Int. J. Sci. R. Tech., 2026 3(5)
A Multidisciplinary peer-reviewed Journal
www.ijsrtjournal.com [ISSN: 2394-7063]

Original Article

A Study To Assess The Perceived Stress And The Effectiveness Of Mind Fullness Meditation Among Staff Nurses Working In Critical Care Units In Selected Hospital At Mysuru.

Munirathnamma K.[1], Sunitha P. S.*[2], Mamatha G.[3]

[1]*Dept. of OBG, JSS College of Nursing. Mysuru.*
[2]*Dept. of Mental Health Nursing, JSS College of Nursing, Mysuru.*
[3]*Dept. of Medical Surgical Nursing, JSS College of Nursing, Mysuru.*

ABSTRACT

Background of the study: Nursing is a demanding profession, especially in Intensive Care Units (ICUs), where nurses manage critically ill patients, complex procedures, and emergencies. Continuous exposure to such stressors can lead to burnout, reduced job satisfaction, and compromised patient care. Evidence shows that mindfulness meditation helps reduce stress, improve emotional resilience, and enhance focus. Therefore, it serves as an effective coping strategy for ICU nurses to manage stress and maintain quality care. Therefore, the present study was undertaken to evaluate the effectiveness of mindfulness meditation among ICU nurses. Aim and Objective: The aim of this study was to assess the effectiveness of mind fullness meditation among staff nurses working in critical care units in selected hospital at Mysuru. Methods and materials: One group pre-test post-test design was used and non-probability purposive sampling technique was used for selecting 30 staff nurses working in critical care units in selected hospital at Mysuru. Pilot study was conducted the study design was found to be feasible. Modified Perceived Stress Scale was used to assess level of stress before and after administering mindfulness meditation for 15 days. The data was analyzed using descriptive and inferential statistics. Result: The study findings showed that the mean stress score among staff nurses working in intensive care units prior to the intervention was 47.86 with SD ±11.25, ranging from 24 to 63. Following the intervention, the mean stress score significantly decreased to 12.63 with SD ± 5.82), with a range of 3 to 24. The calculated t value ($t = 16.26$, $p < 0.05$) exceeded the table value ($t(29) = 2.045$), indicating a statistically significant difference between pre- and post-intervention stress levels. Therefore, the null hypothesis was rejected and the research hypothesis was accepted, demonstrating the effectiveness of the intervention in reducing stress among ICU staff nurses. Conclusion: The study was concluded that, mindfulness meditation was effective in reducing the stress among staff nurses working in critical care units in selected hospital at Mysuru.

Keywords: Mind fullness meditation, Staff nurses, Critical care units.

INTRODUCTION

Nursing is a demanding profession that requires both emotional and physical endurance, especially for those working in high-stress environments such as the Intensive Care Unit (ICU). ICU nurses are responsible for providing critical care to patients in life-threatening conditions, often dealing with complex medical procedures, rapid decision-making, and unpredictable emergencies. The constant exposure to such stressors can result in elevated levels of occupational stress, leading to burnout, decreased job satisfaction, and compromised patient care.

Stress is a natural response to challenging or demanding situations, triggering the body's "fight or flight" mode. While some stress is normal and can be motivating, chronic or excessive stress can negatively impact mental and physical health. Symptoms of stress can include anxiety, irritability, headaches, fatigue, and difficulty concentrating. Over time, prolonged stress can contribute to conditions like

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

heart disease, high blood pressure, and mental health disorders such as depression or anxiety.

Chronic exposure to psychological stress resulting from an imbalance between occupational demand and an individual's ability to cope is known as "burnout" (Saeidi et al., 2020). A growing number of health care professionals are finding themselves unable to cope with high levels of stress, with studies reporting that up to 70% of intensive care unit (ICU) nurses and over 40% of hospital nurses experience work-related burnout.

NEED FOR THE STUDY

Nursing, particularly in intensive care units (ICUs), is recognized globally as a highly stressful profession due to continuous exposure to critically ill patients, high mortality rates, ethical dilemmas, and demanding workloads. Worldwide evidence indicates that stress and burnout among nurses are a significant public health concern. A global review reported that approximately 33.45% of nurses experience emotional exhaustion, highlighting the widespread burden of burnout in the nursing workforce. Specifically, among ICU nurses, studies show that 31% experience high emotional exhaustion , reflecting severe occupational stress in critical care settings.

