



Exploring the Effects of Integrating Yoga and Meditation on Stress Levels

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Abstract

Stress has become a pervasive issue in modern society, impacting individuals' physical, mental and emotional well-being. As such, there has been a growing interest in exploring alternative methods to alleviate stress beyond traditional interventions. This paper presents a comprehensive review of the literature examining the effects of integrating yoga and meditation practices on stress levels. Drawing upon diverse studies from journals, databases, and scholarly sources, this research synthesizes findings to provide a nuanced understanding of the potential benefits of yoga and meditation in stress reduction.

Further, to prove the effectiveness of yoga and meditation in reducing stress levels, statistical data was acquired through conducting a survey with the help of Perceived Stress Scale (PSS). The sample constituted of college students aged 18-25. Students were first made to fill PSS questionnaire, then made to do 1 hour of yoga and mindfulness meditation session; and then again made to fill the questionnaire. This showed the difference between their pre intervention stress level and post- intervention stress level. There was comparatively a decrease in the stress level just within a single yoga and mindfulness session. Implications of this research can be used in educational institutions, corporate organizations, healthcare settings, rehabilitation centers etc. and can prove to be effective for people with chronic stress along with anxiety, anger and mild depression.

Keywords- Stress, Well-being, Alternative Methods, Yoga, Mindfulness Meditation

Introduction

Yoga is a holistic practice that originated in ancient India and encompasses physical postures (asanas), breath control (pranayama), meditation, and ethical principles. It aims to promote physical strength, flexibility, and balance while fostering mental clarity and emotional well-being. Mindfulness meditation, rooted in Buddhist tradition, involves cultivating present-moment awareness and acceptance of one's thoughts, feelings, and bodily sensations without judgment. Both yoga and mindfulness meditation have been independently shown to offer numerous benefits for reducing stress such as-

- **Stress Reduction-** Both practices encourage relaxation and activate the body's parasympathetic nervous system, which counteracts the stress response, leading to reduced levels of cortisol (stress hormone) and physiological arousal.
- **Emotional Regulation-** Yoga and mindfulness meditation promote emotional resilience by enhancing awareness of emotions and providing tools to manage them effectively. Practitioners learn to respond to stressful situations with equanimity rather than react impulsively.
- **Improved Mental Health-** Regular practice of yoga and mindfulness meditation has been associated with decreased symptoms of anxiety, depression, and other mood disorders. These practices cultivate a sense of inner peace and contentment.
- **Enhanced Physical Health-** Yoga helps improve flexibility, strength, and cardiovascular fitness. Mindfulness meditation has been linked to better immune function and lower blood pressure, reducing the risk of stress-related health conditions.
- **Better Cognitive Functioning-** Both yoga and mindfulness meditation have been shown to enhance cognitive functions, including attention, concentration, and memory. Practitioners often report greater mental clarity and focus.

Combining yoga and mindfulness amplifies their individual benefits for stress reduction. By integrating breath awareness, movement, and mindfulness practices, individuals can cultivate a deeper mind-body connection and experience greater relaxation and well-being. The synergy between yoga and mindfulness enhances self-awareness and

fosters a sense of inner harmony, providing individuals with comprehensive tools for managing stress in their daily lives.

Ultimately, the combined practice of yoga and mindfulness meditation offers a multifaceted approach to stress reduction, addressing the physical, mental, and emotional aspects of well-being. This integrative approach empowers individuals to cultivate resilience and thrive in the face of life's challenges.

REVIEW OF LITERATURE

The following studies and researches explore the effects of integrating meditation and yoga to reduce stress and other mental issues-

1) Studies in inner peace and holistic health case studies in stress management through yoga, meditation and naturopathy by Baby Khamernaz in 2013.

- This research paper delves into the realm of inner peace and holistic health by examining case studies focused on stress management through the practices of yoga, meditation and naturopathy. The study, conducted by Baby Khamernaz, aims to explore the effectiveness of these alternative

approaches in promoting well-being and reducing stress levels. Through detailed case analyses, the paper sheds light on the potential benefits of integrating such practices into daily life for improved mental and physical health.

2) The effect of Yogic exercise on Metabolic Syndrome among stress-prone college students, by Ananthakrishnan R in 2017.

- This research paper delves into the correlation between yogic exercise and metabolic syndrome among college students prone to stress. Conducted by Ananthakrishnan, the study aims to assess the efficacy of yogic practices in mitigating the risk factors associated with metabolic syndrome in this specific demographic. Through a combination of quantitative measurements and qualitative assessments, the paper sheds light on the potential of yogic exercise as a preventive and therapeutic intervention for metabolic syndrome in stress-prone individuals.

3) Mindfulness- Based Stress Reduction (MBSR) Program: A Comparative Study of Yoga and Meditation Interventions

- This comparative study evaluates the efficacy of mindfulness- based stress reduction (MBSR) programs, with a specific focus on the integration of yoga and meditation interventions. Through randomized control trials, it examines the differential effects of these interventions on stress reduction, providing valuable evidence for their complementary roles in promoting well- being.

