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Effect Of Yoga Training On Physiological And Psychological Characteristics Of College Students

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***Abstract*:** In college, students are at a key point in their development, as they must learn how to function on their own and deal with the demands of a demanding academic programme. Doing things like going for a run can help boost your mood and reduce stress. College students, on the other hand, tend to be sedentary. Yoga is a centuries-old physical and mental practice that has been shown to reduce anxiety and depression. It is hard to find studies in peer-reviewed journals that examine the psychophysiological effects of yoga. Preliminary evidence demonstrating the stress-relieving effects of yoga on young adult college students is the goal of this study. Students' stress levels were shown to be reduced by the psychophysiological effects of yoga, according to the findings of the current study. Research into how different forms of yoga practices fulfil the requirements of different college subpopulations is still needed (e.g., overweight, sedentary, and smokers).

***Index Terms* - Yoga, Meditation, Stress, College Students, Yogic Practices, Anger, Stress, Anxiety, Mental & Physical Health, Asana, Pranayama.**

I. INTRODUCTION

The name yoga is apparently derived from the Sanskrit word "Yuj," which means "unite" or "connect," and in the higher stages of yoga, this is generally believed to mean the experience of connection between the individual self and the universal self. Keeping fit in today's world requires frequent physical activity as one of the most important components. Many health-related difficulties can be traced back to students' lack of physical activity, which necessitates prompt treatment. Yoga, along with aerobics and dance, is a popular option for female college students looking for a physical outlet. One of the most important components of a healthy lifestyle is engaging in regular physical activity, such as yoga.

Yoga's techniques have evolved over time into a variety of routes, each of which is supposed to lead to self-realization for the practitioner.

Four of the most common routes are as follows:

1. Karma Yoga, which is the path of altruistic service through charitable activities.
2. Jnana Yoga is a Sanskrit term meaning "intellectual knowledge" and refers to the process of studying philosophy.
3. Practice of love and devotion called Bhakti Yoga.
4. Raja Yoga, which means "royal road" in Sanskrit. In Raja Yoga, there are standards for behaviour, physical posture and breathing exercises that help to stabilize the mind and body.

Yoga has a number of notable advantages for college students, including the following:

- Reducing Stress.
- Adding Confidence.
- Enhancing Concentration.
- Instilling Self-Control.
- Improving Memory.
- Improves Metabolism.
- Managing Time.
- Better Posture.

Approximately 40% to 50% of college students are sedentary. There is a lack of multiple-level approaches (i.e., personal, psychosocial, and environmental levels) for examining physical activity behaviour in the college student population, and the measures of physical activity are subjective and inconsistent, making comparisons of physical activity patterns among different samples extremely difficult or impossible. According to the existing studies, the prevalence of stress among college students is increasing. Yoga has been shown to lessen period cramps and menstrual misery in female college students with primary dysmenorrhea, according to a prior study. Insufficient research has been done on the psychophysiological alterations that characterize the efficacy of yoga for college students' stress management.

Physiological effects of yoga in college students:

Stress management and wellness in college students could be improved by including yoga into their daily routines. Pranayama training has been shown to reduce sympathetic activity, resulting in mental calm and decreased autonomic reactivity, hence minimizing force fluctuations during isometric contraction. As a result, students in the medical field saw an increase in hand grip strength and endurance. Autonomic functioning and psychological well-being were found to be significantly altered in premenstrual and postmenstrual phases of the menstrual cycle in healthy young female controls who participated in a study on the effects of integrated yoga on autonomic parameters and well-being. In addition, consistent yoga practice has positive benefits on both stages of the menstrual cycle by promoting parasympathetic dominance and psychological well-being, perhaps via balancing the neuro-endocrine axis.

The following is a recommended yoga therapy protocol for college students based on scientific research:
The following yogic activities may be recommended for college students as evidence-based yoga therapy based on research into the therapeutic management and psychophysiological effects of yoga:
• Starting Prayer.
• Acquaint yourself with the Kapalbhati and Agnisar kriyas (activating the digestive fire).
• Close your arms about your shoulders and breathe in through your nose.
• Squatting down and twisting in various directions while running.
• Namaskar of the Sun (salutations to the sun practice).
• This includes the palm-tree-position, the tree-pose, the hand-to-foot-pose Padahastasana, the half-wheel posture, the cobra-pose, and Shalabhasana, which is a twisting pose (locust pose)
• Quick Relaxation Technique.
• Sheetali Pranayama (cooling breath), Sheetkari Pranayama (hissing breath), and Bhramari Pranayama are all examples of Nadi Shuddhi Pranayama (psychic network purification) (humming bee breath)
• Om Meditation
• Closing Prayer.