In India, the situation is equally concerning. A study conducted among ICU staff revealed that the overall prevalence of stress was 52.43%, with 68.29% among nurses**,** indicating that nurses are particularly vulnerable to stress compared to other healthcare professionals. Further more, recent evidence from Kerala demonstrated that 86.7% of ICU nurses experienced moderate to high levels of stress, workload, or burnout**,** with nearly half reporting high stress level.

High stress levels among ICU nurses not only affect their physical and psychological well-being but also compromise patient safety, quality of care, and job satisfaction. Persistent stress can lead to burnout, increased medical errors, absenteeism, and attrition from the profession.

Despite the high prevalence of stress, there is a need for effective, feasible, and non-pharmacological interventions to reduce stress among ICU nurses. Mindfulness meditation has emerged as a simple, cost-effective strategy to improve mental well-being and resilience. However, limited interventional studies have been conducted in this area, particularly in the Indian context.

OBJECTIVES

1. To assess perceived stress among staff nurses working in critical care units
2. To determine the effectiveness of mindfulness meditation on stress management among staff nurses working in critical care units
3. To find out the association between level of perceived stress with their selected personal variables.

HYPOTHESES

H_1 -There will be a significant difference between pre intervention and post intervention level of stress among nurses working in intensive care units.

H_2- There will be a significant association between level of stress among nurses working in intensive care units with their selected personal variables.

ASSUMPTIONS

1. Nurses working in ICUs may experience higher levels of stress compared to nurses in other hospital departments.
2. Mindfulness meditation may be an effective intervention for reducing stress.

DELIMITATIONS

The study is delimited to 30 nurses working in intensive care units of selected hospital at Mysuru.

MATERIALS AND METHODS

The primary objective of this study was to assess the effectiveness of mindfulness meditation in reducing stress among staff nurses working in intensive care units. An evaluative research approach and one group pre test post test designwas adopted to determine the effectiveness of mindfulness meditation on stress levels among ICU staff nurses. This design was considered appropriate as it enabled the comparison

of stress levels before and after the intervention without manipulation of other variables.

Variables under study

Independent variable: Mindfulness meditation

Dependent variables: Level of stress among nurses working in intensive care units

Selected Personal variables: Age, Gender, Educational qualification, Marital status, working experience, working hours, Attended stress management course and History of any Medical illness.

SETTING OF THE STUDY

The study was conducted in selected Hospital at Mysuru.

POPULATION

Target Population: Staff nurses working in intensive care units.

Accessible Population: Staff nurses working in intensive care units at selected Hospital at Mysuru.

SAMPLE AND SAMPLING TECHNIQUE

The study sample comprises 30 staff nurses working in intensive care units at selected Hospital at Mysuru were selected using a non-probability purposive sampling technique was used for selecting 30 staff nurses for the study.

RESEARCH METHODOLOGY-DESCRIPTION

A one-group pre-test post-test design is a type of quasi-experimental research used to evaluate the impact of an intervention or treatment on a single group of participants. In this design, data is collected from the same group both before and after the intervention. In this study, the perceived stress levels of staff nurses are measured prior to the intervention, after which Mindfulness meditation was implemented as a structured intervention among staff nurses working in intensive care units. Prior to initiation, participants received a brief orientation regarding the purpose and procedure of the intervention. The intervention consisted of guided mindfulness meditation sessions conducted in a quiet and comfortable setting within the hospital. Each session lasted 15–20 minutes and was administered once daily for 5 days per week for a period of 2 weeks**.**

SAMPLING CRITERIA

Inclusion Criteria

Staff nurse who

- are currently working in an ICU at the selected Hospital.
- are having at least 6 months of experience working in the ICU.
- are Willing to Participate in the study

Exclusion Criteria

Staff nurse who

- are having any significant medical or psychological conditions.
- have practiced mindfulness meditation or similar relaxation techniques regularly (e.g., more than 3 times per week) within the last 6 months.