4) The Role of Yoga and Meditation in Workplace Stress Reduction: A Qualitative Study

- This qualitative study explores the subjective experiences of employees participating in workplace yoga and meditation programs to reduce stress. Through in-depth interviews and thematic analyses, it elucidates the perceived benefits and challenges of integrating these practices into corporate wellness initiatives.

RATIONALE OF THE RESEARCH

In recent times, there has been a growing interest in using alternative approaches to stress management due to their potential effectiveness and holistic benefits. However, there is a need for evidence- based research to validate the anecdotal claims surrounding

yoga and meditation's stress- reducing effects. There have been gaps in the existing literature, such as limited studies specifically examining the combined impact of yoga and meditation on stress levels. Yoga and meditation should be both made to interact as they complement each other to provide comprehensive stress relief. They provide a holistic approach towards promoting mental well- being leading to improved results in healthcare practices.

HYPOTHESIS

H0- There is no difference in stress levels of subjects before and after the intervention.

H1- There is a decrease in stress level of subjects after the intervention as compared to their stress level before the intervention.

Method

RESEARCH DESIGN: This research aims to explore how effective mindfulness meditation and yoga are in decreasing stress levels among college students. For this, a survey has been done on college students, result of which will be discussed further. While there is some indication that mindfulness meditation and yoga could help relieve stress, there is limited empirical evidence specifically regarding college

students. This study intends to fill this gap in the existing literature.

SAMPLE: The sample consists of 80 college students who are aged between 18- 23. Out of these 60 were males and 20 were females.

TOOL USED IN STUDY

Perceived Stress Scale: The Perceived Stress Scale (PSS) is a self- report tool used to assess how individuals perceive stress in their lives. Developed in 1983 by Sheldon Cohen and colleagues, it evaluates the subjective experience of stressors rather than specific stressors themselves. The scale typically consists of around 10 items, asking participants to rate the frequency of their experiences related to stress over a defined period, such as the past month. Responses are recorded in Likert- type scale, with options ranging from “never” to “very often”. The PSS is widely used in research and clinical settings to measure stress levels, track changes over time, and evaluate the effectiveness of stress management interventions.

ADMINISTRATION

The experiment was conducted in three phases-

Pre- Intervention- Participants were first made to fill the PSS questionnaire to know their general stress scores.

Intervention- Participants were made to practice 1 hour intervention constituting- 30 minutes of yoga practice and 30 minutes of mindfulness meditation.

Post- Intervention- After the intervention, participants were again made to fill the PSS questionnaire.

DATA MANAGEMENT

Pre- intervention and post- intervention PSS scores will be compared using paired- samples t- tests to determine whether there is a significant change in stress levels after the mindfulness meditation and yoga intervention.

The t- test compares the mean difference between the two sets of scores to the variability within each set of scores.

STATISTICAL ANALYSIS

The data collected through the survey has helped to assess the impact of intervention on stress levels of students. The analysis compares scores obtained before and after the intervention using a one- sample test. The test value, typically set at 0, represents the expected mean difference between pre- and

post- intervention scores if there were no change due to the intervention. Further the following findings have been found out-

The pre- intervention mean score is: 31.63, while the post- intervention mean score is: 30.23. The mean difference between pre- and post- intervention scores is 21.12.

Discussion

The result of the one- sample test comparing pre- intervention and post- intervention scores of perceived stress provide valuable insights into the effectiveness of the intervention of yoga and mindfulness meditation.

Firstly, let's examine the mean scores before and after the intervention. The pre- intervention mean score is 31.632, indicating the average level of the measure before the intervention took place. After the intervention, the score decreases to 30.234, suggesting a decrease in the measure's value following the intervention. The p- value is found to be less than .05, indicating that the observed difference in scores is not due to a random chance but is likely attributable to the intervention.

Furthermore, the mean difference between the pre- and post- intervention scores is 21.1, its interval ranging from 19.8 to 22.4.

Similarly, the mean difference for the post- intervention scores is 17.9, its interval ranging from 16.7 to 19.1.

Overall, these results suggest that the intervention had a significant effect in improving the stress scores. Both pre- and post- intervention scores are significantly different from the test value of 0, indicating that the intervention led to a meaningful change in the stress level of students. This statistically proves how holistic approaches like meditation and yoga helps in promoting mental health well- being of individuals.

FINDINGS AND SUGGESTIONS

- College students face a lot of stressful situations on daily basis for which stress management techniques are necessary to be done on daily basis.
- The intervention used in this research is of 1 hour duration, which makes it difficult for many to practice daily; so it may be more practical if it can be reduced to a smaller duration.

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Competing interests

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Effect of yoga therapy on antenatal stress and pregnancy outcome (Pais,2016)

Effect of yoga based lifestyle intervention on cardiovascular variables, psychopathologies and cognitive functions in hypertension patients (Metri, 2017)

Efficacy of yoga therapy in anxiety disorders: A randomized controlled trial (Annapoorna K.,2017)

Interventional strategies on stress levels for the parents of the intellectually challenged (Shanthi, T., 2018)