II. REVIEW OF LITERATURE

The benefits of yoga for college students (Milligan, 2006) and the unique combination of meditation and physical activity that it offers led to its selection as the subject of this study. Recent studies have found that yoga has a positive effect on cognitive function in addition to its physical health benefits (Cowen's & Adams, 2005). Despite several studies examining the various ways in which yoga impacts cognition, little is known about the effects of yoga on attention particularly. The filtering mechanism of the mind allows a person to concentrate on only a few key parts of their immediate environment, which is what we mean by "attention" (Goldstein, 2007).

Yoga has a wide range of physical and mental advantages. Studies have shown that yoga practise increases flexibility and strength, which is supported by other studies (Cowen & Adams, 2005). Other studies have also shown that yoga can lower blood pressure and boost the immune system. According to Cowen and Adams (2005, 2006), there is a high association between the level of perceived stress and the amount of time students spend practising yoga.

Known as "the yoga of physical discipline," Raja Yoga's Hatha branch has recently exploded in popularity in the West, where it is known as "the yoga of physical discipline" (Feuerstein, 1990). Hatha Yoga focuses on the management of the body's energy through physical, breathing, and concentration approaches (Iyengar, 2001). Stress and stress-induced ailments can both be prevented and managed using the comprehensive science of yoga (Peal, 2018). The HPA axis' response to stress is immediately downregulated by yoga, according to a slew of studies. Efficacy of yoga in reducing stress has been proven (Kirkwood et al, 2005).

Students' mental health is a growing public health concern that requires effective, scalable, and appealing solutions. Mental health issues are becoming increasingly common among university students around the world (Hunt & Eisenberg, 2010). It's a great time to deploy mental health interventions because there are more students than ever before (OECD, 2017). (Hunt & Eisenberg, 2010). Help-seeking behaviour in colleges and universities has improved in recent years and stigma has decreased (Hunt & Eisenberg, 2010).

Recent research on yoga's effect on stress found that 25 of 35 published studies revealed significant reductions in stress following a yoga intervention (Li & Goldsmith, 2012). Small sample size, lack of a control group, non-randomization, a lack of exclusion criteria, and excessive standard deviations were all blamed by the authors for the conflicting or null results in the remaining 10 research (Li & Goldsmith, 2012).

Using four open, unpublished datasets, Brown and Gerbarg (2005b) hypothesized the effects of Sudarshan Kriya yogic breathing on psychopathology, including post-traumatic stress disorder (PTSD). Ujjayi breath (audible whisper breath) was introduced to the yoga (asana, meditation, and psychoeducation) intervention and PTSD symptoms decreased. They believe that yoga's relaxing Ujjayi breath can help alleviate symptoms of post-traumatic stress disorder. We did not quantify the stress-relieving effects of breath work in our study by Sherman et al. (2013), but the results of our qualitative analysis support our hypothesis.

According to some researchers, practising yoga enhances coping mechanisms, allowing practitioners to better handle stressors, therefore reducing stress. For students in health science programmers, Rizzolo and colleagues (2009) suggested that a yoga intervention could help them identify stress more quickly and establish coping mechanisms early in their careers, therefore resulting in long-lasting stress-reduction effects. Research into how yoga affects women's depressive symptoms revealed that participants said they learnt new coping skills and that this reduced their stress levels.

III. OBJECTIVES OF THE STUDY

1. As a means of providing a systematic study of yoga's effect on student distress and other mental health outcomes among healthy university students
2. To examine the influence of yoga and pranayama on academic performance as a result of stress.
3. To examine if yogic practices have an effect on the psycho-physiological characteristics of students in college.
4. There is a need to investigate how yoga decreases stress based on empirical evidence
5. Processes or mediators in the therapeutic process that are rooted in the brain, society, and neurophysiology.

IV. METHODOLOGY

Exercise and yoga practise among college students was the primary goal of the study. An in-depth reading and analysis of secondary sources is required to apply analytical and descriptive research approaches. In order to fully develop the textual analysis, it is necessary to do a close reading analysis of a small number of secondary sources.

