



A RANDOMIZED CONTROLLED TRIAL ON YOGIC PRACTICES FOR ACADEMIC STRESS REDUCTION AMONG COLLEGE STUDENTS

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ABSTRACT

Modern society cannot function without yoga; major medical facilities, community healthcare centres, and small yoga studios all provide yoga as a mental and physical activity to aid in healing. Even though yoga has been practiced in various forms for almost 2500 years, the distinctiveness of "Yoga for wellbeing" is a feature of more contemporary yoga, which is practiced by an enormous number of people in India today. Although yoga is becoming more and more popular among people as a means of promoting overall wellbeing and wellness, not much is known about its use by young people, especially those in urban areas. Yoga is a well-known ancient discipline that incorporates physical postures, mental concentration, and ethical principles into its practice. Academic execution concerns the quantity and kind of learning that is completed in a topic or group of subjects over a long period of instruction. Overwhelming tension impairs understudy' performance. Some yogic tests have shown improvements in academic performance and preparedness. The World Health Organisation (WHO) states that academic stress is stress connected to education; stress may be felt in any situation. For young individuals, it is the primary means of inducing stress. Academic environments often experience tension due to achievement anxiety, according to several specialists. According to some experts, this link between teenage suicide thoughts and academic stress may actually be even higher in East Asian countries because of the societal and familial pressure to perform well academically. Academic stress resulting from teenagers' self- and other-assumptions (e.g., instructors' and guardians') is particularly noteworthy in an Asian context.

Keywords: *Yogic Practices, College Students, Randomized Controlled Trial, Academic Stress.*

1. INTRODUCTION

College students suffer greatly from academic stress, which has detrimental effects on their mental health, academic achievement, and general well-being. Yogic practices, which date back thousands of years, are increasingly being researched as potential remedies for the stress that people are under. These practices have their roots in ancient traditions and incorporate physical postures, breath control, meditation, and awareness exercises. They offer a comprehensive strategy for managing stress's mental, emotional, and physical components. The study's overarching objective is to contribute to what is already known about yoga's ability to alleviate academic stress by collecting first-hand accounts of the ways in which yoga can help college students. An in-depth examination of the causal relationship between yoga practices and the reduction of academic stress is made feasible by the potential for the randomised controlled design to enhance the validity and dependability of the results. The results might influence counselling services, educational policies, and individual behaviours that foster an environment more conducive to college students' holistic development.

1.1. Yoga

Yoga is a mind-body discipline that has its roots in India and has been practiced for over 5,000 years. It promotes both physical and mental well-being by combining breathing techniques, physical postures, and meditation. The name "yoga" comes from the Sanskrit word "yuj," which means "to yoke" or "to unite." This relates to the practice's goal of harmonising the physical, mental, and spiritual selves.



Figure 1:Person Doing Yoga

Yoga offers several mental and physical health advantages. Yoga may enhance one's physical strength, flexibility, balance, and coordination. Additionally, it can strengthen the immune system, lessen discomfort, and enhance sleep. Yoga has the potential to alleviate mental tension, anxiety, and sadness. Additionally, it can enhance memory, attention, and concentration.

Yoga comes in a wide variety of forms, each with a distinct focus. Yin, Ashtanga, Vinyasa, and Hatha yoga are a few of the well-liked forms. Hatha yoga is the umbrella word for all forms of yoga that incorporate breathing techniques and physical postures. Yoga that flows and synchronises movement with breath is called vinyasa yoga.

Whatever your experience or level of fitness, there's a yoga style that will work for you. There are many of materials available to assist you in getting started if you're interested in giving yoga a try. Local studios, gyms, and community centres provide yoga lessons. Additionally, yoga books, DVDs, and internet videos are available.

1.2. Academic Stress

When it comes to their academic performance, students most frequently feel four different things. These emotions consist of pressure, anxiety, and concern.