DATA COLLECTION TECHNIQUE AND INSTRUMENTS USED

Selection and development of tools:

The research instrument is a device used to measure the concept of interest in a research project that a researcher used to collect data. Based on the review of literature following data collection tools were developed by the researcher:

Section A: Proforma for the selected personal variable.

Section B: Modified perceived stress scale to assess level of stress

Section A: Description of proforma for selected personal variables.

This section includes the basic information about staff nurses viz. age, gender, educational qualification, marital status, working experience, working hours,

attended stress management course and history of any Medical illness.

Section B: Modified perceived stress scale to assess level of stress

The Modified Perceived Stress Scale (MPSS) is a version of the original Perceived Stress Scale (PSS) that has been adapted to provide a more comprehensive evaluation of the various dimensions of stress, including physical, emotional, behavioural, and cognitive symptoms.

RELIABILITY

The reliability of the modified Perceived Stress Scale (MPSS) was determined by using test retest method to assess the level of stress among 30 staff nurses working in intensive care units in selected hospital at Mysuru, Reliability Coefficient was (r) 0.84 and hence the Tool was found to be reliable.

PILOT STUDY

A pilot study was conducted after obtaining approval from the concerned authorities. The purpose of the pilot study was to pretest the data collection instruments, assess the feasibility of the study procedures, and refine the plan for statistical analysis. Informed consent was obtained from all participants prior to data collection. The results of the pilot study indicated that the study design and procedures were feasible for the main study.

DATA COLLECTION PROCEDURE

Data collection was carried out after obtaining ethical clearance and permission from the concerned authorities. Samples were selected based on the predefined inclusion criteria. Baseline stress levels were assessed using the Modified Perceived Stress Scale prior to the intervention. Following the baseline assessment, a structured mindfulness meditation intervention was administered. Each session lasted 15–20 minutes and was conducted once daily, five days per week, for a duration of two weeks. Post-intervention stress levels were assessed using the same Modified Perceived Stress Scale to evaluate the effectiveness of the intervention.

PLAN OF DATA ANALYSIS

Descriptive statistics:

1. Frequency and percentage will be used to describe personal variables.
2. Mean, median, and standard deviation will be used describe stress scores among staff nurses working in intensive care units.

Inferential statistics:

1. Paired ‘t’ test to evaluate the effectiveness of mindfulness meditation on level of stress among staff nurses working in intensive care units.
2. Chi square to find the association between level of stress among staff nurses working in intensive care units with their selected personal variables.

SECTION 1

Description of selected personal variables of staff nurses working in critical care units

Results of the study revealed that the majority, 14 (46.66%), were aged above 40 years, followed by 13 (43.33%) in the 31–40 years age group, and 3 (10%) in the 21–30 years age group. Most participants were female 21 (70%), while 9 (30%) were male. Regarding educational status, 21 (70%) had completed a diploma in nursing and 9 (30%) held a degree in nursing. A large proportion, 28 (93.33%), were married, whereas 2 (6.66%) were unmarried. In terms of work experience, the majority, 25 (83.33%), had more than 10 years of experience, 4 (13.33%) had less than 5 years of experience, and 1 (3.33%) had 6–10 years of experience. Most participants, 28 (93.33%), worked 8 hours per day, while 2 (6.66%) worked more than 8 hours daily. Notably, all participants 30 (100%) had not attended any stress management course in the past six months and reported no history of medical illness.

SECTION 2: Effectiveness of mindfulness meditation on level of stress among staff nurses working in intensive care units.

a) Mean, median, range, and standard deviation of stress scores of staff nurses working in an intensive care unit.

The stress score obtained from the study subjects were tabulated to a master. Mean, median, standard deviation and range of the stress score were computed. The findings indicate that the mean stress score among staff nurses working in intensive care units prior to the intervention was 47.86 with SD±11.25 and scores ranging from 24 to 63. Following the intervention, the mean stress score decreased to 12.63 with SD ± 5.82 and scores ranging from 3 to 24.

1. Frequency and percentage distribution of staff nurses working in intensive care units according to their level of stress before and after intervention.

