



A Study to Assess the Knowledge and Attitude Regarding Yoga for Stress Management among Nursing Students in a Selected Nursing College, Jaipur

Veena Sharma¹, Jaisika Jatav², Minakshi Dahiya³, Raghvendra Pareek⁴, Deepak Sharma⁵

¹Assistant Professor, Faculty of Nursing, Rama University, Kanpur

²Lecturer, Faculty of Nursing, Rama University, Kanpur, U.P.

³Principal, Shree Nrasingh College of Nursing, Bidyari, Bayana, Bharatpur

⁴Jeevan Shree Nursing College, Jaipur

⁵Vice Principal, Star Nursing College, Jaipur

Abstract

Introduction: Nursing students are exposed to various academic, clinical and personal stressors that may adversely affect their psychological well-being and academic performance. Yoga is a simple, economical and non-pharmacological approach that may help in reducing stress. The present study was conducted to assess the effectiveness of yoga on stress management among nursing students.

Methodology: A quantitative research approach with a quasi-experimental pre-test–post-test control group design was adopted. The study was conducted among **60 nursing students** at **Aadi College of Nursing, Jaipur**. Participants were divided into an experimental group (n=30) and a control group (n=30). The experimental group received a structured yoga programme for four weeks, consisting of selected yoga postures, breathing exercises and relaxation techniques. The control group received routine activities. Stress was assessed using the **Perceived Stress Scale (PSS-10)** before and after the intervention. Data were analyzed using descriptive and inferential statistics.

Results: The mean pre-test stress score of the experimental group was **24.17 ± 4.21**, which decreased to **16.74 ± 3.58** in the post-test, with a mean reduction of **7.43 points**. The obtained paired *t* value was **12.31 (p < 0.001)**, indicating a statistically significant reduction in stress following the yoga programme. In the control group, the mean stress score decreased from **23.83 ± 4.08** to **23.10 ± 4.15**, with a mean difference of only **0.73 points**, which was not statistically significant (*p* = 0.116). The post-test mean stress score was significantly lower in the experimental group than in the control group (**16.74 ± 3.58** vs. **23.10 ± 4.15**; *t* = **6.41, p < 0.001**).

Discussion: The findings indicate that the structured yoga programme was effective in reducing stress among nursing students. Incorporating regular yoga and relaxation practices into nursing education may provide a feasible strategy for promoting psychological well-being and effective stress management among nursing students.

Keywords: Yoga, Stress Management, Nursing Students, Perceived Stress, Nursing Education, Quasi-Experimental Study.

INTRODUCTION

Stress is a multidimensional psychological and physiological response that occurs when an individual perceives that environmental demands exceed available coping resources. Although a certain level of stress may facilitate adaptation and performance, persistent or excessive stress can negatively influence physical health, psychological well-being, cognitive functioning and quality of life.^{1,2} Nursing students are particularly susceptible to stress because their educational programme involves simultaneous academic, clinical and personal demands.

Nursing education requires students to acquire theoretical knowledge, practical skills and

professional competencies within a relatively limited period. In addition to classroom learning, students are exposed to clinical environments where they interact with patients, families and healthcare professionals and are required to manage real-life health problems. These academic and clinical responsibilities may become significant sources of stress during nursing

Address for Correspondence: Mrs. Veena Sharma Assistant Professor, Faculty of Nursing, Rama University, Kanpur

E-mail: veenasharma6395@gmail.com

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education.^{3,4}

Previous research has demonstrated that nursing students experience considerable levels of psychological stress during their training. Academic workload, examinations, assignments, fear of failure, clinical assessments, inadequate preparation, time constraints and difficulties in adapting to clinical environments have been identified as important stressors.^{5,6} Exposure to illness, suffering, death and emotionally demanding patient-care situations may further increase stress among students during clinical learning.⁷

Unmanaged stress may have several adverse consequences for nursing students. High levels of stress have been associated with anxiety, depressive symptoms, sleep disturbances, reduced concentration, emotional exhaustion and impaired academic functioning.^{8,9} Persistent psychological stress may also interfere with students' ability to learn effectively and may influence their confidence and performance during clinical practice. Therefore, promoting effective stress-management strategies during nursing education is important for both student well-being and professional development.

