YOGA HELPS TO COPE WITH STRESS

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Received: August 10, 2023
Accepted: September 14, 2023

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Abstract
Traditional practices like yoga are gaining importance as comprehensive solutions to diverse health concerns in an era where the complicated interplay between physical health, mental well-being, and immunity is widely recognized. With growing mental health concerns, yoga practices can be employed to lower stress, reduce inflammation, and restore neurotransmitter balance. Accumulating evidence suggests that yoga is effective in treating depression, anxiety, and even schizophrenia. Some studies support the use of hatha yoga in the face of rising mood and anxiety disorders. This article overviews evidence-based studies of yoga pointing to its beneficial effects on stress reduction, immune responses, and mental health outcomes.

Keywords: anxiety; meditation; mindfulness; stress; yoga.

How to cite: Fedorchenko Y. Yoga helps to cope with stress. Anti Aging East Eur 2023;2(3):164-168  https://doi.org/10.56543/aaeeu.2023.2.3.06

Key Messages for Research and Practice
- Yoga practices can be employed to reduce stress, inhibit inflammatory response, and restore neurotransmitter balance.
- Yoga therapy is an effective complementary modality for patients suffering from various disease states such as cancer, heart disease, posttraumatic stress disorder, and depression.
- Yoga promotes reproductive health and helps to treat infertility and associated stress.
Introduction

Daily life events contribute significantly to physical and emotional well-being of individuals. Stress-associated health risks may lead to depression, phobias, insomnia, and personality disorders. Stress is described as a condition of mental or emotional pressure associated with unfavourable events [1]. Chronic stress can be detrimental by triggering autoimmune disorders. Yoga, an ancient Indian practice, has gained popularity in recent years as a holistic approach to enhancing physical and mental well-being [1]. Yoga improves health-related conditions by influencing the adrenal system, decreasing corticosteroid levels, and controlling the sympathetic nervous system [2]. Evidence stemming from scarcely available randomized controlled trials (RCTs) has demonstrated that yoga practices in healthy stressed subjects, pregnant females, older aged, and cancer patients improve self-reported stress [3]. One study demonstrated a significant stress reduction in a group of women aged 33.5 ± 6.5 following 12 sessions of a hatha yoga course [4]. A cross-sectional study has shown the benefit of yoga amidst the COVID-19 lockdown [5]. When compared to those not practicing yoga, females attending yoga sessions during the pandemic demonstrated a significantly lowered severity of stress symptoms [5].

Yoga can be viewed as a complementary modality for stress reduction and minimizing exposure to pharmacotherapies. Physical exercises, breath regulation, meditation, and mindfulness practices are widely viewed as the most accepted yoga techniques [6]. One of the archaic yoga techniques is known as Surya namaskar with twelve series of yoga poses following the respiratory ritual [2]. It is postulated to generate peace, self-consciousness, and bliss [2].

The aim of the current overview is to present potential advantages of yoga techniques for stress management, mental health improvement, and clinical conditions treatment.

Search strategy

Literature searches were conducted through Medline/PubMed, Scopus, and Directory of Open Access Journals (DOAJ) up to September 2023. The following MeSH keywords were employed to retrieve relevant articles: “yoga” in combination with “stress”, “anxiety”, “diseases”, and “depression”. We processed English original articles, reviews, and case reports. Conference papers, book chapters, and preprints were filtered out. Recommendations on comprehensive and systematic searches through databases were consulted [7].

Use of yoga for health professionals

The devastating impact of chronic stress is reverberating throughout the healthcare system, eventually compromising patient care. Numerous nurses experience burnout, despair, and even violence at work, jeopardizing their mental health and quality of patient care [8]. All of these may have negative implications and lead to medical errors [9]. Importantly, restorative yoga may have offer clinical benefits for tackling occupational stress in nurses, particularly those with night shifts [10].

Nurses burnout is a factor contributing to health personnel shortages. The associated job stress negatively influences nurses’ mental health, necessitating novel approaches to minimize its toll on health and quality of services [11]. The use of yoga has proved successful in the combined therapeutic approaches to improving cognitive well-being of medical personnel [12].

Stress among health professionals, particularly nurses, is a big issue. Extended work duties, lack of personnel, and emotional distress may all confound stress intensity, burnout, and cognitive dysfunctions. One study in the COVID-19 pandemic demonstrated that yoga practices with an emphasis on mindfulness, relaxation techniques, and holistic well-being reduced stress [9]. As such, yoga is an effective non-pharmacological strategy for reducing stress across various subject groups [4, 13].

Stress management and yoga

Mindfulness-based stress reduction, based on yoga asanas, have gained importance in the context of work stress. A systematic review of trials examining stress markers in employees practising yoga asanas with or without mindfulness-based stress reduction was evaluated in one study [4]. When compared to no therapy, significant reductions in stress-related indices such as cortisol levels and blood pressure were noticed in a yoga group [4].

Diseases and yoga

Yoga meditation has been recommended for the management of posttraumatic stress disorder (PTSD) [14]. Additionally, yoga has been reported to be an effective complementary strategy for patients struggling with cancer and psychological distress [15].
Heart disease is a primary cause of mortality worldwide. Approximately 7.3 million deaths from coronary heart disease were reported in 2008 [16]. Both men and women bear the burden of a variety of heart diseases with cardiomyopathy and heart failure as a consequence [17]. Yoga has emerged as a potential ally in the fight for healthy hearts [17]. It provides a unique and holistic path toward improved psychosocial well-being [17].

