yoga [6].

Yoga interventions have also shown benefits in specific

high-risk groups. Meditation, yoga, and mindfulness-based interventions have shown beneficial effects on depression, anxiety, and stress among tertiary-education students [7]. Similarly, yoga-based interventions among healthcare workers have been associated with reduced stress and burnout and improved psychological well-being [8].

Although there has been an increasing literature that has been linked to yoga as an effective tool of stress management, the conventional models that rely on the face-to-face approach possess some of its flaws such as lack of access, time constraints and logistical constraints. Such apprehensions were especially pronounced when it comes to the COVID-19 pandemic which contributed to the increase in the utilization of digital health solutions. In this regard, the telehealth-based online yoga interventions, mobile-based yoga, and virtual yoga are now a viable option because they can be flexible and accessible to a greater number of people without affecting the major characteristics of the therapeutic procedure.

However, even though yoga, overall, has been proven to be effective, the actual impact that online yoga interventions have on the reduction of stress is not researched as well. The literature available is usually heterogeneous in nature in terms of design, population and nature of interventions and therefore, provides disjointed evidence, which cannot be depended upon to draw up definite conclusions. While there are reviews on yoga and mental health, there are very few reviews that have been conducted on the effectiveness of digitally delivered yoga interventions for reducing stress, across specific populations, delivery of the intervention, and study design. Hence, the focused narrative review could be useful to clarify the present evidence and practical gaps.

The present narrative review has the purpose of summarizing the findings of research studies that have been carried out from 2017 to 2026 regarding efficacy, feasibility and limitations of online yoga stress-reduction interventions. The review emphasizes reviews of digitally delivered yoga interventions in the student population, the healthcare professions, people with chronic health conditions, as well as methodological gaps and implications for practice.

REVIEW METHODOLOGY

This article was written in the form of a narrative review and not a systematic review or meta-analysis. Hence, the reporting in PRISMA and the registration in PROSPERO as well as the quantitative meta-analysis were not possible. The purpose of the review was to present a structured narrative synthesis of the latest evidence for yoga interventions for stress reduction via the Internet.

A literature search was performed through PubMed, Scopus, DOAJ as well as other peer-reviewed open access databases. Literature search was done for the period of January 2017 to June 2026. Online yoga, tele-

yoga, online yoga intervention, virtual yoga, app-based yoga, stress, psychological stress, stress management, anxiety, mental health and well-being were combined with these terms on a search.

Eligible studies included those that utilized yoga interventions online, via telehealth, mobile apps, video-based or other electronic mediums and measured results pertaining to stress, anxiety, psychological health, burnout, sleep or mental health measures. Randomized controlled trials, quasi-experimental studies, feasibility studies, pilot studies, systematic reviews and meta-analyses were all taken into consideration. Articles that were dissertations, conference abstracts, non-peer-reviewed reports, case reports, non-English publications or did not report psychological or stress related outcome measures were excluded.

Relevant data were extracted and summarized in a narrative format, based on the study design, population, delivery method, characteristics of the interventions, outcomes measured and main findings. Due to the diversity of the populations, yogic practices, length of the intervention and outcomes measures, no quantitative pooling was made. Rather, it addressed common conclusions, methodological constraints, feasibility and clinical/public health implications.

CONCEPTUAL FRAMEWORK OF ONLINE YOGA FOR STRESS REDUCTION

Online yoga interventions adapt traditional yoga practices for delivery through digital platforms, thereby improving accessibility, flexibility, and scalability. Online yoga interventions can be categorized into the synchronous ones (including the live sessions with the instructors using the video conferencing platform) and asynchronous ones (including the pre-recorded sessions or the modules

through the app that will allow the user to work at his/her own pace). The introduction of these forms is a changing trend towards more adaptable and consumer-friendly practices in health promotion, especially in reaction to obstacles related to face-to-face engagement [9].

The integration of online yoga in the broader digital mental health indicates the suitability of online yoga as an additional tool to cope with stress. Arising from the point where electronic interventions are cost-effective and scalable, particularly in settings in which conventional mental health care is not readily available, electronic health interventions, such as tele-yoga, have become prominent. Tele-yoga has been examined as a remotely delivered intervention for people living with long-term illness and may support accessible rehabilitation and self-management [10]. People with long-term illness have described expectations that tele-yoga may offer accessible guidance, social support, and perceived health benefits [11].

