



Yoga for improving mental health during Covid-19 pandemic: A review

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Abstract

Novel Coronavirus disease 2019 (COVID-19), a deadly viral disease is caused by SARS-CoV-2 that has caused over a million deaths globally and still counting. Many countries are observing a nationwide lockdown since November 2019 that varied time to time and country to country to decrease its spread and the governments are urging the people to follow safety guidelines such as face and nose masking, different hygienic habits, sanitisation, repeated handwash, avoiding crowd, not spitting in the public place, not using the tobacco products including social distancing, that may cause loneliness, mental distress, anxiety and depression. Electronic database PubMed was searched from 1 December 2019 to 25 November 2020 using the keywords 'coronavirus disease, COVID-19, yoga, meditation, pranayama, mindfulness and mental health'. Out of 95 studies, 23 were selected for the review. There are no studies published to evaluate the effect of yoga on mental health during the spread of pandemic COVID-19 on people. However, the studies published on effect of yoga and meditation for improving mental health are of great importance to deal such challenging COVID-19 pandemic period. Yoga and meditation can be used as a preventive and coping measure to combat COVID-19 and to reduce the harmful psychological effects due to COVID-19.

Keywords: coronavirus disease, covid-19, meditation, mindfulness, pranayama, yoga

Introduction

Novel Coronavirus 2019 (COVID-19), a pandemic caused by SARS-CoV-2 (Severe Acute Respiratory Syndrome-Coronavirus-2) that has spread globally emerged as a group of unexplained pneumonia cases in Wuhan, China in December [1, 2]. COVID-19 was declared a Public Health Emergency of International Concern by WHO on 30 January 2020 [3].

Till date there are no specific drugs, treatment protocol and vaccination for the coronavirus disease and the treatment includes isolation and symptomatic management [2]. The preventive measures to stop the transmission of the disease are social distancing, frequent hand washing and quarantine in some cases [1, 4]. Previous studies on SARS and Ebola outbreak in 2003 and 2014 respectively, reported the unfavourable psychological effects of quarantine like post-traumatic stress symptoms, confusion, and anger and people with pre-existing anxiety and depression may show worse psychological symptoms due to quarantine and social distancing [1]. The easy access to different types of news, false claims and misinformation propagated through print media, news channels and social media on COVID-19 can enhance the aforementioned symptoms [5, 6]. Poor mental conditions such as depression and stress, also elevates the possibility of acute respiratory infections [7].

Due to work from home, the electronic and distancing means of communication and the seating hours on screen has increased in several folds and the freedom of movement has been reduced considerably [8]. Lockdown has affected the economy negatively and in a recent interview Nobel laureate Dr. Abhijit Banerjee said that 'COVID-19 pandemic is far from over and it is uncertain that how long the economy will take to recover' [9, 10]. A great magnitude of joblessness and reduced income caused insecurity and uncertainty among people, collectively leading to loneliness,

contamination fear, sleep disturbances, worry for loved ones, helplessness, boredom, psychological distress such as irritability, frustration, a variety of negative emotions that may progress into long term symptoms of mental illness like anxiety, maladjustment and panic disorder and depression due to separation from family, friends and other social activities [2, 4, 10, 11, 12].

Yoga is a non-pharmacological means to develop overall mental health by improving willpower, emotional control, self-confidence and reducing perceived fatigue, stress and lifestyle related disorders due to stress such as diabetes mellitus, hypertension, obesity and many more through mantras, meditation, pranayama and asanas [13, 14]. Mindfulness is a technique to purposely focus on the present moment which can be improved with the help of asanas, pranayamas and meditation [15, 16]. Whereas, mantras are mindfulness chants that helps in improving resilience and manages stress related consequences such as insomnia, anxiety, hyperarousal and depression. Studies suggests that yoga, mindfulness and mantras are an effective alternative to allay fear, distress, intense worry, emotional triggers and psychological symptoms such as depression and improves self-awareness, empathy and the spiritual wellbeing as well [15, 17, 18, 19]. Therefore, this review will describe the importance and practice of yoga and its positive outcomes for community for promoting positive mental health in the crucial times of novel coronavirus disease outbreak that will be beneficial or a constructive way out.

