A STUDY ON THE PSYCHOPHYSIOLOGICAL EFFECTS OF HATHA YOGA IN PSYCHOSOMATIC ILLNESS THERAPY

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ABSTRACT

Researchers in the Indian state of Bihar set out to learn more about the physiological and psychological benefits of Hatha Yoga for those with psychosomatic diseases. Conditions such as hypertension, irritable bowel syndrome (IBS), and migraine are examples of psychosomatic disorders, which are defined by the impact of psychological variables on physical health. Some believe that Hatha Yoga, with its emphasis on the integration of mind and body, can have a beneficial effect on physiological and psychological factors, leading to a reduction in symptoms and an overall improvement in quality of life. Ninety persons, ranging in age from twenty to sixty, were surveyed. The participants included both males and females. Incorporating Hatha Yoga into the treatment of psychosomatic illnesses is the subject of this paper's extensive examination of demographic characteristics, intervention outcomes, and implications.

Keywords: - *Yoga, Therapy, Health, Illnesses, Adult.*

I. INTRODUCTION

The ancient Indian philosophical discipline of Hatha Yoga has recently received widespread acclaim for its many benefits to physical health, mental clarity, and emotional stability. This study explores the effects of Hatha Yoga on the mind and body, with a focus on its potential therapeutic use in the treatment of psychosomatic illness. Many mental and behavioral factors contribute to the development of psychosomatic diseases, which can manifest without a clear anatomical origin. These include hypertension, irritable bowel syndrome, chronic pain, and PTSD. Modern medicine is just starting to delve into the ways in which Hatha Yoga's integrative nature, which includes physical postures (asanas), breath control (pranayama), and meditation, might manage these complicated diseases holistically. Because of the importance of mind-body interactions in psychosomatic disorders, conventional pharmaceutical therapies are typically ineffective. On the other hand, Hatha Yoga provides an alternate therapeutic approach that may help alleviate the mental factors that contribute to physical symptoms. Paying close attention to one's breathing and posture during Hatha Yoga helps to activate the mind-body connection, leading to a state of calm and mindfulness. Research suggests that these activities can help alleviate symptoms in psychosomatic patients by lowering levels of stress hormones, improving autonomic function, and encouraging emotional resilience. Also, the physiological benefits of yoga, like reduced blood pressure, enhanced circulation, and a slower heart rate, are in line with the requirements of psychosomatic illness treatment, which focuses on stress management and physical function improvement. Examining the psychophysiological aspects of Hatha Yoga's effects elucidates the complex relationship between the body's stress response and the autonomic nervous system

(ANS) and the hypothalamic-pituitary-adrenal (HPA) axis. Disregulation of the autonomic nervous system (ANS) is a common feature of psychosomatic disorders, which can cause an exaggerated level of alertness and the maintenance of bodily symptoms. By strengthening the parasympathetic nervous system, Hatha Yoga helps restore homeostasis and lessen the impact of the "fight-or-flight" reaction. Scientists have discovered that yoga can reduce levels of the stress hormone cortisol and increase the production of the feel-good chemical endorphin. Vagal tone is an indication of autonomic nervous system balance; practicing Hatha Yoga's emphasis on calm, controlled breathing improves it. This, in turn, improves emotional regulation and resilience.

Hatha Yoga's emphasis on awareness and introspection is essential in treating the mental components of psychosomatic diseases, in addition to its physical advantages. Reducing emotional reactivity and improving stress management are two benefits of yoga practice's emphasis on tuning into one's body and observing feelings without judgment. Negative coping mechanisms, including dwelling on negative thoughts or avoiding situations, are common among people who suffer from psychosomatic disorders and can make their symptoms worse. Patients are empowered to manage their symptoms more successfully through the meditative parts of Hatha Yoga, which offer a disciplined way to foster acceptance and lessen worry. Consistent yoga practice may also have long-term positive effects on mental health by causing neuroplastic changes in areas of the brain that are involved in self-regulation, including the amygdala and the prefrontal cortex. As a supplemental treatment for people with psychosomatic diseases, this study intends to examine the particular psychophysiological impacts of Hatha Yoga. This research aims to offer a comprehensive understanding of the therapeutic potential of Hatha Yoga by studying its effects on physiological markers (such as heart rate variability, cortisol levels, and immune function) and psychological outcomes (such as stress, anxiety, and quality of life) both immediately and over time. This research has the potential to add to the expanding area of integrative medicine by shedding light on clinical practices and increasing therapy choices for the management of psychosomatic illnesses.

II. REVIEW OF LITERATURE

O'shea, Melissa et al., (2022) There has been a recent uptick in research into the potential of yoga to increase participation in and response to psychological treatment. However, there is a lack of a systematic review of studies that have looked at yoga in conjunction with psychological treatment. This review mapped out studies that tested yoga as a supplement or integrated therapy with psychiatric interventions supported by evidence for the treatment of anxiety, depression, PTSD, and eating disorders. In total, the review found ten published studies and three unpublished ones, all of which were either modest quasi-experimental or single group designs. Clinical trials combining yoga with cognitive behavioral therapy (CBT) for depression and anxiety, as well as including yoga into rigorous treatment paradigms for post-traumatic stress disorder (PTSD), have demonstrated mixed but encouraging results. To further

understand yoga's potential involvement in clinical practice, future studies should concentrate on controlled trials that may investigate its component effects in conjunction with evidence-based psychiatric treatment, as well as data on acceptance and practicality.