Considering the emotional turmoil that comes with reproductive treatments, yoga may serve as a calming lighthouse amid a hurricane. Reportedly, yoga reduces psychological discomfort and gives hope to women on fertility therapies [18]. With each stretch and breath, yoga may ease the pain of infertility [4, 19].

**Depression and yoga**

Yoga can lessen the intensity of despair, anxiety, and exhaustion [20]. It can serve as an alternative to other workout regimens [21]. One study reported a significant reduction in anxiety, depression, and tiredness after six months of yoga therapy [22]. Notably, twelve RCTs have demonstrated short-term improvement of depression symptoms due to yoga [23].

Another study examined the effects of yoga on melancholy, anxiety disorders, and PTSD [24]. The results suggested that there may be benefits for patients with depression but not with anxiety and PTSD [23]. Adverse events were mainly associated with inversion postures [23]. Yoga may have a minor influence on PTSD symptoms [22].

**Antioxidant essence of yoga**

Oxidative stress accompanies most pathological processes underlying cardiovascular and neurodegenerative disorders [25]. Recent data suggest an increase in the glutathione ratio in volunteering males who practised yoga [23].

**Couples yoga**

Couples broken relationships often lead to unhappiness, dissatisfaction with sexual encounters, and poor health [26]. An Australian study examining 128 couples devoted to yoga practices revealed improvements in their mindfulness and emotional status as a consequence of yoga courses [24]. Yoga increased their satisfaction with marital life [24].

Importantly, yoga can be helpful for treating infertility and manage associated stress by reducing pain, alleviating depression and anxiety, restoring fertility, avoiding assisted vaginal deliveries, and improving fetal outcomes [27]. Overall, yoga helps to strengthen infertile couples relationships and overcome numerous infertility issues [27].

Yoga positively influences lipid levels, glucose metabolism, and quality of life, contributing to the holistic management of Polycystic Ovarian Syndrome (PCOS) [28]. It helps to treat a variety of PCOS features, ranging from acne to infertility [29]. Yoga is a stress-relieving modality for infertile subjects who suffer from poor mental health and emotional distress [30]. Yoga promotes reproductive health by creating an atmosphere for lifestyle modifications [31]. In fact, a randomized controlled study of 128 infertile women revealed that those who were engaged in a 6-week yoga program with twice a week courses significantly reduced their stress levels and improved their pregnancy chances [32].

Endometriosis often leads to infertility, necessitating a surgical intervention [33]. Reportedly, ayurvedic modalities such as Yoga Basti and Kuberaksha have a positive impact on reducing the size of endometriosis, fertility, pregnancy, and delivery [34]. Ayurvedic therapy helps to control endometriosis, avoid retrograde menstruation, and delay the need for surgical intervention [35].

**Prenatal yoga**

Prenatal depression can be harmful to maternal and fetal health [36]. A meta-analysis of six randomized controlled studies including 375 pregnant women indicated that yoga therapies were effective for decreasing symptoms of depression during pregnancy [37]. Yoga therapies incorporating pranayama, meditation, and deep relaxation outperformed physical exercise-based yoga in both prenatally depressed and non-depressed women [37].

Yoga is also effective in pregnancy-associated depression [38]. Despite its potential benefits for pregnant women, Tai Chi has not been compared to yoga and exercise in pregnancy research [19]. Tai Chi turned especially effective in the third trimester when vigorous exercise therapies are discouraged [39]. Combining Tai Chi with yoga could be an ideal strategy for pregnant women who benefit a lot from exercises with balance therapy, stretching, and moderate aerobic activity [40]. In a study of 92 depressed pregnant women, those who were engaged in Tai Chi or
yoga sessions had lower levels of sadness, anxiety, and sleep disruptions compared to controls [39]. Yoga also reduced stress, pain, and pregnancy discomfort [39].

Yoga and sexual health

Moola bandha yoga practice aids females in providing sexual control and ameliorating sexual issues. Bandhas are known to provide an appropriate state of the endocrine system by indirect influence on the pituitary gland and brain. Moola bandha stimulates the sensory-motor and the autonomic nervous system in the pelvic area. Furthermore, moola bandha has been reported to reduce dysmenorrhea and decrease signs and symptoms of menopause [41]. Yoga sessions have led to a significant improvement in sexual functioning (P < 0.0001) that was more established in ageing females (age > 45 years) compared with younger ones (age < 45 years) [42]. Similarly, yoga has shown a positive influence on sexuality during pregnancy. Pregnant women are encouraged to practice yoga sessions during this peculiar period to improve self-esteem, body image and sexual functioning [43].

Conclusion

This literature review sheds light on positive effects of yoga and mindfulness. Yoga and mindfulness improve physical capacity, mental health, and emotional status. Overall, yoga practices can serve as unwavering sentinels in the fight against stress, wielding a shield of calm and a sword of resilience.

DISCLOSURES

There are no conflicts of interest regarding the publication of this article.

AUTHOR CONTRIBUTIONS

Conception or design of the work: YF, interpretation of the recent data on the topic: YF, drafting the work and reviewing it critically for important intellectual content: YF, JN; final approval of the version to be published: YF, JN; agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved: YF, JN.

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