Figure 2:Academic Stress

Furthermore, stress connected to academic achievement is a common explanation given by students for their reports of feeling anxious. It may result from several things, like as:



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- **High expectations:** Pupils may experience pressure from instructors, parents, or themselves to live up to high expectations.
 - **Difficult coursework:** Students may feel overburdened by their homework with certain classes being more difficult than others.
 - **Upcoming exams:** Students often experience anxiety during exams due to concerns about their performance and the repercussions of performing poorly.
 - **Financial aid:** Students may experience financial stress in addition to academic stress if they worry about their ability to pay for college.
 - **Personal problems:** Academic stress can also be caused by personal concerns, such as relationship or family troubles.

Academic stress can have negative effects on students' physical and mental health. Physical problems including headaches, stomach-aches, and trouble sleeping may result from it. Additionally, it may result in mental health issues including despair, anxiety, or even suicidal thoughts.

1.3. Physiological Effects of Yoga in College Students

Yoga has the potential to improve stress management and health in undergraduates through self-engaging, nonpharmacological techniques. Pranayama preparation was shown to reduce deliberate movement, which in turn causes mental relaxation and a reduction in autonomic excitation, which in turn reduces power fluctuations during isometric withdrawal. This was demonstrated by the medical students' close-by grip strength and tenacity.

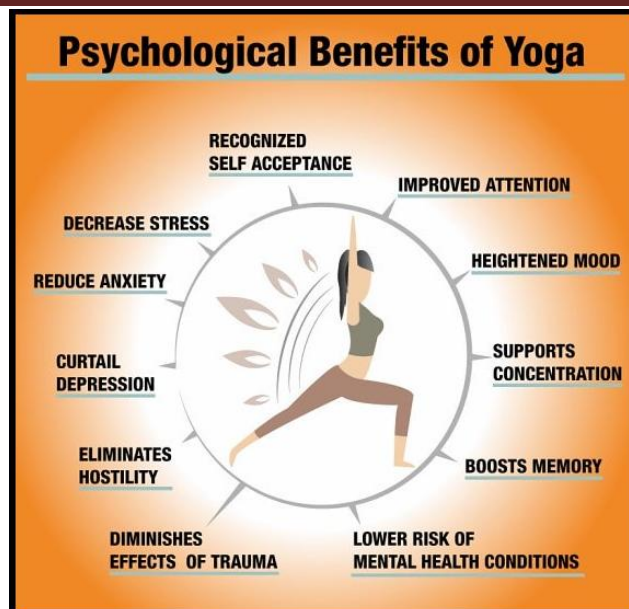


Figure 3: Physiological Effects of Yoga in College Students

In a review that looked at how incorporated yoga affected autonomic boundaries and psychological well-being in young, healthy female controls before and after the feminine cycle, it was found that there was a significant change in autonomic status and psychological status in the premenstrual stage as compared to the postmenstrual work in young, healthy female controls.

Additionally, it was shown that practicing yoga regularly influences the two phases of the feminine cycle by promoting parasympathetic dominance and psychological prosperity, most likely via modifying the neuroendocrine hub. It has been observed that the yogic practice Suryanamaskara is effective in promoting relaxing behaviours such as genuine relaxation, mental peace, quiet and harmony, feeling renewed and rejuvenated, strength and awareness, and bliss. It also reduces sluggishness, physical tension, stress, and negative emotions on a dispositional level. Yogic activities have a major role in improving pupils' emotional reactivity, supportive consideration, mental execution, and balanced character traits, which in turn helps them prepare for academic excellence. Additionally, yoga helps undergraduates feel less stressed and adverse impacts, which helps them improve psychological well-being.



2. LITERATURE REVIEW

Gupta and Reddy (2023) a randomised controlled study was carried out to investigate the impact of a mindfulness-based yoga intervention on the levels of academic stress experienced by college students majoring in engineering programmes. According to the findings of the study, participants who participated in the yoga intervention had a considerable reduction in their levels of academic stress. The findings of this study imply that combining mindfulness techniques into yoga might be an effective method for engineering students to manage the stress caused by their academic responsibilities.