Theoretically, the online yoga interventions are based on the biopsychosocial model, which highlights the interrelatedness of biological, psychological and social determinants in health outcome. One of the ways the mind and body communicate with each other is yoga which is accomplished through physical postures, breathing exercises and mindfulness that aid in the management of stress. These elements can affect physiological processes, like the autonomic nervous system balance, in a virtual world but at the same time increase psychological resilience and emotional awareness, as Figure 1 illustrates. Evidence from broader yoga research suggests possible associations between yoga practice, stress outcomes, and cardiometabolic biomarkers [12]. These findings provide indirect mechanistic support and should not be interpreted as evidence specific to online yoga delivery.

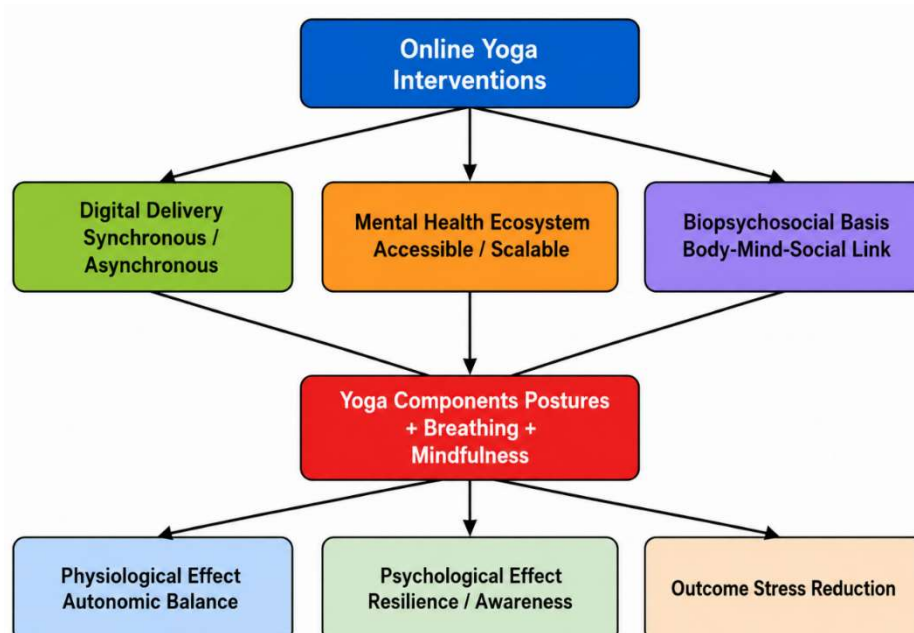


Figure 1: Conceptual framework showing pathways through which online yoga may influence stress reduction

In addition, the growing body of research on tele-yoga and online interventions enhances the potential and the feasibility of online yoga being an effective means of relieving stress. The studies indicate that online yoga is perceived as convenient, interactive, and useful by the users to maintain a regular practice, particularly during more restricted mobility, such as the COVID-19 pandemic [13]. The idea of online yoga as a potential and dynamic tool in an already existing mental health paradigm can be justified by this fact.

TYPES AND DELIVERY MODES OF ONLINE YOGA INTERVENTIONS

Synchronous (Live Instructor-Led Yoga): Synchronous online yoga is a yoga class that is conducted in real-time via an online platform, with the teacher and students engaged in a live session. It is a close format that is based on traditional face-to-face classes, and offers immediate feedback, corrected activities and interactive exchange. This real-time feedback allows participants to feel the sense of connection and increases motivation and adherence. The planned sessions can help with regularity, structuring and compliance, all of which are beneficial for interventions on stress management. Synchronous yoga can also create a community aspect due to the interactive feature that will go a long way in countering the loneliness aspect that comes along with high level of stress. Online yoga in real-time can be especially beneficial for those needing interventions that are guided and structured, due to these features [14].

Asynchronous (Pre-recorded/App-based Yoga): In an async online yoga setting, instructors provide pre-recorded yoga classes or modules that can be done on the app at any time in the day. It might best be suited for people with irregular work hours or those who prefer to work at their own pace. This allows the users to choose the timing for the session, its intensity and style accord-

ing to their needs, hence increasing customization and accessibility. However, when a real-time monitoring device is not used, the accuracy can be lowered while performing posture and limited in giving individualized feedback. Although this is a drawback, the delivery of the information is consistent through asynchronous because there is less time and location requirement, which can be a remedy to long-term stress management and life-style incorporation [15].

