

Yoga and anxiety

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ABSTRACT

Exercise, yoga, meditation, tai chi, or qi gong are popular nonpharmacologic and nonconventional treatments for depression and anxiety. These therapies have been demonstrated to reduce symptoms of depression and anxiety disorders in meta-analyses and systematic reviews. Exercise appears to be the most effective supplementary treatment for treatment-resistant depression, unipolar depression, and posttraumatic stress disorder. Yoga is effective as monotherapy or adjuvant therapy, notably for depression. It aids in the treatment of anxiety disorders, notably panic disorder, as adjuvant therapy. Although tai chi and qi gong

may be beneficial as supplementary therapy for depression, the results are mixed. Mindfulness-based meditation is effective as a single or adjuvant therapy for depression, with effects lasting up to six months. Even though beneficial results are less common in patients with anxiety disorders, the data supports supplementary treatment. Mindfulness-based therapies appear to have no negative side effects, and their overall health advantages warrant their use as a supplementary therapy for patients with depression and anxiety disorders.

Key Words: Yoga; Anxiety; Exercise; Stress

INTRODUCTION

Yoga is increasingly used in clinical settings for a variety of mental and physical health issues, particularly stress-related illnesses and concerns, and has demonstrated promising efficacy. Yet how yoga reduces stress remains poorly understood. To examine the empirical evidence regarding the mechanisms through which yoga reduces stress, we conducted a systematic review of the literature, including any yoga intervention that measured stress as a primary dependent variable and tested a mechanism of the relationship with mediation. Our electronic database search yielded 926 abstracts, 71 of which were chosen for further inspection, 5 of which were selected for the final systematic review. These five studies examined three psychological mechanisms (positive affect, mindfulness, self-compassion) and four biological mechanisms (posterior hypothalamus, IL6, CRP, cortisol). Positive affect, self-compassion, inhibition of the posterior hypothalamus, and salivary cortisol were all shown to mediate the relationship between yoga and stress [1,2]. It is striking that the literature describing potential mechanisms is growing rapidly, yet only seven mechanisms have been empirically examined; more research is necessary. Also, future research ought to include a more rigorous methodology, including sufficient power, study randomization, and appropriate control groups.

Accumulating experimental and clinical research demonstrates that yoga reduces stress [3]. The term mechanism, which will be used throughout this paper, refers to underlying psychological, social, and neurophysiological processes or mediators through which therapeutic change occurs in this case mechanism refers to those processes caused by yoga that lead to a reduction in stress. However, the mechanisms through which yoga may alleviate stress remain unclear and some health care professionals are reluctant to recommend yoga to their patients, in part due to this lack of clarity. Many mechanisms have been proposed, but few studies have been conducted to assess these pathways [4,5]. The psychological benefits include positive affect, mindfulness, and self-awareness; among the biological are lower levels of cortisol and nitric oxide.

No explicit reviews of the mechanisms through which yoga is purported to affect stress have been published. However, theories about why and how yoga affects health have been put forward, and many of these theories address stress and the proposed linkages between yoga and health [6]. Specifying the paths through which yoga may reduce stress will increase the likelihood that it is recommended and implemented as a complement to psychological and

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pharmacologic therapy for stress-related conditions. Knowledge of these paths will also allow for the tailoring of yoga interventions to specific types of stress and basing these interventions on the most efficacious components of yoga [7]. This paper summarizes the most commonly cited proposed links of yoga and stress and then systematically reviews the empirical tests of those mechanisms. Finally, this paper makes concrete methodological suggestions to improve future inquiry in this area.

Stress refers to “the quality of experience, produced through a person-environment transaction that, through either over arousal or under arousal, results in psychological or physiological distress”. Stress has been measured in myriad ways; these ways can be broadly categorized as either subjective or objective.

Subjective measures of stress are self-report measures that assess perceived stress, the degree to which one appraises situations in one’s life as stressful. Objective measures of stress consist of biological markers (biomarkers) of stress. The number of biomarkers that may reflect stress processes is potentially innumerable, and also because biomarkers often reflect many other biological processes, we limited our yoga-stress empirical review of the objective measures to these some biomarkers that have been identified as particularly associated with stress [6,7]. These stress biomarkers can be categorized as neuroendocrine, immune, metabolic, cardiovascular, and anthropometric.

