



THE EFFECTIVENESS OF NAAD YOGA MEDITATION PRACTICE IN REDUCING ACADEMIC STRESS IN MODERN EDUCATION (A STUDY BASED ON INDIAN KNOWLEDGE SYSTEMS)

Deepti Garg¹, Dr. Mamta Bhardwaj²

¹Research Scholar, Department of Education, Dev Sanskriti Vishwavidyalaya, Gayatrikunj, Shantikunj, Haridwar (Uttarakhand)

²Assistant Professor, Department of education, Dev Sanskriti Vishwavidyalaya, Gayatrikunj, Shantikunj, Haridwar (Uttarakhand)

ABSTRACT

The contemporary educational environment has transformed education from a mere process of knowledge acquisition into a complex system that significantly influences students' psychological health. Intense academic competition, examination-oriented evaluation systems, increasing parental expectations, assignments, and continuous pressure to achieve academic success have contributed to rising levels of academic stress among university students. Prolonged exposure to such stress adversely affects students' mental health, emotional stability, learning efficiency, and overall personality development. A natural technique 'Nada Yoga Dhyana Sadhana' influences brain waves, emotional regulation, and mental states. Sound vibrations affect the nervous system and endocrine responses, promoting relaxation and psychological balance. Thus, Nada Yoga serves not only as a spiritual discipline but also as a scientifically relevant practice for stress management and mental well-being.

The present study aims to examine the effect of Nada Yoga Dhyana Sadhana, a sound-based meditative practice rooted in the Indian Knowledge System, on academic stress among university-level students. An experimental research design employing a pre-test and post-test control group approach was adopted. A sample of 120 undergraduate students aged 17–19 years from Gurukul Kangri University, Haridwar, Uttarakhand, was selected using purposive sampling. The sample was divided equally into experimental and control groups. Academic stress was measured using the Academic Stress Scale developed by Dr. Poorva Jain and Mrs. Neelam Dikshit. The experimental group practiced Nada Yoga Dhyana Sadhana for three months, 15 minutes daily, while the control group continued with their routine academic activities.

Statistical analysis was conducted using the t-test technique. The findings revealed a statistically significant reduction in academic stress among students practicing Nada Yoga Dhyana Sadhana at the 0.01 level of significance. The results indicate that Nada Yoga Dhyana Sadhana is an effective intervention for managing academic stress among university students.

KEYWORDS: Nada Yoga, Meditation, Academic Stress, Indian Knowledge Systems, University Students.

INTRODUCTION

In the present era, education has evolved beyond being a mere means of acquiring knowledge and has increasingly become a source of academic stress for students. At the school and university levels, intense competition, examinations, assignments(2), parental expectations(2,9), self-evaluation, and the pressure to succeed contribute significantly to academic stress among students(2,9,14).

Higher education institutions are considered vital pillars of national development(4), and their success largely depends on the academic performance and well-being of their students(4). In a rapidly changing industrial and technological environment, students are expected not only to enhance their knowledge but also to develop diverse skills(4). Such expectations, combined with competitive academic environments, social media influence, and family pressures, create continuous stress among students (4).

Stress is a common psychological condition that weakens an individual's coping capacity(9). When individuals are unable to manage internal or external demands effectively, stress emerges(9). Academic stress has serious physical, mental, and social consequences(2). Physically, students may experience headaches, sleep disturbances, fatigue, reduced appetite, and digestive problems. Psychologically, stress manifests as anxiety, depression, guilt, and negative self-perception.

Students are the foundation of an educated society, and persistent academic stress has become a major contributor to rising mental health issues among young learners(4). Prolonged stress negatively affects academic performance and may lead to social withdrawal, emotional instability, and, in extreme cases, self-destructive behavior. Therefore, addressing academic stress is a critical concern for educational institutions and policymakers.

Government and educational bodies have emphasized the importance of student mental health. Reports by agencies such as



NCERT and UGC highlight that a large proportion of students identify academic pressure and examinations as primary sources of anxiety. Yoga, meditation, and mindfulness practices have been identified as effective coping strategies for stress management.

A UGC report, released in September 2025, aims to ensure equal access to quality mental health services for all students enrolled in Higher Educational Institutions (HEIs). It focuses on developing preventive measures for mental health issues such as academic pressure, peer pressure, behavioral challenges, stress, career anxieties, depression, and other problems.

