

## Yoga and Mental Health: A Review

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### Abstract

The need for effective population mental health promotion approaches is urgent as mental health concerns are escalating globally and current allopathic treatment regimens are insufficient to bring people towards the state of mental well-being (citation). Successfully alleviating stress has the potential to promote wellbeing and prevent illness. Worldwide, yoga is gaining popularity as an accessible, acceptable and cost-effective practice for mind and body. People are turning to yoga for mental health improvement because of preferences for: self-treatment as opposed to clinical intervention; perceived greater efficacy than medication; fewer side effects; lack of response to medication. Yoga has minimal side effects and is cost-effective in comparison with pharmacological treatments and psychotherapy. Yoga's added benefit is that it improves physical fitness and encourages self-reliance. In this brief article we discuss the evidence for yoga as a form of mental health promotion, illness prevention and treatment for depression.

**Keywords:** Mental wellbeing; Quality of life; Yoga; Depression; Mental health promotion

### Introduction

By 2020, the World Health Organization predicts that depression will be the second largest contributor to the global disease burden, after ischemic heart disease (cite). Anxiety is also being diagnosed at a greater rate than it was in the past. Despite these increases in diagnosis, treatment regimens typically include pharmaceutical therapies that are not sufficient to prevent further illness or promote mental well-being. Effectively addressing mental health concerns entails a comprehensive approach that addresses the root of the problem(s) [1-3].

In this paper, we provide evidence for yoga as a form of health promotion, illness prevention and treatment for depression and other mental health imbalances. Like other therapies, yoga is not a complete solution to mental health concerns. In conjunction with other approaches, yoga has great potential to lead people towards greater mental well-being.

### What is Yoga?

The eight limbed path of yoga includes: Yama (moral codes), niyama (self-discipline), asana (postures), pranyama (breath practices promoting life force), pratyahara (sensory transcendence), dharana (concentration), dhyana (meditation), samadhi (state of bliss). The word roots of yoga mean "to join" in Sanskrit. Joining mind and body, and individual and collective selves is the essence of this ancient South Asian practice [4]. Yogic philosophy posits that every life form is interconnected and united [5]. "Yoga exists in the world because everything is linked" [6].

Yoga's greatest aim is to create compassion within and a deep sense of unity and oneness with all forms of life [7]. Yoga is an individual activity that has social implications. Those who regularly participate in yoga typically interact with the world in calmer and more reasonable

ways. More positive social interactions and relationships are one of the ripple effects of individual yoga practice. Accessible or complementary yoga classes offer low income people the opportunity to experience the benefits of inner peace and healthier body. When practices such as yoga are accessible to all, larger effects are possible. Without overstating the impacts, potential consequences of large scale population mental well-being initiatives such as this are less violence in society, less addiction, greater ability to be authentic with one and others.

### Literature Review of Mental Health and Yoga Methods

We found approximately 30 review articles and 300 separate studies in the area of yoga and mental health in the peer-reviewed medical literature. Because this is a relatively new area of research, it is difficult to compare one study to the next partly because of sample size variation, differences in trial length, and variances in the kind of yoga. Some studies tested Iyengar (primarily asanas) while others tested Sudarshan kriya (patterned pranayam exercises, moving from slow and calming to rapid and stimulating, followed by emotional self-expression in a supine position), savasana (deep relaxation), Sahaja yoga (a type of meditation), or pranayam. Varying time periods, from 2 week to 6 months of yogic interventions, also made studies difficult to compare and contrast. Overall, studies of yoga and mental health would improve from greater methodological rigor, particularly better randomization [8].

### A brief summary of peer-reviewed literature on yoga and mental health

As the Patanjali Sutras notes: "Yoga is the practice of quieting the mind" [9]. Positive mental health is "a state of well-being in which every individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community [10]". We searched for articles that examined yoga as a form of promoting mental wellbeing for healthy people. However most of the literature in this area focuses

on improving quality of life for people with cancer and other afflictions. The literature on mental health and yoga is biased towards individualized mental health imbalances in a similar way as literature in physical health is biased towards individualized disease.

We found approximately 30 review articles (2002-2014) on yoga as a treatment for various mental health disorders, including Major Depressive Disorder (MDD), Anxiety Disorders, Obsessive Compulsive Disorder (OCD), Schizophrenia and others. The most significant results were for yoga as treatment for depression. More research is required for conclusive evidence-based recommendations; so far, peer-reviewed literature appears promising for yoga as mental health promotion and treatment particularly for depression.

### Studies of yoga's effects on quality of life and depression

Yoga has been shown to enhance quality of life in people who are healthy and ill. A review study found that yoga is as effective or better than exercise at improving a variety of mental and physical health measures such as stress, quality of life, mood states, heart rate variability, pulmonary function and so on [11]. A meta-analysis concluded that because weight gain and toxicity are side effects of various pharmacotherapies, yoga may be an effective and less toxic auxiliary treatment for severe mental illness [12]. In one study yoga improved subjective wellbeing, mental health and executive functioning within prison populations [13]. Yoga improved the quality of life of pregnant women in various studies and enhanced their interpersonal relationships [14]. Studies over the past 15 years have shown that yoga can improve psychological health during breast cancer treatment [15], as well as health-related quality of life in antipsychotic-stabilized patients [16].