V. RESULTS AND DISCUSSION

The participants in this study were chosen from among students at a local university. Based on the results of the Pre-test, participants were separated into two groups: the Experimental group and the Control group. There are 30 pupils per group. Both groups were given a 10-question survey and their conduct was analysed. For seven weeks, an experimental group received a yoga module that included asanas, pranayama, meditation, and a value orientation programme. Afterwards, the experimental and control groups were re-tested. Separately, the instructors taught both groups. A pre-test and a post-test were administered to both groups in order to compare their mean scores at the end of the study.

Figure -1

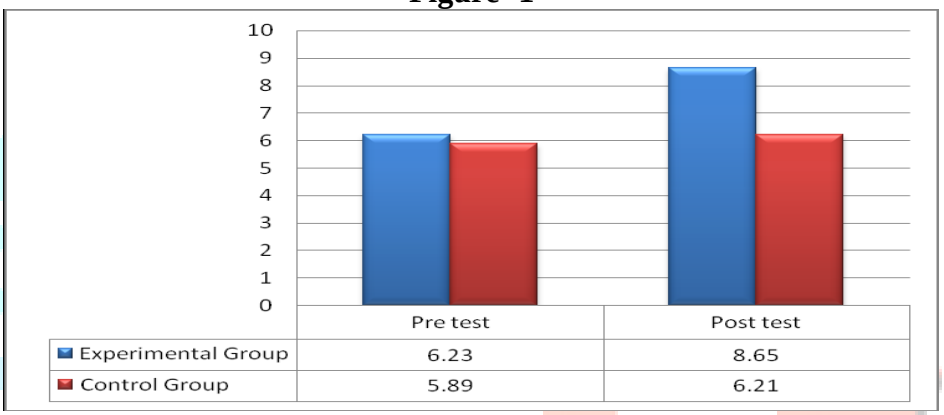

Figure -1: Comparison of Mean Value of Pre-Test and Post-Test

There was no difference between the two groups' first test scores, but following treatment the experimental group had a higher average than the control group's first test score, indicating a greater level of performance.

Students who practiced yoga had superior grades, according to the study's findings. Students with lower levels of stress outperformed those with higher levels, indicating that stress has an impact on student performance.

Table – 1

The Experimental Group Received the Training Outlined in Table 1 for a Total of 16 Weeks.

Experimental Group – Yogic Practices				
S. No.	**Name of practice**	**Frequency**	**Duration of the practice**	**Total duration of the practice**
A	**Meditation**			20 minutes
	Prayer	16 Weeks	2 minutes	
	Thandu Vada Shuddhi & Nadi Shodhana	16 Weeks	8 minutes	
	Nama-Rupa Meditation	16 Weeks	10 minutes	
B	**Yogasana-** Loosing exercise	16 Weeks	2 minutes	40 minutes
	Vakrasana & Trikonasana	16 Weeks	8 minutes	
	Trikonasana &	16 Weeks	8 minutes	

	Ardha Chakrasana			
	Savasana & Padmasana	16 Weeks	8 minutes	
	Yoga Mudra & Matsyasana	16 Weeks	8 minutes	
	Matsyasana	16 Weeks	6 minutes	
Total				**60 minutes**

Table – 2

The Significance of the Mean Gains and Losses Between Pre and Post Test Scores on Chosen Variables of the Yoga Practice Group

S. No.	Variables	Mean		Mean difference	SD (±)		σ DM	't' Ratio
1	Anger	65.50	55.35	10.15	4.50	3.52	1.31	7.72
2	Stress	32.60	22.50	10.10	5.99	4.27	1.46	6.88
3	Anxiety	18.20	11.35	6.85	4.71	2.43	0.89	7.67

Table-2 shows that the 't' ratios for anger, tension, and anxiety were 7.72, 6.88, and 7.67, respectively. For 19 degrees of freedom, the 't' ratios for the selected variables were determined to be higher than the required table value of 2.861. As a result, its importance was discovered. This study's findings were statistically significant, and they helped to explain the impacts in a good light.

VI. CONCLUSION

According to the findings of this study, daily practise of yogic interventions such as pranayama and meditation reduced stress levels. Practicing yoga can reduce college students' stress levels, according to a new study. Students may simply incorporate yoga into their daily routines because it is a basic and inexpensive health regimen that can be quickly adopted. So, the children will have better mental and physical health, as well as a more balanced existence, as a result of this programme.

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