Structured Tele-Yoga Programs: Structured tele-yoga programmes deliver planned yoga sessions remotely through digital platforms and may include breathing practices, pranayama, meditation, and yoga postures. Such programmes can provide regularity, guided practice, and remote access while allowing participants to engage from home or another convenient setting. Structured tele-yoga has been used in clinical and semi-clinical populations, including people affected by COVID-19. In a randomized controlled trial, an integrated tele-yoga programme was delivered remotely to asymptomatic COVID-19-positive participants using planned breathing, pranayama, meditation, and yoga [16].

Intervention Characteristics: Yoga interventions delivered online differ in length, frequency, intensity, format and style of yoga and can potentially affect the efficacy of stress reduction. These may be short day to day sessions, longer multi week programs and the rigor of practice may vary based on the skills of the participants. The most popular of these are Hatha yoga, relaxation yoga, mindfulness yoga, Kundalini yoga, and Yoga Nidra. These methods focus on various aspects such as posture, breath, meditation, relaxation and attention. The choice of some of the characteristics can be determined by the intended outcomes and target population. An online Kundalini Yoga trial among university students illustrates how a structured digital programme can be evaluated for mental-health outcomes, as also revealed in Table 1 [17].

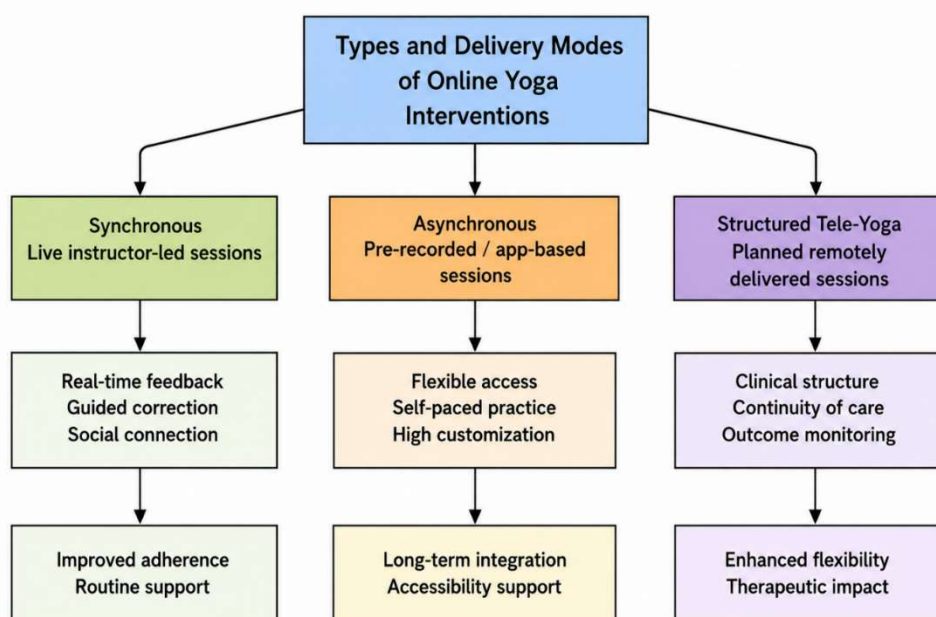


Figure 2. Delivery modes of online yoga interventions for stress management

Table 1: Common Characteristics of Online Yoga Interventions

Parameter	Description	Impact on Stress	Reference
Duration	Multi-week tele-yoga programme	Stress and mental-health outcomes were studied in adults with long COVID, but the optimal programme duration remains uncertain	[18]
Delivery Mode	Telehealth / remote structured sessions	Enhances accessibility and participation	[19]
Practice Type	Yoga Nidra / relaxation-based interventions	Reduces cortisol and improves emotional balance	[20]
Flexibility	Asynchronous or self-paced formats	May improve scheduling flexibility and have shown preliminary acceptability and feasibility among adults with moderate-to-high stress	[21]

Table 2: Proposed Psychological Mechanisms of Stress Reduction Through Online Yoga

Mechanism	Description	Effect on Stress	Reference
Mindfulness	Present-moment awareness through breathing & focus	Reduces rumination and mental overload	[26]
Emotional Regulation	Improved control over thoughts and reactions	Lowers anxiety and emotional instability	[26]
Biological Response	Changes in immune and inflammatory markers	May reflect physiological stress-related effects	[23]
Stress Reactivity	Reduced sensitivity to external stressors	Improves coping and adaptive response	[27]

