



IMPACT OF YOGA ON PSYCHOLOGICAL AND PHYSICAL HEALTH

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ABSTRACT

The existing data on the benefits of yoga therapies on many components of mental and physical health is summarized in this paper, with an emphasis on the evidence provided in review articles. These evaluations show a variety of areas where yoga may be useful, although further study is needed in almost all of them to definitely prove such benefits. The variability of therapies and circumstances investigated has made meta-analysis an ineffective method for synthesizing the present evidence. Nonetheless, there are several meta-analyses that show that yoga therapies are useful, and there are numerous randomized clinical trials (RCTs) of pretty good quality that show that yoga is beneficial for pain-related impairment and mental health. Yoga may be beneficial as a supporting adjunct in the treatment of various medical disorders, but it has yet to be demonstrated as a stand-alone, curative therapy. Larger-scale, more rigorous research with higher methodological quality and adequate control interventions is strongly encouraged because yoga has the potential to be implemented as a beneficial supportive/adjunct treatment that is relatively cost-effective, can be practiced at least in part as a self-care behavioral treatment, provides a life-long behavioral skill, boosts self-efficacy and self-confidence, and is frequently associated with additional positive side effects.

Keywords: *anxiety disorders, yoga treatment, physical health, self-efficacy*

1. INTRODUCTION

Yoga's philosophical foundations can be traced back to ancient Indian philosophy. There are many modern yoga schools or types (such as Iyengar, Viniyoga, Sivananda, and others), each with its own emphasis on the relative content of physical postures and exercises (asanas), breathing techniques (pranayama), deep relaxation, and meditation practices that cultivate awareness and eventually more profound states of consciousness. The use of yoga as a therapeutic intervention, which dates back to the early twentieth century, takes use of the component practices' varied psychophysiological advantages. Physical exercises (asanas) may improve a patient's physical flexibility, coordination, and strength, while breathing techniques and meditation may quiet and concentrate the mind, resulting in increased awareness and less anxiety [1], and therefore a better quality of life. Reductions in distress, blood pressure, and increases in resilience, mood, and metabolic control are all possible benefits [2].

According to Khalsa, the bulk of research on yoga as a therapeutic intervention was done in India, and a large portion of it was published in Indian publications, some of which are difficult to get for Western doctors and researchers [3]. They discovered that 48 percent of the included studies were uncontrolled, 40 percent were randomized clinical trials (RCT), and 12 percent were non-RCT in their bibliometric study from 2004. (N-RCT). Psychiatric, cardiovascular, and respiratory diseases were the three main areas treated [3].

Despite a growing number of clinical research papers and systematic reviews on yoga's therapeutic benefits, there is still a dearth of reliable data on its clinical usefulness for a variety of symptoms and medical disorders. There is conflicting evidence for many particular reasons and diseases, with some research indicating good results of yoga therapies and others being less definitive. Differences in the research populations (e.g., age, gender, and health condition), the nature of the yoga treatments, and follow-up rates may all contribute to these inconsistencies.

The existing data on the therapeutic benefits of yoga therapies on many aspects of mental and physical health is summarized in this publication. In general, the reviews (Table 1) and an AHRQ evidence report on "Meditation Practices for Health," which includes studies on yoga [30], include a heterogeneous set of studies with varying effect sizes, heterogeneous diagnoses and outcome variables, often limited methodological quality, small sample sizes, varying control interventions, different yoga styles, and strongly divergent duration of interventions.

2. YOGA AND MENTAL WELL-BEING

2.1 Depression

Two reviews on the effects of yoga on depression [4, 5], a description of research on yogic breathing for depression [6], and one "summary" [8] were judged to be relevant. The reviewers found a wide range of diagnoses in the papers they looked at, ranging from "major depression or another kind of clinical depression" to "elevated depressed symptoms" [5]. Although several randomized controlled trials (RCTs) reported beneficial effects of yoga interventions for treating depressive symptoms, the quality and quantity of data from these studies appear insufficient to conclude whether there is

substantial clinical justification to consider yoga as a depression treatment. The yoga therapies seem to be successful when compared to passive controls; but, when compared to active controls, the benefits are less compelling [5]. The research findings are currently insufficient in number and quality to establish whether studies focusing on the asanas are more effective than studies focusing on meditation or pranayama. As a result, additional definitive research with high methodological quality and bigger patient populations are urgently needed. It's still unclear whether or not depressed individuals' motivation is an issue. There has been an effort to look at electrophysiological indicators of attention and neurotransmitters that have been discovered to alter with yoga in order to comprehend the whole picture of the effects of yoga in depression [7, 31].