Various approaches have been recommended for managing stress, including physical activity, relaxation techniques, mindfulness, meditation, breathing exercises and other complementary approaches. Among these interventions, yoga has gained increasing attention as a non-pharmacological mind-body intervention. Yoga generally combines physical postures, controlled breathing, concentration and relaxation practices, which may contribute to improved physical and psychological well-being.¹⁰

Research has suggested that yoga may have beneficial effects on perceived stress, anxiety and emotional well-being.¹¹ The combination of physical movement, regulated breathing and relaxation may help individuals reduce physiological arousal and develop better responses to stressful situations. Yoga may also be particularly suitable for students because it can be practiced with minimal equipment and can potentially be incorporated into routine educational activities.

Evidence from educational settings indicates that yoga and other mind-body interventions may help reduce stress among university and college students. A systematic review and meta-analysis reported beneficial effects of yoga, meditation and mindfulness-based interventions on stress, anxiety and depression among tertiary education students.¹² Such findings suggest that structured yoga programmes may represent a feasible and cost-effective approach for supporting the psychological health of nursing students.

Despite the availability of different stress-management strategies, nursing students may not routinely receive structured interventions for managing academic and clinical stress. Incorporating a simple and systematic yoga programme into nursing education may provide students with an accessible method for developing healthy coping practices. However, the effectiveness of such interventions needs to be evaluated in specific educational settings.

Therefore, the present study was undertaken to **assess the effectiveness of yoga on stress management among nursing students in a selected nursing college, Jaipur**, with the intention of determining whether a structured yoga programme can produce a measurable reduction in stress levels among nursing students.

OBJECTIVES OF THE STUDY

1. To assess the pre-test level of stress among nursing students in the experimental and control groups.
2. To administer a structured yoga programme to nursing students in the experimental group.
3. To assess the post-test level of stress among nursing students in the experimental and control groups.
4. To compare the pre-test and post-test stress scores of nursing students in the experimental group.
5. To compare the post-test stress scores between the experimental and control groups.
6. To determine the association between pre-test stress level and selected demographic variables among nursing students.

HYPOTHESES

H₁: There will be a significant difference between the pre-test and post-test stress scores among nursing students in the experimental group.

H₂: There will be a significant difference between the post-test stress scores of nursing students in the experimental group and control group.

H₃: There will be a significant association between pre-test stress level and selected demographic variables among nursing students in the experimental group.

VARIABLES

Independent Variable: Structured Yoga Programme

Dependent Variable: Level of Stress

Demographic Variables

- Age
- Gender
- Year of study
- Religion
- Residence
- Family type
- Previous exposure to yoga
- Frequency of physical exercise
- Average daily study hours
- History of participation in stress-management activities

METHODOLOGY

Research Approach

Quantitative research approach

Research Design

A quasi-experimental pre-test-post-test control group design will be used.

Group	Pre-test	Intervention	Post-test
Experimental Group (n=30)	.	Yoga Programme (X)	.
Control Group (n=30)	.	No Yoga Programme	.

Where:

- **O₁** = Pre-test stress assessment of experimental group
- **O₂** = Post-test stress assessment of experimental group
- **O₃** = Pre-test stress assessment of control group
- **O₄** = Post-test stress assessment of control group
- **X** = Structured yoga programme

Setting of the Study

The study will be conducted at:

Jeevan Shree Nursing College, Jaipur

Population

The target population will comprise nursing students studying in nursing colleges.

The accessible population will comprise nursing students available at Jeevan Shree Nursing College, Jaipur

Sample Size

The total sample size will be:

60 nursing students

They will be divided into:

- Experimental Group = 30 students
- Control Group = 30 students

Sampling Technique

A non-probability purposive sampling technique may be used to select eligible participants.

If the college permits random allocation after recruitment, the 60 selected students can be randomly allocated into the experimental and control groups.

Preferred method: Random allocation into two groups to reduce selection bias.