Raub, James. (2003). Time magazine's cover story on "The Power of Yoga" from April 2001 shows that despite yoga's growing popularity as a fitness method in Western societies, it is still portrayed as trendy. The medical establishment has to start seeing yoga more as a legitimate alternative to traditional medicine. Numerous studies conducted over the past decade have demonstrated that Hatha Yoga has numerous health benefits, including increased flexibility and strength as well as the potential to regulate vital signs like heart rate, breathing rate, and blood pressure, which in turn enhances the body's ability to withstand physical exertion. The health advantages of yoga for both healthy individuals and those with musculoskeletal and cardiovascular diseases are summarized in this evaluation of medically supported evidence.

Sarkar, Sankalan et al., (2021) Worldwide, people are worried about their health because to the 2019 coronavirus illness (COVID-19) pandemic. Institutions that train people to be doctors, nurses, and allied health professionals are always looking for new methods to make their students' lives easier and more fulfilling. Yoga has shown effective results in combating stress. In light of the current COVID-19 pandemic, this review set out to investigate the potential physiological and psychological benefits of yoga for stress reduction among students pursuing careers in medicine and allied health. The majority of the published research and government records that the writers combed through concerned the impact of yoga on future doctors and other health care workers. There is evidence that these pupils have higher rates of mental stress compared to the overall population. These students are likely to be profoundly affected by the abrupt changes brought about by the epidemic. Anxieties and tensions arise from not knowing what to expect in terms of instruction, evaluation, and progress, and social withdrawal just makes things worse. Yoga has become well-known for its positive effects on many bodily systems, including the immune system, respiratory health, and overall quality of life. Few institutions for the medical and allied health professions have included yoga as part of a holistic curriculum, despite the numerous studies that have looked at the psychophysiological benefits of yoga on students preparing for careers in these fields.

Tripathi, Mahesh et al., (2018) College students are at a vulnerable stage of developmental maturity as they face challenging academic work and learn to rely on themselves. Exercising one's muscles and running or riding a bike can boost one's mood and reduce stress. But it's not uncommon for college students to be sedentary. Stress and mood can be improved by the practice of yoga, an ancient mental and physical discipline. The psychophysiological benefits of yoga, however, have received surprisingly little attention in scholarly publications. Finding out how yoga affects stress in young adults at university is the primary motivation for this research. Yoga may help college students deal with stress by influencing

their bodies in beneficial ways, according to this study.

III. RESEARCH METHODOLOGY

Sample size

Psychosomatic illness-related inclusion criteria led to the selection of 90 participants.

Location

The research took place in Bihar, India, where people could practice yoga under the watchful eye of researchers.

Data Collection

- Primary
- Secondary

Statistical Analysis

To compare the scores on all psychological and physiological variables before and after the intervention, paired t-tests were performed. Demographic and outcome characteristics were presented using descriptive statistics, including mean and standard deviation. We used analysis of variance (ANOVA) to look for variations between different demographic subgroups (such as gender, age, and socioeconomic level).

IV. DATA ANALYSIS AND INTERPRETATION

Demographic profile

Table 1: Gender of the respondents

Particular	Frequency	Percentage %
Male	64	71.12%
Female	26	28.88%
Total	**90**	**100**

Source: Primary Data

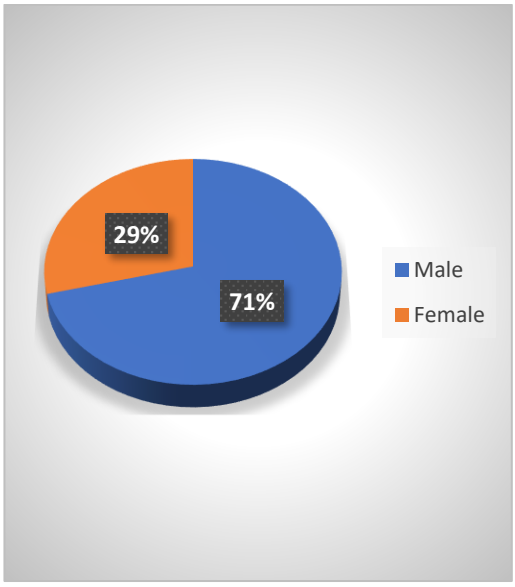

Figure 1: Gender of the respondents

You can see the breakdown of responses by gender in Table 1. Of the 90 people that took part, 64 were men, making up around 71.12% of the total. At the same time, 26 people (or 28.88 percent of the total) said they were female. This split shows that there are more male respondents than female ones; men comprised over two-thirds of the survey takers, while females accounted for less than a third.