Methodology

Search methodology and article selection

This article is a narrative review of the available literature on coping effects of yoga on mental health relevant to the novel coronavirus disease pandemic. The preferred reporting items for systematic review and meta-analysis

(PRISMA) guidelines were followed for this article. The electronic database PubMed was searched using the terms “coronavirus disease”, “COVID-19”, “yoga”, “pranayama”, “meditation” and “mindfulness” in multiple permutations and combinations with “mental health” in the time frame ranging from 1 December 2019 to 25 November 2020. A total of 97 studies were recovered, from which 72 results were excluded- 40 because they were repetitive, 23 because they were one of the following: commentary, correspondence, guidelines, short communication, personal account, case report, perspective article or research proposal, 3 because full-text articles were not available and 6 studies were excluded because they did not consist the selected keywords. Studies that encompassed stress, anxiety, depression and its related symptoms affecting mental health exclusively were included. Finally, a total of 24 studies were finalised for the review that were relevant to the concerned topic.

Thematic analysis of the selected articles

Out of the 24 selected studies most were research articles (n = 11) or review articles (n = 9). The rest of the articles were letter to the editor (n = 4). All the articles were either directly or indirectly related to mental health during COVID-19 patients and their surrounding members like nursing staff, doctors, family and friends. The selection process is described in Figure 1.

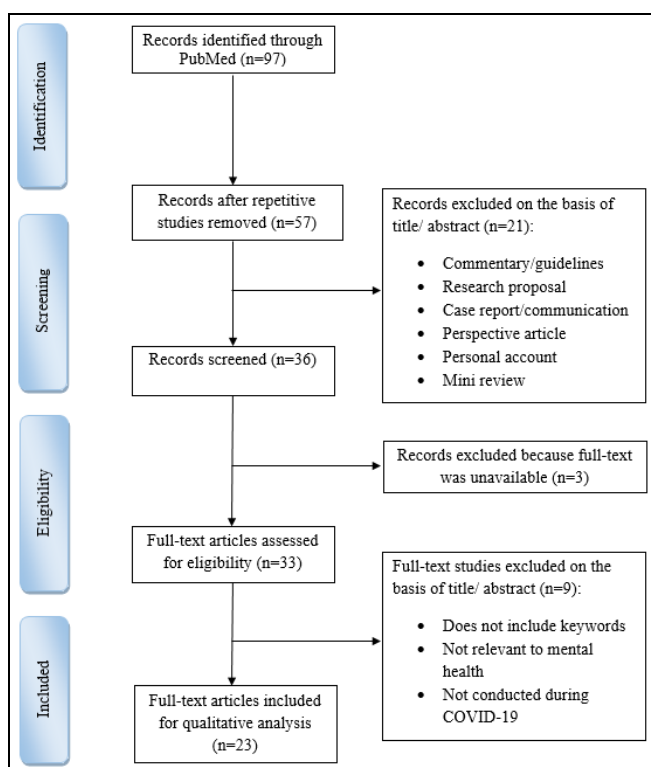


Fig 1: Flow Chart Depicting the Selection of Studies for the Review

Result

Yoga and Mental Health of Healthcare Workers during COVID-19 Pandemic

Due to the rising number of COVID-19 cases there has been an increase in the working hours, the stress of working at high risk in unfamiliar conditions and social isolation and decrease in leisure time in doctors, nurses and other healthcare staff who are also referred to as the frontline

workers. This has affected their psychological health and resulted in symptoms such as anxiety, depression, increase in work related stress eventually leading to burnout, fear of infection, insomnia, helplessness, panic, anger, post-traumatic stress disorder (PTSD) and many more and in severe cases may lead to substance abuse or addiction and suicide [5, 20, 21, 22]. A study reported that frontline workers in Chinese hospitals show increased prevalence of insomnia, anxiety, depression and obsessive-compulsive disorder (OCD) than workers in non-healthcare environment.^[20] Most of these symptoms go hand in hand and presence of one may aggravate others^[21].

Along with deliberate positive lifestyle changes such as self-appreciation and persistence to improve the mental well-being of the healthcare staff, muscle relaxation techniques, meditation, mindfulness and diaphragmatic breathing has been shown to alleviate stress, improve resilience, feeling of connectedness and reduce the severity of the symptoms.^[5, 16, 20, 21, 23]

Yoga and Mental Health of Older Adults during COVID-19 Pandemic

Rapid spread of coronavirus disease and the steps taken to control it has affected the geriatric population and resulted in distress, feelings of worthlessness and abandonment. It has been found that almost 60 to 80% of elderly suffers from a minimum of one non-infectious condition^[24]. In case of senior citizens due to age associated immunosuppression, especially in males suffering with comorbidities such as asthma, diabetes and hypertension were found to be at a higher risk of infection of COVID-19 with a mortality rate more than 8% [3, 24]. During the primary stages COVID-19 might cause delirium, depression, anxiety, fatigue and PTSD^[3].