2.2 Anxiety and Anxiety Disorders

There is one systematic review [1], a Cochrane review on meditation treatment for anxiety disorders [10] (citing one yoga study [32]), a description of research on yogic breathing (which are also covered in the systematic review) [6, and one summary [8].

The majority of research found that yoga treatments were effective, especially when compared to passive controls (e.g., examination anxiety), but also when compared to active controls (e.g., relaxation response) or conventional medications. However, there are presently no metaanalyses available that clearly distinguish this critical problem. "Yoga was no better than Mindfulness-based Stress Reduction in reducing anxiety in patients with cardiovascular illnesses," according to the AHRQ study [30].

2.3. Stress.

The benefits of yoga on stress-related symptoms are described in a comprehensive study. Chong et al. found eight randomized controlled studies that met their criteria [11], four of which were randomized. Yoga therapies were shown to have a wide range of positive benefits in the majority of investigations. Despite the fact that not all research utilized sufficient and/or reliable tools to evaluate stress, they all suggest that yoga may be as helpful as other active control therapies like relaxation, cognitive behavioral therapy, or dance in reducing perceived stress.

"Yoga helps lower stress," according to the AHRQ report [30]. The two trials considered in this study both demonstrated a substantial decrease in stress levels in the yoga group (SMD = 1.10 [CI: 1.61 to 0.58]).

Post-Traumatic Stress Disorder (PTSD) is a kind of anxiety disorder. The available research on yoga for posttraumatic stress disorder (PTSD) was examined in a single review paper [12]. There were seven publications evaluated, including eight research on PTSD caused by natural disasters such as tsunamis and hurricanes (1 RCT, 1 NRCT, three group studies, two single-arm studies, and one cross-sectional study) and two studies on PTSD caused by conflict and terrorism (1 RCT, 1 single-arm study). Following a natural catastrophe, yoga practice was shown to lower PTSD symptoms, self-reported stress symptoms (fear, anxiety, disrupted sleep, and melancholy), and breathing rate. Similarly, yoga therapies have been shown to relieve PTSD symptoms in those who have been exposed to battle or terrorism. The interventions lasted anywhere from one week to six months, depending on where they were provided. Yoga may have a function in PTSD treatment, according to the review, but longer-term trials with more rigor are required [12].

3. PHYSICAL FITNESS AND YOGA

3.1. Physical stamina.

There was one negative assessment that looked at whether yoga may help elderly persons become in shape [13]. Ten research were considered, with a total of 544 individuals (mean age 69.96.3). Five of the studies were RCTs, and five of the studies used a single-arm pre/post design. The trials found modest effect sizes for gait, balance, body flexibility, body strength, and weight reduction in terms of physical fitness and function [13]. Additional research studies with suitable control interventions (active and specific) are needed to confirm these encouraging results.

Maintaining physical fitness and enhancing physical functioning in older persons may be expected to have a favorable impact on functional capacities and self-autonomy. More research is needed to see whether people' self-esteem and self-confidence improve as a result of the courses, and if frequent lessons may help boost social skills and engagement. Compliance with the research protocol may be an issue when recruiting older people, resulting in low levels of study completion and long-term follow-up data. Future research should look at the best period of yoga intervention, as well as the best postures and yoga style for the elderly.

3.2 Activation of the Sympathetic and Parasympathetic Nervous Systems

There were 42 research [14] on the effects of yoga on sympathetic/parasympathetic activation and cardiovagal function, including 9 RCTs, 16 non-RCTs, 15 uncontrolled trials, and two cross-sectional trials. "Some evidence that yoga promotes a decrease in sympathetic activation, increase of cardiovagal function, and a change in autonomic nervous system balance from predominantly sympathetic to parasympathetic" [14] was found in the majority of investigations. Some of the research included in the study, however, revealed less clear or even contradictory results. Because the majority of these effects are transient, additional research is required.