Table 2: Age of the respondents

Particular	Frequency	Percentage %

20-30 years	30	33.3%
31-45 years	35	38.9%
46-60 years	25	27.8%
Total	**90**	**100**

Source: Primary Data

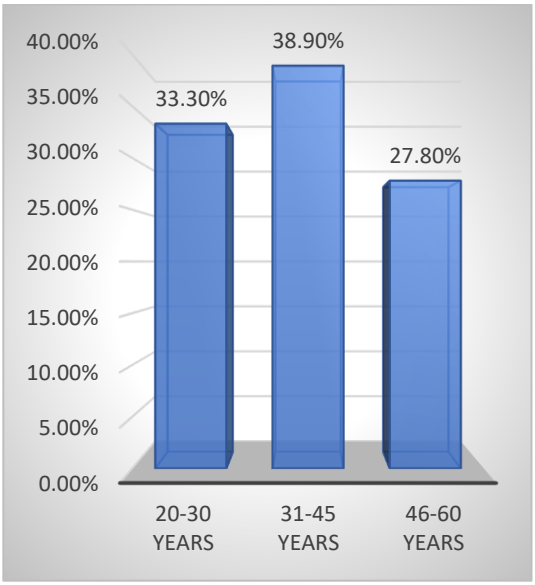

Figure 2: Age of the respondents

You can see the breakdown of respondent ages in Table 2. Of the 90 people who took part, 35 (or 38.9% of the total) fell within the 31-45 age bracket. Nearly as many (30) people, or 33.3% of the total, fell within the 20–30 age bracket. Finally, twenty-five people (or 27.8% of the total) fell into the age bracket of 46 to 60. The majority of responders were in the age bracket of 20–45, indicating a balanced representation of generations.

Pre- and Post-Intervention Data Analysis

We used paired t-tests to compare participants' scores before and after the Hatha Yoga intervention to see how well it worked.

Table 3: Comparing pre- and post-intervention scores of effectiveness of the Hatha Yoga intervention

Measure	Pre-Intervention Mean (SD)	Post-Intervention Mean (SD)	t-value	p-value
Anxiety (HAM-A)	20.3 (5.4)	15.1 (4.8)	6.02	<0.01
Depression (BDI)	18.7 (4.9)	13.9 (4.3)	5.85	<0.01
Stress (PSS)	22.1 (6.1)	16.7 (5.2)	6.50	<0.01
Blood Pressure (SBP)	135.2 (12.4)	128.5 (10.2)	4.32	<0.01
Heart Rate (BPM)	85.6 (9.5)	78.3 (8.1)	5.90	<0.01
Respiratory Rate	19.4 (2.6)	17.1 (2.1)	5.21	<0.01

Table 3 shows the results of a Hatha Yoga intervention compared to the participants' pre- and post-intervention scores on a battery of psychological and physiological assessments. All assessed outcomes showed significant improvements. A significant decrease in anxiety was shown by a t-value of 6.02 and a p-value of less

than 0.01 on the Hamilton Anxiety Rating Scale (HAM-A), which measured anxiety. The mean score for anxiety reduced from 20.3 (SD = 5.4) before the intervention to 15.1 (SD = 4.8) after the intervention. Mean scores on the Beck Depression Inventory (BDI) for depression decreased from 18.7 (SD = 4.9) to 13.9 (SD = 4.3), indicating a comparable improvement in depression levels; this improvement was supported by a t-value of 5.85 and a p-value of less than 0.01. A significant decrease in perceived stress levels was shown by a t-value of 6.50 and a p-value of less than 0.01 on the Perceived Stress Scale (PSS), which measured stress from 22.1 (SD = 6.1) before the intervention to 16.7 (SD = 5.2) after the intervention.

With a t-value of 4.32 and a p-value of less than 0.01 suggesting improved cardiovascular function, the systolic blood pressure (SBP) decreased from 135.2 mmHg (SD = 12.4) to 128.5 mmHg (SD = 10.2), according to the physiological measures. A t-value of 5.90 and a p-value of less than 0.01 were observed for the decrease in heart rate (BPM) from 85.6 (SD = 9.5) to 78.3 (SD = 8.1), while a t-value of 5.21 and a p-value of less than 0.01 were produced for the decrease in respiratory rate from 19.4 breaths per minute (SD = 2.6) to 17.1 (SD = 2.1). The results show that physiological health indicators including heart rate, blood pressure, and respiration rate improved, and that stress, anxiety, and depression were all considerably reduced by the Hatha Yoga intervention.

V. CONCLUSION

By tending to one's emotional and physical well-being simultaneously, Hatha Yoga shows encouraging psychophysiological advantages for people suffering from psychosomatic disorders. Hatha Yoga is a system of physical postures, breathing exercises, and mindfulness that helps bring about emotional resilience, reduced stress hormones, and autonomic nervous system regulation. Not only do these effects reduce physical symptoms, but they also promote overall health and better coping skills. By highlighting the importance of the mind-body connection in health and healing, Hatha Yoga, as a complementary therapy, provides a holistic perspective that may enhance conventional treatments for psychosomatic disorders.

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