In the treatment of mild to moderate MDD, promising results indicate that yoga may be applied as a monotherapy [3]. Level Two evidence supports the use of yoga as an adjunctive therapy [17]. Multiple studies conclude that: a) Yoga is better than no treatment in improving mild to moderate depressive symptoms in MDD [18]; b) Yoga is equally as effective as TCAs (tricyclic antidepressants) in severe MDD [19]; c) Yoga in combination with anti-depressants is better than anti-depressants alone for depressive symptoms [20].

### Patients' Experiences with Yoga

#### Connectedness and shared experience with others

"The shared experience was important for coping shared consciousness was there, when everyone was there together it makes you feel a feeling of connectedness of everything. You walk out of there feeling in touch with the condition of others, not just what's going on with me, but what's going on with everything, which is very reassuring. When you're in a depressed state, you feel very alone but feeling whole and part of a whole is where the value is really is."

#### Coping with stress and ruminations

"I feel good about myself more often than before the yoga. I learned to focus on the positive, instead of what I did wrong, didn't do, or can't do anything about anyway."

#### Empowerment and competence

"It gives me motivation to try other things that I might not have tried before it gave me a sense that 'I can do it, I can do this for myself.'"

### How Does Yoga Work?

The mechanisms that make yoga a seemingly effective health promotion, disease prevention, treatment, rehabilitation, and palliation intervention are not entirely understood. Various researchers hypothesize that yoga works through positively affecting the nervous system, the cardiovascular system and gene expression. Stimulation of the vagal nerve results in increased parasympathetic activity of the autonomic nervous system and also increases GABA (a neurotransmitter) activity in the brain [21]. Similar to other forms of physical exercise, breathing and body movement has a positive impact on cardiovascular health. Studies comparing gene expression in long term practitioners of yoga with controls suggest that yoga positively affects gene expression profiles in immune cells [22].

From a yogic perspective, the breath is a bridge between mind and body. Slow diaphragmatic breathing is common to almost all forms of yoga. The key to quieting the mind is slowing and deepening the breath. Practicing yoga helps to regain mental stability, calmness, and tranquility, primarily because of this kind of breathing. Practitioners are able to connect internally through this stillness and silence. Virtually all yogic practices, including asana (postures), pranyam (life force practices), dhyana (meditation), encourage quietness and listening within. Being kinder and gentler to oneself and others is part of the practice on and off the mat.

A yogic saying states that through a flexible body we gain a flexible mind. This helps people become more patient, forgiving, less prone to anger and sadness. Additionally, yoga brings practitioners "home" to their natural selves, partially through an imitation of nature. Many of the asanas imitate animals and plants such as tree pose, dog pose, cat pose, snake pose, and others [23].

The final part of a yoga class is savasana, corpse pose, in which people lie down with their arms and legs open in deep rest. It is often the most popular part of the class, partly because it comes after the body has been moving and working. Ayurvedic physicians recommend savasana to almost all their patients as a remedy to modern society's hectic pace of living. Savasana combines deep breathing with systematic relaxation of each body part. While some people may fall asleep during savasana, the intent is to maintain consciousness while most of the body is resting. The sense of expansion and softness helps to release attachment to material concerns. While we don't tend to discuss this outside of India, the symbolism of savasana as a corpse is based partly on the notion that the corpse is in complete peace. Within Indian philosophy death is part of a cycle of life and re-birth. By allowing the mind and body to imitate death, letting go of all worries and attachments becomes possible.

Moreover, yoga encourages practitioners to experience an open heart. Many yogic philosophers consider the entire practice to be about metaphorically connecting to our hearts. Within the chakra system, the heart lies in the middle of the seven chakras. Asanas such as arda chakrasana (back bend), kapotasana (pigeon pose), and ustrasana (camel pose) encourage the expansion of the center of the chest which is the location of the anahata chakra, the yogic heart center. Visualizations and pranyams in yoga also encourage open heartedness. The effect is often less judgment, greater acceptance of self and others and a more relax approach to life.

## Conclusions

The practice of yoga shows promise for promoting better population mental health. It is acceptable, accessible, cost-effective and encourages self-reliance. Yoga is an individual health promoting practice that can be done in groups and supported by communities. Like other holistic practices such as tai chi, qigong, meditation and so forth, it includes a community component. Practicing yoga together, in workplaces, schools and other group settings have shown to promote population mental health [24]. While yoga does not address the social determinants of mental illness it does promote a greater sense of inner peace for those who partake.

It appears that deep slow breathing in combination with movement and other aspects of yoga are at the heart of yoga's ability to bring people a greater sense of tranquility. It meets the triple aim of improving health, improving care and reducing cost. A recent article questions whether sufficient evidence exists for family physicians to recommend yoga to their patients. The evidence-based answer: "Yes, yoga can reduce symptoms of anxiety and depression (strength of recommendation [SOR]: B, systematic reviews of randomized controlled trials [RCTs] with significant heterogeneity). Across multiple RCTs using varied yoga interventions and diverse study populations, yoga typically improves overall symptom scores for anxiety and depression by about 40%, both by itself and as an adjunctive treatment. It produces no reported harmful side effects." In some cases yoga is taught for free such as yoga clubs in India and other countries. While it may not be for everyone, through a disciplined approach most people with or without mental health imbalances may feel more mental ease and relaxation through the practice of yoga.

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