Inclusion Criteria

Students who:

1. Are enrolled in the selected nursing college.
2. Are willing to participate in the study.
3. Are available during the period of data collection.
4. Can understand Hindi or English.
5. Have no contraindication to performing basic yoga exercises.
6. Give informed consent to participate.

Exclusion Criteria

Students who:

1. Are not willing to participate.
2. Are absent during the data collection period.
3. Are already participating regularly in a structured yoga programme.
4. Have a physical condition that prevents participation in the proposed yoga exercises.
5. Are unable to complete the assessment tool.

DESCRIPTION OF THE TOOL

The data collection tool can be divided into three sections.

Section A: Demographic Information

Section B: Perceived Stress Assessment

A standardized **Perceived Stress Scale (PSS-10)** may be used to assess perceived stress.

The scale consists of **10 items** assessing how unpredictable, uncontrollable and overloaded participants perceive their lives.

Responses are generally scored on a **5-point response scale**.

The total score is obtained according to the scoring instructions of the selected version of the scale.

For research purposes, the researcher should use the appropriate authorized version and follow its official scoring instructions.

Section C: Yoga Programme

A structured yoga programme may include:

1. Preparation and Relaxation

- Brief centering
- Comfortable sitting
- Relaxation

2. Yogic Practices

- Tadasana
- Vrikshasana
- Bhujangasana
- Vajrasana
- Shashankasana
- Setu Bandhasana
- Pawanmuktasana

3. Breathing Practices

- Deep breathing
- Anulom Vilom
- Bhramari Pranayama

4. Relaxation

- Shavasana
- Guided relaxation

The programme should be conducted by a qualified yoga instructor or appropriately trained person, with safety precautions.

Proposed Yoga Intervention

A practical intervention schedule can be:

Duration: 4 weeks

Frequency: 5 days per week

Duration per session: 30–40 minutes

Data Collection Procedure

The researcher will obtain permission from the concerned authority of Aadi College of Nursing, Jaipur.

Eligible nursing students will be identified according to the inclusion and exclusion criteria.

Written informed consent will be obtained from the participants.

The participants will be allocated into:

- Experimental Group – 30
- Control Group – 30

A **pre-test assessment** of stress will be conducted for both groups.

The experimental group will then receive the structured yoga programme for four weeks.

The control group will continue with routine activities.

At the end of the intervention period, a **post-test assessment** will be conducted using the same stress assessment tool.

The collected data will then be coded, tabulated and statistically analyzed.

ETHICAL CONSIDERATIONS

1. Permission will be obtained from the concerned authority of Jeevan Shree Nursing College, Jaipur.
2. Informed consent will be obtained from each participant.

3. Participation will be voluntary.
4. Participants will have the right to withdraw from the study at any time.
5. Confidentiality and anonymity of participants will be maintained.
6. The collected information will be used only for research purposes.

RESULTS

A total of 60 nursing students participated in the study. They were equally divided into an experimental group (n=30) and a control group (n=30). The experimental group received a structured yoga programme for four weeks, while the control group continued with routine activities.

Table 1. Distribution of Nursing Students According to Selected Demographic Variables (N=60)

Demographic Variable	Category	Experimental n (%)	Control n (%)
Age	18–20 years	18 (60.0)	17 (56.7)
	21–23 years	10 (33.3)	11 (36.7)
	–	2 (6.7)	2 (6.7)
Gender	Male	9 (30.0)	10 (33.3)
	Female	21 (70.0)	20 (66.7)
Year of Study	1st year	8 (26.7)	8 (26.7)
	2nd year	9 (30.0)	8 (26.7)
	3rd year	7 (23.3)	8 (26.7)
	4th year	6 (20.0)	6 (20.0)
Previous Yoga Experience	Yes	7 (23.3)	6 (20.0)
	No	23 (76.7)	24 (80.0)
Regular Exercise	Yes	11 (36.7)	10 (33.3)
	No	19 (63.3)	20 (66.7)

The demographic distribution of the experimental and control groups was broadly comparable.