General Guidelines:

- HEIs should regularly organize motivational lectures and other activities that help develop a positive mindset and attitude among students.
- Courses related to mental health can be included in the curriculum, and students can be awarded credits upon successful completion.
- Counselors should be appointed, etc.

The National Council of Educational Research and Training (NCERT) conducted a survey in September 2022 titled 'Mental Health and Well-being of School Students - A Survey, 2022'. This survey analyzed anxiety among students in grades 6-12 across India. Major cause of anxiety: A significant majority of respondents (81%) identified academics, examinations, and results as their primary sources of anxiety. Coping strategies: Frequently adopted coping mechanisms reported by students included yoga and meditation, attempting to change their thinking, and journaling.

Rajni and Gartia (2012), in their study on academic stress and academic achievement among higher secondary level students, found that students with lower levels of stress had higher academic achievement, and those with higher academic stress had lower levels of academic achievement.

The National Education Policy (2020) emphasizes holistic education that promotes not only cognitive development but also emotional, psychological, and social well-being. The integration of Indian Knowledge Systems with modern education is increasingly recognized as a meaningful approach to addressing contemporary challenges.

Indian Knowledge Systems encompass India's rich intellectual heritage, including philosophy, science, literature, Ayurveda, and Yoga. Among yogic practices, Nada Yoga holds a unique position. Rooted in ancient texts such as the Vedas, Upanishads, Hatha Yoga Pradipika, and Samaveda, Nada Yoga is based on the principle that the universe originates from sound vibrations(8). Through focused attention on sound, the practitioner progresses toward inner awareness and mental stability(8).

Nada Yoga Dhyan Sadhana influences brain waves, emotional regulation, and mental states. Sound vibrations affect the nervous

system and endocrine responses, promoting relaxation and psychological balance(8). Thus, Nada Yoga serves not only as a spiritual discipline but also as a scientifically relevant practice for stress management and mental well-being(8).

The present study attempts to explore the effectiveness of Nada Yoga Dhyan Sadhana in reducing academic stress among university students, thereby contributing empirical evidence to the application of Indian Knowledge System-based practices in contemporary education.

OBJECTIVES OF THE STUDY

The objectives of the present study are as follows:

1. To explain the significance of Nada Yoga Dhyan Sadhana as a practice rooted in the Indian Knowledge System.
2. To study the effect of Nada Yoga Dhyan Sadhana on academic stress among university-level students.

HYPOTHESIS OF THE STUDY

The following null hypothesis was formulated for the study:

H01: There is no significant difference in academic stress between the experimental group and the control group of university-level students.

RESEARCH METHODOLOGY

Research Design, Sample, and Grouping

The present study adopted an experimental research design to examine the effect of Nada Yoga Dhyan Sadhana on the academic stress of university-level students. Nada Yoga Dhyan Sadhana was treated as the independent variable, while academic stress served as the dependent variable. A single-group pre-test and post-test design along with a control group was employed to assess changes in stress levels over time and to compare outcomes between groups, thereby enhancing the internal validity of the study.

The sample comprised 120 undergraduate students aged 17–19 years from Gurukul Kangri University, Haridwar, selected through purposive sampling. Students with high levels of academic stress were identified through an initial screening process and were equally divided into an experimental group and a control group, each consisting of 60 students. The experimental group underwent the intervention, whereas the control group continued with their regular academic routine without any intervention.

Tool and Procedure

For data collection, the **Academic Stress Scale developed by Dr. Poorva Jain and Mrs. Neelam Dikshit** was used. The scale consists of **50 items** measured on a **five-point Likert scale** and is designed to assess academic stress among university-level students.



Pre-test data were collected from both the experimental and control groups using the Academic Stress Scale. Following the pre-test, the experimental group practiced **Nada Yoga Dhyana Sadhana for a period of three months**, for **15 minutes daily**, in a **meditative posture**. The practice involved listening to a **flute-based raga, specifically Raga Puriya Dhanashree**, which is traditionally associated with mental calmness and emotional stability. During the same period, the control group followed their regular academic routine without any intervention. After the completion of the intervention period, post-test data were collected from both groups using the same tool.