Another gap is that there are just a few studies that look at plasma catecholamine levels, and the majority of these are preliminary [33, 34].

3.3 Cardiovascular Endurance

"Significant improvements in overall cardiovascular endurance of young subjects who were given varying periods of yoga training (months to years)" were reported in Raub's literature review, which included seven controlled studies [15]. During exercise testing, the researchers measured oxygen consumption, work output, anaerobic threshold, and blood lactate. Physical fitness increased in adolescents and young adults (athletes and untrained individuals) when compared to other forms of exercise, with longer yoga practice leading to improved cardiopulmonary endurance.

4. DISCUSSION

These studies point to a number of areas where yoga could be beneficial, but more research is needed in almost all of them to establish benefits more definitively. This is not surprising, given the fact that research on yoga as a therapeutic intervention has only been conducted for the past four decades and is limited. Individual yoga studies for various conditions are typically small, low-quality trials with multiple instances of bias. In addition, the populations studied, yoga interventions, duration and frequency of yoga practice, comparison groups, and outcome measures for many conditions are all highly heterogeneous (e.g., depression and pain). It's difficult to untangle the effects of this heterogeneity in order to better understand the value of yoga interventions in different situations. Because of the heterogeneity and poor quality of the original trials, meta-analyses could not be conducted for many conditions. Nonetheless, some higher-quality RCTs found that yoga has positive effects on mental health (see Uebelacker et al. [5]). Further research is recommended in this area, especially given the plausibility of the underlying psychophysiological rationale (including the efficacy of frequent physical exercises, deep breathing practices, mental and physical relaxation, healthy diet, etc.).

While it is unsurprising that physical fitness can be improved through training, whether through yoga or traditional exercises, it is intriguing that yoga may have beneficial effects in people who are in pain, with overall moderate effect sizes. However, these effects were strongest in healthy people, but they were much weaker in patients with chronic pain. Increased physical flexibility, relaxing and concentrating the mind to build better awareness and reduce anxiety, decrease of discomfort, enhancement of mood, and so on might all be reasons for the positive benefits. Patients may have increased self-competence and self-awareness as a result of recognizing that they can be physically active despite persistent pain sensations, which adds to an improved quality of life.

Asanas, for example, are thought to improve fitness and physical flexibility with a secondary influence on mental state, while pranayama and relaxation/meditation methods are thought to improve awareness, reduce stress, and improve overall well-being and quality of life. This, however, will have to be shown in well-conducted future investigations.

Yoga therapies may potentially promote self-confidence and self-efficacy since patients participate in yoga activities as a self-care behavioural therapy. Patients with psychological loads and/or poor motivation (such as depression, anxiety, exhaustion, and so on) may be less inclined to completely engage in intense yoga therapy. In several of the studies that were examined, poor participation and significant dropout rates were discovered. Patient compliance may be stronger in group therapies with social support, but private regular practices at home may be more difficult to maintain regularly. Further research is needed to solve these issues. The majority of research, according to Innes et al. [14], were from India, where "yoga is an intrinsic element of a lengthy cultural and spiritual heritage." As a result, it's uncertain if Western patients' adherence is comparable. Many Indian clinical studies, which were done in residential settings not often encountered outside India, included yoga class treatments 5 to 7 days per week, but such compliance would not be conceivable with patient populations outside India. Such behaviors, at least at this level of intensity, are unlikely to continue. Such programs would be a wonderful approach to begin yoga treatment if, as some yoga practitioners think, the intensity of the practice should be higher at the start of therapy. In India, there has been a steady change in attitudes around yoga, with most urban Indians under 35 thinking it is a method to stay healthy rather than assigning the same cultural significance to it as previous generations did. Cross-cultural studies (which are scarce) employing an identical intervention delivered to a community in India and done in parallel abroad would be highly valuable for these reasons.

While multiple evaluations imply that yoga has health benefits, methodological constraints (such as small sample numbers and variability of controls and treatments) restrict the generalizability of these encouraging results. Yoga is likely to promote patient self-efficacy, self-competence, physical fitness, and social support, and it may be beneficial as a supportive adjunct to alleviate medical disorders, but it has not yet been established as a stand-alone, curative therapy. Confirmatory research with greater methodological quality and appropriate control interventions is required.

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