Hwang and Kim (2022) With the purpose of determining the effects of a yoga intervention on the levels of academic stress and emotional intelligence in college students, an experiment was carried out. According to the findings of their study, which suggested good repercussions, participation in yoga was associated with lower levels of academic stress and improved emotional intelligence. This was one of the findings. Yoga has the ability to not only reduce stress but also improve emotional intelligence, which is a key component of academic accomplishment. The findings of this study suggest that yoga has this potential.

Kaur and Brar (2021) The effects of a yoga intervention on academic stress, the quality of sleep, and perceived stress were investigated. The results of this experiment were presented in a report. According to the findings, the yoga intervention was associated with an increase in the quality of sleep as well as a reduction in the amount of stress that college students claimed they were feeling. As a result of this, it would suggest that including yoga into one's regular routines may have a positive impact on one's sleep patterns as well as the general feeling of being stressed.

Kim and Hwang (2021) Finding out how a yoga intervention affected female college students' levels of academic stress, sleep quality, and mindfulness was the driving force for this research. The results of the randomised controlled experiment showed that regular yoga practice led to improvements in the quality of sleep, mindfulness, and the amount of stress experienced by students in their academic pursuits. When it comes to treating the plethora of issues that are



linked with stress among female college students, the fact that this is the case highlights the possible gender-specific advantages that yoga therapy may offer.

Mahajan and Sachdev (2022) examined the effects of a yoga intervention on the levels of stress experienced by medical students, as well as the quality of their sleep and their academic achievement. A favourable correlation was discovered between the practice of yoga and improvements in the management of stress, the quality of sleep, and academic achievement, according to the findings of the study. Based on these findings, it appears that introducing yoga into the daily routine of medical students may have a comprehensive influence on their performance in the classroom as well as their overall well-being.

3. RESEARCH METHODOLOGY

A total of eighty male day scholars from various institutions located in Gurugram sectors 47, 49, and 50 participated in the research project under investigation. The inclusion and avoidance models were utilised in the selection process for these individuals. By utilising the academic stress score, the inclusion model targeted students who had moderate to high levels of academic stress.

On the other hand, the avoidance model excluded those who suffered from mental health illnesses such as derangement, hypertension, vertigo, seizures, asthma, and any form of external muscular pain. The members were provided with sufficient information on the system prior to the acquisition of their informed consents. The members of the concern group reached a consensus that they would refrain from taking part in any other activities throughout the eight-week period. Following that, at that time, the members were divided into two groups according to arbitrary criteria.

YOGA and forty people make up Group A. As a group of forty people, we obtained PILATES. An incredible opportunity to get ready with ASANAS and PRANAYAMAS over a period of forty-five minutes, which included warm-up and chill-off meetings, was provided to the group members.



Table 1: Yoga Practice Schedule

S.NO.	YOGA	TIME
1.	ASANAS	
	pawanmuktasana	3 to 5 rounds 5 min
	suptavajrasana	3 to 5 rounds 5 min
	hastutasana	3 to 5 rounds 5 min
	bhujangasana	3 to 5 rounds 5 min
2.	savasana	10 min
3.	PRANAYAMA	
	Nadishodhan pranayama	5 min
	Bramari pranayama	5 min

It is important to note this in relation to Group B. It was offered as a fantastic opportunity of opportunity to warm up and cool down with Pilates for forty-five minutes, with an outline approach to the shoulders, hips, pelvis, and spine. This was a beautiful opportunity.



Table 2:Pilates Exercise Session Breakdown with Duration

S.NO.	PILATES	TIME
1.	WARM UP SESSION	
	Standing roll down	5 min
	Stamina stretch	5 min
2.	FRAME APPROACH EXERCISES	
	Frame technique in shoulder	3 to 5 rounds 5 min
	Frame technique in Hip	3 to 5 rounds 5 min
	Frame technique in pelvic	3 to 5 rounds 5 min
	Frame technique in spine	3 to 5 rounds 5 min
3.	COOL DOWN SESSION	

4. RESULTS AND DISCUSSION

Group A and Group B both had t upsides of 7.6356 and 6.7262, respectively, of their respective groups, with a p-value that was lower than 0.1110 that was found to be statistically significant. Regarding the examination, both of the groups proved the significant influence that academic pressure has on the conclusion of the situation.