The study was conducted in accordance with established ethical standards. **Ethical clearance was obtained**, with **REC registration completed on 15 March 2024** by the **REC-DSVV**

Ethics Committee (Ref. No. **DSVV/EDU/13184/2024**). The study was subsequently registered with the **Clinical Trials Registry of India (CTRI)** on **25 October 2024** (Registration No. **CTRI/2024/10/075909**), ensuring transparency and adherence to ethical research practices. This research paper was presented in the two-day seminar organized by DIET Lohaghat on 18-19 January, 2026.

Results Analysis Table

Table 1: Comparison of Pre-Test and Post-Test Academic Stress Scores
This table presents the comparison of pre-test and post-test mean scores, standard deviation, and *t*-values to examine the effect of the intervention.

Test	Group	N	Mean (M)	SD	SED	t-value	Significance
Pre-Test	Experiment	60	92.05	10.24	1.76	0.77	Not Significant
	Control	60	90.70	9.01			
Post-Test	Experiment	60	77.05	12.34	2.26	-7.11	Significant (0.01)
	Control	60	93.08	12.36			

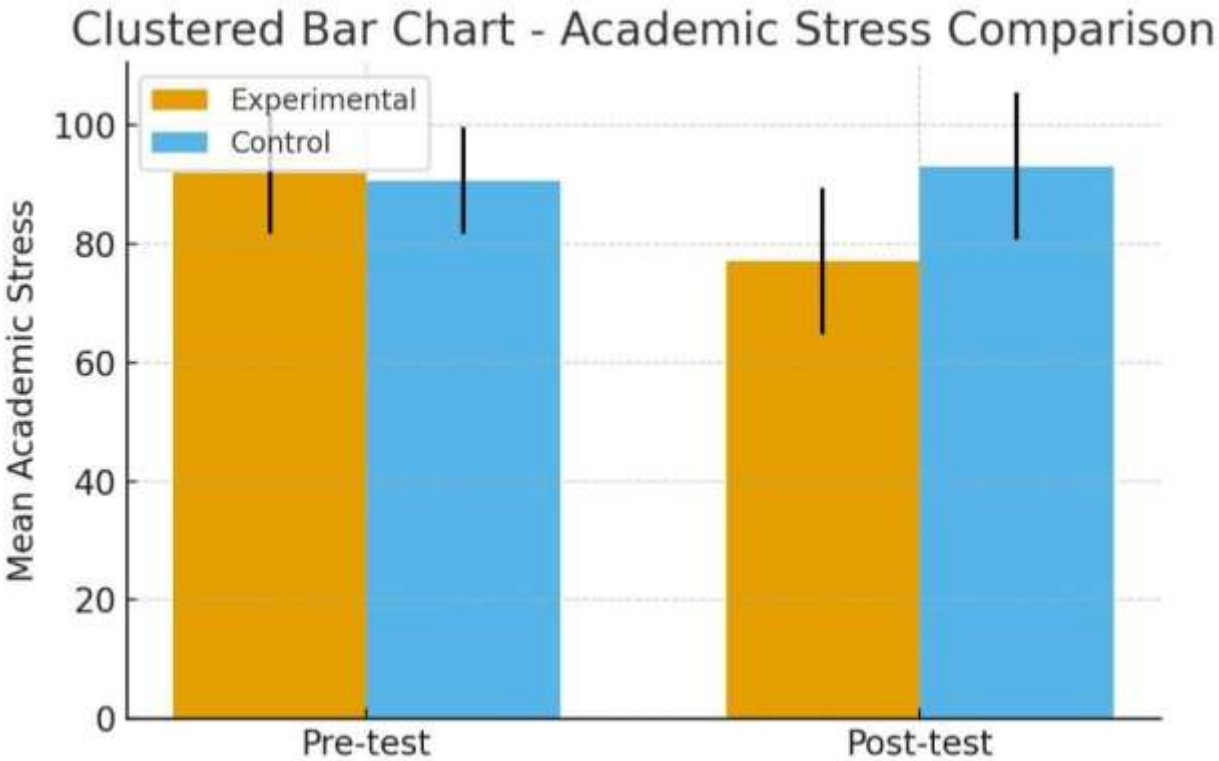
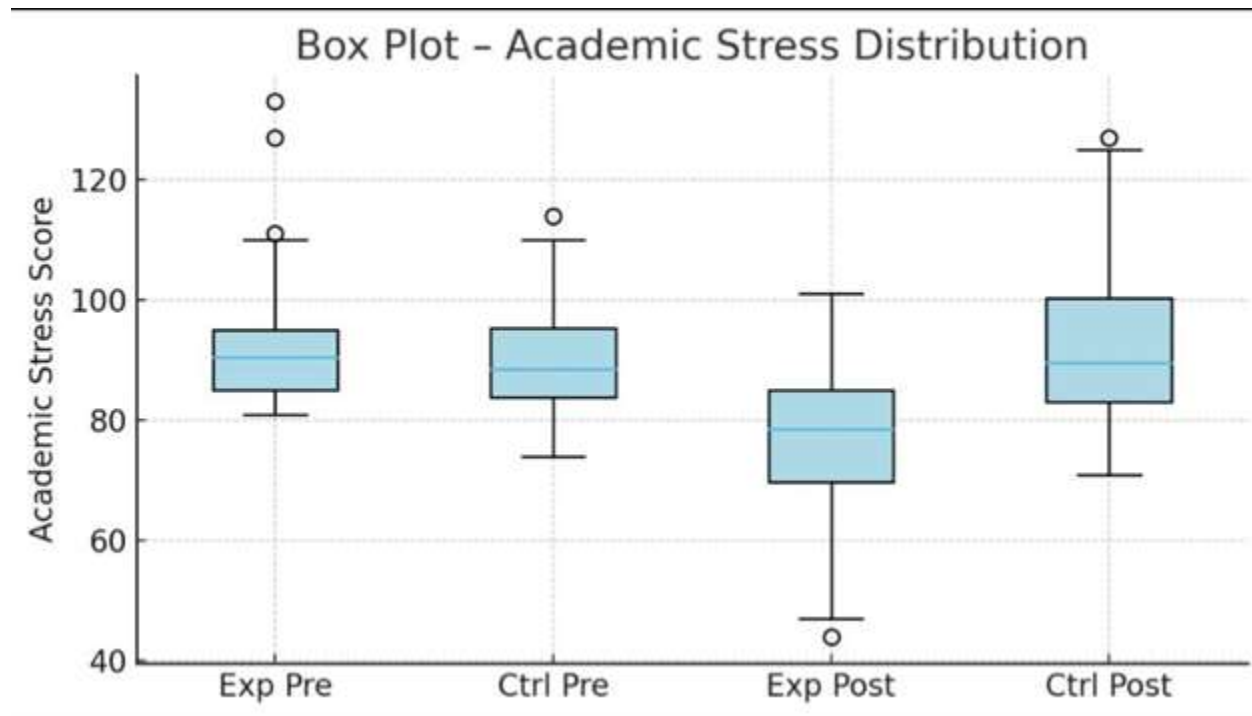