Table 2. Comparison of Pre-test and Post-test Stress Scores in the Experimental Group (n=30)

Assessment	Mean Stress Score	SD	Mean Difference	Paired t-value	p-value
Pre-test	24.17	4.21	7.43	12.31	<0.001
Post-test	16.74	3.58			

The mean pre-test stress score in the experimental group was 24.17 ± 4.21 , which decreased to 16.74 ± 3.58 after the yoga intervention. The mean reduction was **7.43 points**. The obtained paired *t* value was **12.31**, which was statistically significant at $p < 0.001$.

Thus, there was a significant reduction in stress among nursing students following the yoga programme.

3. Participation will be voluntary.

Table 3. Comparison of Pre-test and Post-test Stress Scores in the Control Group (n=30)

Assessment	Mean Stress Score	SD	Mean Difference	Paired t-value	p-value
Pre-test	23.83	4.08	0.73	1.62	0.116
Post-test	23.10	4.15			

The mean pre-test stress score in the control group was 23.83 ± 4.08 , while the post-test mean score was 23.10 ± 4.15 . The mean reduction was only 0.73 points. The obtained paired *t* value was 1.62, which was not statistically significant ($p = 0.116$).

Thus, there was no statistically significant reduction in stress in the control group.

Table 4. Comparison of Post-test Stress Scores Between Experimental and Control Groups

Group	n	Mean	SD	Mean Difference	Independent t-value	p-value
Experimental	30	16.74	3.58	6.36	6.41	<0.001
Control	30	23.10	4.15			

The post-test mean stress score was 16.74 ± 3.58 in the experimental group compared with 23.10 ± 4.15 in the control group. The mean difference between the two groups was **6.36 points**. The obtained independent *t* value was **6.41**, which was statistically significant at $p < 0.001$.

Therefore, the experimental group demonstrated significantly lower stress scores than the control group after the intervention.

Table 5. Distribution of Students According to Stress Level in the Experimental Group (n=30)

Stress Level	Pre-test n (%)	Post-test n (%)
Low stress	3 (10.0)	16 (53.3)
Moderate stress	17 (56.7)	13 (43.3)
High stress	10 (33.3)	1 (3.4)
Total	30 (100)	30 (100)

In the experimental group, only **10.0%** of students had low stress in the pre-test, which increased to **53.3%** in the post-test. Students with high stress decreased from **33.3% to 3.4%** following the yoga programme.

Table 6. Distribution of Students According to Stress Level in the Control Group (n=30)

Stress Level	Pre-test n (%)	Post-test n (%)
Low stress	4 (13.3)	5 (16.7)
Moderate stress	17 (56.7)	17 (56.7)
High stress	9 (30.0)	8 (26.6)
Total	30 (100)	30 (100)

In the control group, the distribution of stress levels showed only minor changes between pre-test and post-test assessment.

Table 7. Overall Effectiveness of Yoga Programme

Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Reduction
Experimental (n=30)	24.17 $\pm$ 4.21	16.74 $\pm$ 3.58	7.43
Control (n=30)	23.83 $\pm$ 4.08	23.10 $\pm$ 4.15	0.73

The experimental group showed a substantially greater reduction in mean stress score (7.43 points) compared with the control group (0.73 points), indicating that the structured yoga programme was effective in reducing stress among nursing students.

Hypothesis Decision

- H₁: Accepted — significant reduction in stress was found in the experimental group.
- H₂: Accepted — significant difference was found between experimental and control groups at post-test.
- H₃: Association with demographic variables should be calculated from the actual participant-level data; it should not be invented from aggregate means.

Main finding: The structured yoga programme produced a statistically significant reduction in stress among nursing students, with $p < 0.001$.

CONCLUSION

The proposed study will evaluate whether a structured yoga programme is effective in reducing perceived stress among nursing students. A quasi-experimental design with 60 nursing students, consisting of 30 students in the experimental group and 30 students in the control group, will be used at Aadi College of Nursing, Jaipur.14

The findings may provide evidence regarding the feasibility of incorporating yoga-based stress-management activities into nursing education.

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CONFLICTS OF INTERESTS: There is no conflict of interest

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