MECHANISMS OF STRESS REDUCTION IN ONLINE YOGA

Physiological Mechanisms: Physiological mechanisms of stress modulation that may be induced by online yoga include autonomic regulation, neuroendocrine balance and stress recovery [22]. One of the mechanisms is the autonomic nervous system: The regular practice of yoga moves the sympathetic (fight or flight) to the parasympathetic (rest-and-digest) nervous system. Less physiological arousal and stress recovery is associated with such a change. Some forms of yoga-based interventions have also been linked to alterations in cortisol and other biomarkers of stress; however, this is inconsistent across the different study designs and populations. Broader yoga research has also examined changes in markers of immunity and inflammation [23]. Systematic-review evidence has examined the effects of yoga, meditation, and breathing exercises on inflammatory biomarkers, although these findings do not specifically establish the effects of digital delivery [24]. Heart rate variability (HRV) is commonly used as an indicator of autonomic regulation, and yoga-related changes in HRV may reflect enhanced parasympathetic modulation and improved autonomic balance [25]. Together, these physiological changes may contribute to reduced stress-related arousal.

Psychological Mechanisms: Some of the psychological effects of yoga online include improved mindfulness, emotional awareness, cognitive control and coping. With meditation attention to breathe, mindful concentration and slow, deliberate motion, people become more aware of their thoughts and state within and outside, and they diminish the automatic stress responses. Such awareness leads to better emotional control and cognitive regulation and enables individuals to respond more adaptively to stressors. Furthermore, yoga exercises have been portrayed to reduce tension, anxiety and depression linked to trauma by boosting leisure and also mental awareness. All these factors can play a role in strengthening coping strategies and improve psychological resili-

ence and as Table 2 shows yoga is a practical intervention to deal with stress in various groups [26].

Digital Delivery Considerations: The core components of yoga remain the same, however, there are factors that may impact feasibility, adherence, safety, and effectiveness when practicing yoga digitally. Digital platforms are versatile and user-friendly, can facilitate adherence and can allow for a more frequent practice. However, it is possible that this is due to the lack of direct supervision, which may affect the procedure and engagement. However, it has been suggested that, despite the drawbacks, if participants are motivated to put their yoga online, it can still have positive physiological and psychological effects. Quality of interventions is ensured by organised interventions and explicit guidelines/easy interfaces. Thus, online yoga interventions follow the traditional methods and interactions and follow up as in the real world. Clear instructions, accessible platforms, structured delivery, and suitable instructor contact may help maintain the acceptability and feasibility of online yoga [9].

EVIDENCE ON EFFECTIVENESS OF ONLINE YOGA FOR STRESS REDUCTION

Table 3 is a summary of key studies included in this narrative review. The table below provides information on study design, population, delivery mode, intervention characteristics, outcomes measured, principal findings, and limitations to enhance transparency of the evidence synthesis.

Evidence from Randomized Controlled Trials: Randomized controlled trials yield the highest quality evidence, although the research on online yoga is limited and is not very well defined. For instance, some studies have revealed positive effects on stress, well-being, and psychological effects among yoga trials conducted online with students and adults, although the comparison of studies is difficult due to variations in yoga style, duration of intervention, control groups, and outcome

measures. The protocols in such studies are normally designed, comparisons are normally controlled and outcome measures are also valid that makes the results of such studies reliable. There is evidence that participants practising online yoga may experience greater reductions in stress, anxiety, and trauma-related symptoms than control groups. One of the most important elements of quantifiable psychological gains is digital delivery and this is the very delivery used by participants to be consistent in practice. A randomized feasibility trial examined online yoga for post-traumatic stress symptoms among women who had experienced stillbirth and reported preliminary benefits that require confirmation in larger trials [29].

Evidence from Tele-Yoga Clinical Studies: In clinical studies, the tele-yoga interventions have shown potential benefits in stress in individuals experiencing health relat-

ed problems. They may include interventions as part of the treatment or rehabilitation programs and are directed at the physiological and psychological health. Tele-yoga studies in long-COVID patients and healthcare workers indicate possible improvements in stress, sleep quality, burnout, and mental health. However, some studies used open-label or pilot designs, and therefore their findings should be interpreted cautiously. The results indicate that tele-yoga helps in stress reduction, enhancement of mental health, and the quality of sleep, especially in people who have already overcome such illnesses as COVID-19. Tele-yoga programs are clinical programs, therefore, ensuring a regular interaction and monitoring, which enhances their effectiveness in treatment. The evidence provided above leads to the idea that online yoga can be a helpful intervention in a clinical and healthcare setting [18].