Table 2: Box Plot Descriptive Summary of Academic Stress Scores

Group	Median Stress Level	Interpretation
Experimental Pre-Test	90–95	High academic stress before intervention
Control Pre-Test	90–92	Comparable baseline stress level
Experimental Post-Test	75–80	Significant reduction in stress
Control Post-Test	90–95	No meaningful change observed



Interpretation

Interpretation for H01

Table 1: Comparison of Pre-Test and Post-Test Academic Stress Scores presents a comparison of academic stress scores between the experimental and control groups at the pre-test and post-test stages. At the pre-test stage, no significant difference was observed between the experimental group ($M = 92.05$, $SD = 10.24$) and the control group ($M = 90.70$, $SD = 9.01$), as indicated by the non-significant t-value ($t = 0.77$). This confirms that both groups were comparable in academic stress prior to the intervention.

At the post-test stage, a significant difference emerged between the two groups. The experimental group demonstrated a substantial reduction in academic stress ($M = 77.05$, $SD = 12.34$), whereas the control group showed higher stress levels ($M = 93.08$, $SD = 12.36$). The obtained t-value ($t = -7.11$) was statistically significant at the 0.01 level, indicating a meaningful effect of the intervention.

The results clearly indicate that the practice of Nada Yoga Dhyana Sadhana was effective in reducing academic stress among university-level students. Since no comparable reduction was

observed in the control group, the improvement in the experimental group can be attributed to the intervention. Thus, the null hypothesis was rejected, and the findings provide empirical support for Nada Yoga Dhyana Sadhana as an effective stress-reduction technique.