Psychological mechanisms that have been proposed as ways through which yoga ameliorates stress include increases in positive attitudes towards stress, self-awareness, coping mechanisms, appraisal of control, calmness, spirituality, compassion, and mindfulness.

There is no universally agreed-upon definition of meditation. However, it is widely accepted that it is a type of mental training that requires the mind to be calmed to achieve a condition of “detached observation.” Mindfulness-based treatments (MBIs), mindfulness-based training, mindfulness-based stress reduction, and mindfulness-based cognitive therapy are all meditation approaches that have been examined in patients with depression and anxiety disorders. Although these methods differ, they all have one thing in common: they all focus on mind-calming.

The strongest evidence for MBIs’ usage for depression was identified in a recent systematic review and meta-analysis of MBIs for psychiatric diseases. MBIs outperformed no treatment and other active treatments, and they were on par with evidence-based treatments like selective serotonin reuptake inhibitors. Another meta-analysis found that MBIs were somewhat helpful in lowering anxiety symptoms and enhancing mood in patients with clinically diagnosed anxiety and mood disorders. The effect sizes were consistent and didn’t appear to be affected by the number of sessions. Furthermore, the gains were maintained for an average of 27 weeks (median: 12 weeks). In pre-post and waitlist control comparisons, as well as when compared to other active treatments, such as other psychological treatments, a systematic review of 209 studies found effect size estimates suggesting that mindfulness-based training was moderately effective in reducing depression and anxiety symptoms. CBT, other behavioral therapies, and pharmaceutical treatments were all shown to be equally beneficial as mindfulness-based training. The authors found that mindfulness-based training is an effective treatment for a wide range of psychiatric problems, with an emphasis on anxiety, depression, and stress reduction.

Not every study yielded immediate results. MBIs were found to be useful in persons who were now having a depressive episode, but not in people who were experiencing anxiety, according to a meta-analysis of RCTs. It discovered substantial differences between groups of depressive disorder participants after the intervention, with a large impact size on primary symptom severity favoring the intervention. There was no evidence that it helped with anxiety.

According to a 2012 literature review, there is rising evidence that MBIs can help avoid depression and anxiety relapse. Another study found that mindfulness-based cognitive therapy was as effective as subspecialist treatment in persons with recurrent depression and that it looked to perform well when paired with antidepressants, after a two-year follow-up.

MBIs are usually part of a larger treatment framework, and it’s unclear whether standalone MBIs are effective without one. In comparison to controls, a systematic review and meta-analysis of the effects of stand-alone MBIs on anxiety and depression symptoms found that these exercises had minor to medium impacts on anxiety. This was the first meta-analysis to suggest that using mindfulness-based treatments regularly can be beneficial, even if they aren’t part of a larger therapy framework [8].

Some subsets of people with depression and anxiety disorders may benefit from MBIs, however, the evidence is conflicting. In one randomized controlled trial, mindfulness-based cognitive treatment was observed to improve depressive symptoms in persons who had suffered a traumatic brain injury. Ten RCTs met the inclusion criteria in a meta-analysis of MBIs in adults with PTSD. In addition to mindfulness-based stress reduction, yoga, and a mantra repetition program, adjunctive mindfulness-based stress reduction, yoga, and a mantra repetition program improved symptoms of PTSD and depression when compared to controls, but the findings were based on low- to moderate-quality evidence. For the quality of life and anxiety, the effects were good but not statistically significant, and no studies looked at functional status. In a randomized controlled trial, mindfulness-based stress reduction resulted in a larger reduction in PTSD symptom severity in veterans when compared to present-centered group therapy (a common non-trauma-focused treatment for PTSD). Although meditation appears to help with PTSD symptoms, further high-quality research with big enough sample sizes are needed to discover statistical differences in outcomes.

MBIs have been shown to be effective in the treatment of social anxiety disorder and panic disorder in several studies. Clinicians should be cautious about prescribing these medicines as first-line therapy for social anxiety and panic disorders until sufficiently powered trials are completed.

CONCLUSION

In conclusion, MBIs appear to be useful in treating depression and anxiety disorders. Because there is no evidence that these approaches damage people with these disorders, they can be advised with the caveat that further drugs or psychotherapy may be required.

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