Table 3: Summary of Key Studies on Online Yoga Interventions for Stress Reduction

Author	Study design	Population	Delivery mode	Intervention duration	Outcomes assessed	Key finding	Main limitation
Wadhen V et al[14]	Feasibility/outcome study	People working from home during COVID-19	Online streamed yoga	Short-term online program	Stress and well-being	Online yoga was feasible and associated with improved stress and well-being	Limited sample and short follow-up
Chang TFH et al[15]	Randomized controlled trial	Students	Online Isha Upa Yoga	COVID-19 period intervention	Mental health and well-being	Reported improvements in student mental health and well-being	Population limited to students
Jain SP et al[16]	Randomized controlled trial	Asymptomatic COVID-19-positive patients	Integrated tele-yoga	Structured tele-yoga	Physiological and psychological variables	Tele-yoga improved selected psychological and physiological outcomes	Disease-specific population
Brandão T et al[17]	Randomized controlled trial	University students	Online Kundalini Yoga	Online intervention	Mental health outcomes	Suggested benefit for student mental health	Limited generalizability
Bhargav H et al[18]	Prospective multi-center study	Adults with long COVID and stress	Tele-yoga	Structured tele-yoga	Stress, mental health, sleep	Tele-yoga was associated with reduced stress and improved sleep/mental health	Open-label single-arm design
Naveen KH et al[28]	Pilot randomized controlled trial	Healthcare workers on COVID-19 duty	Tele-yoga	Pilot intervention	Burnout, mental health, immune markers	Tele-yoga showed feasibility and potential benefit for burnout and mental health	Pilot design and limited power
Teo AR et al[19]	Randomized controlled trial	Rural older adults	Telehealth yoga	Telehealth intervention	Loneliness and social isolation	Tele-yoga improved psychosocial outcomes relevant to stress	Stress was not always the primary outcome
Moszeik EN et al[20]	Randomized controlled trial	Adults	Online Yoga Nidra meditation	Online relaxation-based intervention	Well-being and salivary cortisol	Suggested improvement in subjective well-being and cortisol rhythm	Specific yoga subtype
Ahmadi SE et al[21]	Feasibility study	Adults with moderate-to-high stress	Asynchronous online yoga	App/pre-recorded formats	Acceptability and feasibility	Asynchronous yoga was acceptable and feasible	Needs larger controlled trials

Evidence from Feasibility and Pilot Studies: Pilot, and feasibility research would be useful in realizing the practicality of implementing online yoga interventions. The principal components of these studies are user acceptability, adherence as well as accessibility which are crucial in the long-term success. Online yoga is easily accessible, accepted, and perceived as more convenient, and has been demonstrated to be effective in increases adherence and engagement. Furthermore, preliminary research suggests that tele-yoga is an effective intervention and is practical in very high-stress settings, such as a health care institution, where time and resources may be a barrier to other types of interventions. The findings suggest the possibility and practicability of online yoga to deal with stress [28].

Evidence from Comparative and Experimental Studies: Comparative and experimental research studies comparing yoga with other interventions, including mindfulness or meditation also help to prove the effectiveness of yoga in stress reduction. Yoga is an integrated method of treatment, the research indicates, because the training and focus are a part of the practice, and when added to the purely cognitive or relaxation techniques may have extra advantages. Yoga practitioners report that their moods are more balanced, they are less stressed and more able to cope. The practice of movement and breath regulation seems to integrate and facilitate psychological, also physiological reactions to stress, and yoga is a general, but powerful intervention in various contexts [30]. A randomized trial compared yoga with mindfulness training among adults experiencing distress [31].

DISCUSSION

Summary of Main Findings: The reviewed literature suggests that online yoga interventions may help reduce stress and improve psychological well-being across several populations, including students, healthcare workers, adults with elevated stress, and individuals with chronic or post-COVID conditions. The evidence is most supportive when interventions are structured, guided, and practiced regularly. However, the overall strength of evidence remains limited by heterogeneity in intervention type, duration, delivery format, study design, and outcome measures. Therefore, online yoga should be viewed as a promising adjunctive stress-management approach rather than a stand-alone replacement for clinical mental health care.