TABLE 1

Frequency and percentage distribution of staff nurses working in intensive care units according to their level of stress before and after intervention.

n=30

Level of stress	Before intervention		After intervention	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Low stress (< 20%)	0	0	26	86.66
Moderate stress (20-50%)	14	46.66	4	13.33
High stress (51-80%)	16	53.33	0	0
Sever stress (> 80%)	0	0	0	0

The data presented in Table 1 revealed that before the intervention, the majority of participants 16 (53.33%) experienced high stress, while 14 participants (46.66%) had moderate stress. After the intervention, most of the participants 26(86.66%) reported low stress, and only 4 participants (13.33%) experienced moderate stress.

C. Significance difference between the pre-intervention and post-intervention stress scores of staff nurses working in intensive care units.

In order to find out the significance of difference in the pre-intervention and post-intervention stress scores of staff nurses working in intensive care units paired t test was computed. The data presented in the Table 2

To test the statistical significance, the following null hypothesis is stated.

H_{01} -There will be no statistically significant difference between pre-intervention and post-intervention stress scores of staff nurses working in intensive care units.

n=30

Stress scores	Mean	Mean difference	Standard deviation	Degrees of freedom	Paired t value
Pre intervention	47.86	35.23	±11.25	29	16.26*
Post intervention	12.63		±5.82		

$t_{(29)}$= 2.045, p<0.05, *significant

The data presented in the table 2 revealed that the calculated t value p=16.26 was greater than the table value $t_{(29)}$= 2.045. Hence the null hypothesis is rejected and the research hypothesis is accepted, indicating that mindfulness meditation was effective in significantly reducing stress levels among staff nurses working in intensive care units.

SECTION 3: Findings related to association between the level of stress among staff nurses working in intensive care units and their selected personal variables.

To find out the association between the level of stress among staff nurses working in intensive care units and their selected personal variables chi square was computed.

To test the statistical significance, the following null hypothesis is stated.

H_{02}-There will be no significant association between the level of stress among staff nurses working in intensive care units and their selected personal variables.

Results of the study revealed no significant association between stress levels and selected variables except educational qualification. Hence, the null hypothesis was partially accepted, and educational qualification was significantly associated with stress levels at $p < 0.05$.

DISCUSSION

A statistically significant difference was observed between pre-intervention and post-intervention stress scores among staff nurses working in intensive care units, as the calculated t value (t = 16.26) exceeded the table value ($t_{(29)}$ = 2.045). Therefore, the null hypothesis was rejected, indicating that the intervention was effective in reducing stress levels. These findings are consistent with the results reported by Kim AJ, Na S, Kim JY, Kim SJ, and Kim J, who demonstrated that an online supportive music and imagery intervention significantly improved stress management among ICU nurses.

CONCLUSION

A statistically significant reduction in stress was observed among ICU nurses following the intervention. Post-intervention scores were markedly lower than pre-intervention scores. This confirms the effectiveness of the intervention. Hence, non-pharmacological interventions are effective in reducing stress.

REFERENCES

1. Van der Cingel M, Hoonhout M. The emotional challenges of critical care nursing: Stress and its impact on the ICU nurse. Intensive Crit Care Nurs. 2016; 32:28-36.
2. McEwen B S. Protective and damaging effects of stress mediators: Central role of the brain. Dialogues Clin Neurosci. 2006;8(4):367-381.
3. Saeidi M, Sadeghi A, Davoodi M, et al. The relationship between occupational stress and burnout in hospital nurses. Nurs Manag. 2020;27(1):43-49.
4. Mealer M, Burnham EL, Goode CJ, Rothbaum B, Moss M. The prevalence and impact of post-traumatic stress disorder and burnout syndrome in nurses. Depress Anxiety. 2009;26(12):1118-26.
5. Kim AJ, Na S, Kim JY, Kim SJ, Kim J. An online supportive music and imagery intervention to promote ICU nurses' stress management: Preliminary study. Heliyon. 2024 Jul 23;10(15):e35117. doi: 10.1016/j.heliyon.2024.e35117. PMID: 39170279; PMCID: PMC11336480.

HOW TO CITE: Munirathnamma K.[1], Sunitha P. S.*[2], Mamatha G.[3], A Study To Assess The Perceived Stress And The Effectiveness Of Mind Fullness Meditation Among Staff Nurses Working In Critical Care Units In Selected Hospital At Mysuru., Int. J. Sci. R. Tech., 2026, 3 (5), 789-794. https://doi.org/10.5281/zenodo.20338339