Yoga being a mind body medicine has been found to improve the physical aspects and mental parameters in older adults by elevating positive mood states, promoting better sleep quality and reducing anxiety, depression that can eventually reduce the chances of infection by positive regulation of the immune system. Yoga comprising of breath regulation, meditation, postures and mindfulness are safe, affordable and easy to practice specially for older adults suffering with comorbidities.^[24] Some studies indicate that in older adults, yoga is superior to common physical-activity intervention.^[25]

Online Management of Mental Health through Yoga during COVID-19

It has been evident from recent studies that COVID-19 can cause negative impact on mental health of all age groups and the symptoms can be short-term or long-term and yoga and mindfulness can improve the overall wellbeing of an individual during and after the coronavirus disease pandemic and due to geographic limitations online mode of communication has become a boon^[26, 27]. A preliminary study of four weeks conducted by Jasti *et al.*, (2020) revealed that online yoga sessions can be safe and useful in reducing stress, improving psychological relaxation, calmness and concentration^[26]. Another study performed by Drissi *et al.*, (2020) to analyse the working capabilities of highly rated anxiety applications on mobile phones showed that 147 applications used meditation, breathing exercises, yoga, mindfulness and guided relaxation to cope with anxiety and related disorders such as stress, depression,

eating and sleep disorders and many more [28].

However, Morr *et al.*, (2020) depicted that the virtual sessions of mindfulness were useful in reducing depression and anxiety but were ineffective in reducing perceived stress in college students [27]. Due to constant exposure of young adults to mal-information on social media platforms worsening of psychological symptoms were observed and it was revealed that mindfulness acts as a preventive measure to reduce distress caused by social media [29].

Discussion

The fundamental medicine principle “Prevention is better than cure” must be followed by everyone to reduce the cases of infection. The most common psychological symptoms observed during the pandemic were stress, anxiety and depression. Some simple and useful home-based yoga and meditation practices can be used as a preventive measure and also as recovery management of COVID-19 [7, 30]. Weilgus *et al.*, (2020) indicated by using path analysis that there exists a positive relationship between anxiety and psychological responses to the pandemic and mindfulness decreased the level of anxiety [31]. Similar results were obtained by Brose *et al.*, (2020) when they showed that increase in mindfulness resulted in decrease in negative mental health symptoms and vice versa [11]. Studies has shown that mantras, a spiritual coping mechanism are useful in stress management for people suffering with PTSD, chronic diseases and for healthcare workers as well [17].

Since SAR- CoV-2 is a heat sensitive enveloped virus therefore, jala neti and ghrita neti or the nasal oil application using lukewarm water and oil respectively are efficient in upper respiratory tract infections and has been proposed as a preventive method by Traditional Chinese Medicine researchers as it forms a biofilm and prevents the entry of virus. [7, 32] Heat based therapies such as steam has been found to improve physical and mental relaxation, sleep and mindfulness [32].

Tele-yoga sessions and mobile applications can be used to decrease the adverse effects of sedentary lifestyle [25, 28]. Most of the studies included in the review had limitations due to small sample size and subjective nature of the study. However, since the COVID-19 pandemic is persisting and new strains are emerging leading to lockdown again in many countries hence poor mental health will continue even when specific treatment protocol and vaccination will be available in due course of time therefore, there is a need of lot of research to understand the post effect of COVID-19 after recovery.

Conclusions

The practices of yoga and mindfulness will be of great benefit even post COVID-19 era. It was concluded that yoga and mindfulness can be used as a coping mechanism to improve mental health, emotional control, self-confidence, concentration, motivation and quality of life [2, 4, 14]. It reduces stress, negative thoughts, anxiety, Panic and also helps in the management of sleep, depression and feeling of loneliness [1, 4, 6, 12, 25]. Thereby, calming, soothing and relaxing the mind and body of the affected patients, families, pregnant females, police personnel, care staff,

medical and paramedical staff during and after the pandemic [1, 12, 25, 23, 33].

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