Comparison Between Online and In-Person Yoga: Available evidence suggests that both online and in-person yoga may support stress reduction, although direct head-to-head comparisons between the two delivery formats remain limited. Online yoga offers greater flexibility and accessibility for people facing geographic, financial, or scheduling barriers, whereas in-person yoga provides closer supervision, immediate feedback, and individualized correction. These differences in accessibility, interaction, flexibility, and supervision are summarized in Figure 3. Further comparative studies are needed

to clarify whether either delivery format offers advantages for particular populations or stress-related outcomes.

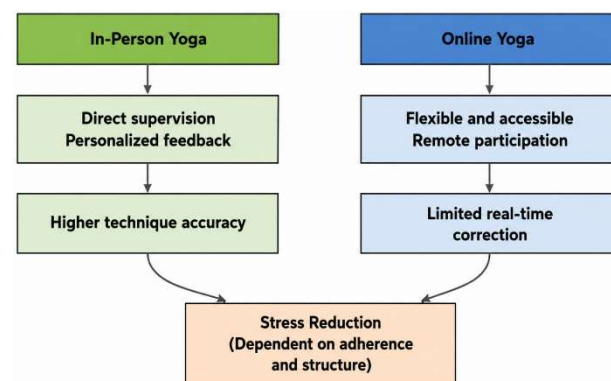


Figure 3. Comparison of online and in-person yoga delivery characteristics.

Strength and Certainty of Evidence: Different study types have different levels of certainty of evidence. Randomized controlled trials offer more support for online yoga, but there are a few studies available that are feasibility trials, pilot studies, and/or short follow-up times or single-arm studies. Furthermore, numerous studies have used self-reported stress, anxiety or well-being scales. The results of the studies cannot be directly compared due to varying populations, yoga style, frequency of yoga sessions, duration of intervention, and comparator groups. All of these indicate that the evidence to date is encouraging but inconclusive.

Implications for Practice: Yoga may be used in complementary, low-cost, and easily available ways to reduce stress in educational, workplace, community health, and some clinical settings. On-line yoga may be recommended by healthcare practitioners for people with mild to moderate stress, when the yoga is safe, properly guided and educated for the ability of the participant. Online yoga is recommended for those who have severe anxiety, depression, trauma, or other major psychiatric disorders as an adjunct to mental health professional services. Digital literacy, Internet accessibility, privacy, instructor qualifications, and participant safety should also be taken into account when implementing online yoga interventions.

Limitations: There are a number of limitations to this review. It was written as a narrative review without formal PRISMA based screening process, meta-analysis or risk of bias assessment. The results, then, should be understood as a descriptive synthesis of the findings and not as an indication of the effectiveness of the intervention. Publication bias and language restriction and selective availability of open access literature may also influence the review. Further, given the variation in online yoga interventions across studies, recommendations for optimal intervention length, frequency, and delivery are still limited.

POPULATION-SPECIFIC OUTCOMES

Students and Young Adults: Online yoga interventions may provide a practical approach for supporting stress management and psychological well-being among students and young adults. An asynchronous six-week online yoga programme among undergraduate nursing students was associated with improvements in stress, anxiety, depression, and self-compassion [32]. In this group, emotional stability, decreased anxiety, and increased well-being have been correlated with a practice of yoga-based activities. The online platforms are flexible and may allow students to include yoga in their everyday lives without interfering with their academic commitments. Moreover, structural programs have been demonstrated to help in mental health and healthier coping mechanisms. These findings support the suitability of online yoga as a preventive and supportive intervention towards dealing with stress among the younger generations.

Healthcare Workers: Healthcare workers are particularly vulnerable to work-related stress and burnout because of demanding clinical responsibilities and occupational pressures. A randomized waitlist-controlled trial among healthcare providers found that a 12-week mHealth-aided yoga-based meditation and breath intervention, incorporating weekly online sessions and regular home practice, significantly improved burnout and professional quality-of-life outcomes [33]. Online yoga interventions may therefore provide a flexible supportive approach for healthcare workers. A pilot tele-yoga trial among healthcare workers found that remote delivery was feasible and suggested possible benefits for burnout and mental-health outcomes, although the pilot design limits certainty [28].