Table 2: Box Plot Descriptive Summary of Academic Stress Scores presents a box-plot illustrating the comparison of academic stress scores across four conditions:

Exp Pre – Experimental group before intervention

Ctrl Pre – Control group before intervention

Exp Post – Experimental group after intervention

Ctrl Post – Control group after intervention

1. Experimental Group (Pre-Test)

The median value appears to be approximately between 90 and 95, indicating relatively high academic stress levels before the intervention. The presence of several outliers reflects that some students experienced very high levels of stress.

Conclusion: Before the intervention, academic stress was high in the experimental group.



2. Control Group (Pre-Test)

The median value lies around 90–92, and the spread of scores is similar to that of the experimental pre-test group.

Conclusion: Prior to the intervention, both groups exhibited nearly identical stress levels, confirming that the groups were comparable at the baseline stage.

3. Experimental Group (Post-Test)

The median value drops significantly to approximately 75–80, indicating a clear reduction in academic stress. The lower whisker extends to nearly 45, suggesting that some students experienced a substantial decrease in stress. The overall distribution shifts downward.

Conclusion: The intervention had a positive and effective impact on the experimental group, resulting in a marked and meaningful reduction in academic stress.

4. Control Group (Post-Test)

The median remains around 90–95, similar to the pre-test condition. The overall distribution shows minimal change.

Conclusion: No major change is observed in the control group, as no intervention was administered.

Overall Interpretation

The intervention proved effective only for the experimental group. A substantial reduction in academic stress was observed in the post-test scores of the experimental group, while the control group remained largely unchanged. The box-plot clearly demonstrates that:

- The median stress score of the experimental group declined sharply from pre-test to post-test.
- The distribution of scores shifted downward.
- Some students experienced a very large reduction in stress, as indicated by the lower whisker.

These findings strongly indicate the effectiveness of Nada Yoga Dhyana Sadhana as an intervention for reducing academic stress. The results confirm that the intervention played a significant role in improving students' psychological well-being by lowering academic stress levels.

RESULTS AND DISCUSSION

The findings of the study revealed a significant reduction in academic stress among students practicing Nada Yoga Dhyana Sadhana. No significant difference was observed during the pre-test stage, indicating group equivalence. Post-test results demonstrated a substantial decrease in stress levels among the experimental group, while the control group showed no meaningful change.

These results confirm the effectiveness of Nada Yoga Dhyana Sadhana in managing academic stress. Sound-based meditation using specific ragas positively influences emotional balance and mental calmness. The findings are consistent with previous research highlighting the therapeutic effects of music and meditation.

CONCLUSION

The present study concludes that Nada Yoga Dhyana Sadhana is an effective, culturally rooted, and non-invasive practice for reducing academic stress among university-level students. The findings clearly indicate that students who regularly practiced Nada Yoga Dhyana Sadhana demonstrated a significant reduction in academic stress compared to those who did not receive any intervention. This reduction reflects the positive influence of sound-based meditative practices on students' psychological functioning and coping capacity.

Regular practice of Nada Yoga appears to foster emotional stability, mental calmness, and enhanced self-regulation, enabling students to respond more effectively to academic pressures. By facilitating inner awareness and relaxation, Nada Yoga Dhyana Sadhana helps students manage stress in a balanced and constructive manner without reliance on external or pharmacological interventions. The results suggest that such traditional meditative practices can play a meaningful role in promoting students' overall well-being and academic adjustment.

Furthermore, the study highlights the relevance of Indian Knowledge System-based practices in addressing contemporary educational challenges. The integration of Nada Yoga Dhyana Sadhana within educational settings aligns with the vision of the National Education Policy (NEP 2020), which emphasizes holistic development, mental well-being, and the incorporation of indigenous knowledge traditions into modern education.

In conclusion, Nada Yoga Dhyana Sadhana offers a practical, cost-effective, and accessible approach for managing academic stress among university students. Its inclusion as a supportive practice in higher education institutions may contribute to the creation of healthier academic environments and support the holistic development of learners.

EDUCATIONAL IMPLICATIONS

1. Nada Yoga Dhyana Sadhana can be introduced as a supportive intervention in educational institutions.
2. Meditation-based practices can help students manage academic pressure effectively.
3. Integration of Indian Knowledge Systems can promote holistic education.

LIMITATIONS OF THE STUDY

1. The study was limited to a single university.
2. The duration of intervention was limited.
3. Self-report tools were used for data collection.

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