Table 3: displaying the effects of academic stress pre and post

		MEAN	MEAN DIFF.	STANDARD DEVIATION	T VALUE	P VALUE
YOGA	<i>PRE TEST</i>	47.88	26.85	<u>20.97</u>	7.6356	<0.1110
	<i>POST TEST</i>	22.04		<u>13.38</u>		
PILATES	<i>PRE TEST</i>	48.50	26.43	<u>22.66</u>	6.7262	<0.1110
	<i>POST TEST</i>	23.28		<u>16.83</u>		

Numerous studies conducted worldwide have demonstrated that students of varying levels of academic achievement suffer from low psychological wellness as a result of increased competition, ongoing stress, and pressure to do well. It is necessary to provide students with offices in order to help them manage concerns related to psychological wellbeing.

Stress, despair, anxiety, and other mental health issues can be effectively managed by a variety of expressive arts therapies, including music, dance, painting, and meditation. One of the important activities that has been used for a long time and has proven to be beneficial is yoga therapy.

Based on previous research and a review led by Memmedova in November 2020, it was assumed that in addition to its benefits for physical and medical conditions, pilates also positively affects neuropsychological variables such as anxiety, inspiration, and academic achievement [educational benefits]. A further analysis conducted in 2018 by K. Kanimozhi concluded that practicing Shambavimahamudra Yoga helped members become more adaptable and reduce their stress levels. Thus, students' interruptions from reviewing material and engaging in daily activities to focus on their academic and general execution have decreased thanks to the enhancement of Shambavimahamudra Yoga through CBT, which has been chosen as a rational tool for stress analysis and condensing.



This review makes use of a table that displays the mean contrast of the variables between the pretest and post-stage.

A statistically significant difference between the pre- and post-test scores ($p = 0.1110$) is indicated by the t-proportion of yoga on academic stress, which is 7.6356^{**} . The mean score (M) before the exam was 47.88 and after it was 22.04. Students showed reduced symptoms of academic stress, as shown by a substantial drop in their posttest scores on the subject, following yoga practice.

A statistically significant difference in the pre- and post-test scores ($p = 0.1110$) is indicated by the t-proportion of pilates on academic stress, which is 6.7262^{**} . The average score before the exam was 48.50, and after the test it dropped to 23.28. Student post-test ratings on academic stress fell considerably following Pilates practice, suggesting that they were less likely to display symptoms of academic stress.

Yoga and Pilates mediate the reduction of academic stress, according to the results of the current emphasis. Pilates has the amazing power to provide the body with a place to relax, heal, and apply pressure. Breath is a key Pilates technique that oxygenates the blood and calms the mind. Our bodies respond physiologically to breathing, which often reduces tension and anxiety. Through a series of standardised physical postures, breathing exercises, meditation, and relaxation techniques, yoga synchronises human physiology. Certain types of yoga practice balance parasympathetic and mindful movement, important shifts in mental cycles, tactile engine mood, and guidelines for breathing rate. They also increase cardiovascular activity and elevate the sense of prosperity. All of these effects are felt on the autonomic sensory system. While both Pilates and Yoga demonstrate a significant increase in reducing academic stress, students found it difficult to constantly practise yoga, which is a traditional method of stress management. If Pilates was to take place, an understudy was participating well and enjoying themselves during the workout. Additionally, Pilates is not difficult to practise and is surprisingly easy to learn and follow, in contrast to yoga.



5. CONCLUSIONS

A hypothesis has been developed on the basis of the data that were generated from the current survey. The hypothesis states that yoga may have a significant impact on the psychophysiological level, which would then result in enhanced academic accomplishment among undergraduate students. Furthermore, in order to confirm the effectiveness of Yoga, it is required to do additional research in order to determine the link between students and the practice of Yoga. One of the most serious issues that young people are today facing is anxiety related to their academic performance. The inclusion of yogic intervention approaches has been shown to significantly reduce the levels of academic anxiety that are expressed by the participants, according to the findings of scholarly research. According to the findings of this study, the two sessions of Pilates and Yoga are able to significantly reduce the amount of stress that is associated with academics.

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