Patients with Chronic Conditions: Chronic stress refers to a stress that patients who have long-term or chronic health conditions experience, which is associated with physical symptoms and chronic treatment requirements. Online yoga interventions may provide psychological and physiological support for patients with chronic conditions, although evidence varies across disease groups and study designs. Mindfulness-based practices involving mindfulness and mindful movement can be used to enhance emotional control, alleviate depressive symptoms, and overall quality of life. Also, yoga-based interventions have been related to changes in biological markers related to stress and inflammation. The results suggest that online yoga can be regarded as the adjunctive treatment tool since it may be applied to assist patients with chronic ailments improve their psychological and physical well-being [34].

General Population: Online yoga interventions have been known to be effective in combating stress and enhancing mental health in the general population. Research shows that a consistent involvement in yoga sessions may result in substantial changes in mood, emotional stability, and stress resiliency. Online yoga can be adapted to suit people with differing levels of experience

and fitness and thus more people can join. Moreover, it has been indicated that yoga may be effectively used to counteract the symptoms of depression and psychological distress, which is why yoga can be a helpful stress-management tool in general. The results verify the potential of online yoga as a population-wide intervention to enhance mental health through a scalable and inclusive approach [35].

LIMITATIONS AND GAPS IN CURRENT LITERATURE

Although there is an increasing amount of evidence of yoga-based interventions to reduce stress, there exist some limitations to the existing body of literature on online yoga. One of them is that many studies involve small sample sizes and this limits generalizability to broader populations. Moreover, a lot of interventions are carried out in short periods, and it is challenging to determine the sustainability of stress reduction in the long-term. The absence of a set of guidelines concerning the number and length of sessions, and the nature of yoga is another obstacle to cross-study comparisons and constrains the possibility of creating standardized clinical guidelines [36].

Another significant gap is the diversity of outcome measures used to assess stress and mental health. Studies often use various psychological scales and self-reported outcomes, potentially limiting comparisons between interventions. There is also limited long-term evidence for online yoga, as many studies measure outcomes during the intervention or immediately after the end of the program. It is, therefore, not known whether the improvements seen after a short follow-up are maintained over a longer period.

Moreover, online yoga with its digital character implies new challenges such as inequality in access to technology, access to the internet, and digital literacy. These aspects might marginalize some groups and affect the rates of participation and compliance. In addition, very few studies have sufficient comparative research on online yoga versus other well-established interventions of managing stress, e.g., cognitive-behavioral therapy or mindfulness-based programs. These gaps need to be filled to provide a more robust evidence base and increase the effectiveness of online yoga as a mental health intervention [36].

In addition to limitations within the primary studies, the present review is limited by its narrative design. Since formal risk-of-bias assessment and quantitative synthesis were not conducted, the conclusions should be interpreted cautiously. The review provides a broad overview of current evidence but cannot determine the pooled effect size or establish the superiority of one online yoga format over another.

FUTURE RESEARCH DIRECTIONS

Online yoga interventions offer considerable scope for further research using more rigorous methodologies and

greater attention to practical implementation challenges. Standardisation of session duration, frequency, intensity, and type of yoga practice would improve consistency across studies and facilitate comparison of findings. Well-designed, large-scale, multicentre randomized controlled trials are also warranted to generate more reliable evidence across diverse populations. Longitudinal studies are needed to determine whether stress-reduction effects are sustained over time and to better understand patterns of adherence.

Innovations in digital health also create opportunities to integrate online yoga with emerging technologies, including artificial intelligence, to support personalized recommendations and adaptive interventions. Programs may also be designed according to participants' needs, preferences, and stress profiles, which could improve engagement and intervention effectiveness. Additionally, online yoga interventions should be cross-culturally validated for relevance and acceptability across a variety of social and cultural contexts, and ultimately in different regions of the world to enable its use.

CONCLUSION

Stress management through online yoga interventions is an intriguing and accessible way to tackle stress in the digitalized landscape of healthcare. The evidence reviewed indicates that digital yoga can decrease perceived stress, anxiety, burnout and psychological distress and help manage emotion, relax and improve well-being. Benefits seem particularly to be relevant for students, healthcare workers, adults under higher stress and people with chronic or post-COVID conditions. There are, however, some limitations in the quality of evidence, due to small sample size, the diverse forms of the intervention, the different outcome measures and the short duration of follow up. Online yoga should thus be viewed as an adjunct stress management technique and not an alternative to clinical professional intervention. Standardized protocols and larger randomized controlled trials, validated measures of stress, long-term follow-up, and cross-cultural evaluations should be priorities for future research. If properly implemented, online yoga can be a viable part of digital health promotion and preventive mental health care.

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