

# A Study to Assess the Effectiveness of Education Module on Psychological Stress Experiences and Coping Among Staff Nurses Working in COVID Ward at a Selected Hospital in Bangalore

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## Abstract

*Occupational stress is a growing concern among healthcare professionals, particularly staff nurses working in COVID wards. The study aimed to explore the sources and effects of occupational stress among staff nurses at Suprabha Hospital, Bangalore, using a pre-experimental one-group pretest-post-test design. 60 staff nurses working in COVID wards were selected through convenient sampling. The results showed that younger nurses, those from joint families, and those with less work experience reported higher stress scores. Additionally, nurses who experienced chronic headaches due to occupational stress showed a significant reduction in stress scores. The study identified four major categories of occupational stressors: working conditions, relationships at work, role conflict and ambiguity, and organizational structure and climate. The findings emphasize the importance of implementing stress management interventions and fostering a healthy work environment for staff nurses within healthcare organizations. This study contributes to the understanding of occupational stress among staff nurses working in COVID wards and informs the development of targeted interventions to mitigate its adverse effects.*

**Keywords:** Occupational stress, covid, pre-experimental design, convenient sampling, stress management interventions

## INTRODUCTION

Occupational stress has emerged as a critical issue in the healthcare sector, particularly among staff nurses who serve as the backbone of patient care. The COVID-19 pandemic further intensified this concern, placing extraordinary physical, emotional, and psychological demands on healthcare workers. Staff nurses working in COVID wards were especially vulnerable, as they were continuously exposed to high-risk environments, long working hours, fear of infection, and emotional strain from patient outcomes. These factors have contributed significantly to increased levels of psychological stress, often affecting their health, job satisfaction, and overall well-being [1].

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Received Date: September 07, 2024  
Accepted Date: September 30, 2025  
Published Date: October 10, 2025

**Citation:** Feeba Paul. A Study to Assess the Effectiveness of Education Module on Psychological Stress Experiences and Coping Among Staff Nurses Working in COVID Ward at a Selected Hospital in Bangalore. International Journal of Evidence Based Nursing and Practices. 2025; 3(2): 21–26p.

The experience of stress in such high-pressure roles is influenced by multiple factors, including individual characteristics, work settings, and the organizational environment. Younger nurses or those with limited experience may face greater challenges in managing stress, especially when lacking adequate support systems. In particular, stressors such as unclear job roles, strained workplace relationships, poor working conditions, and a rigid organizational climate can amplify the emotional burden on nurses [2]. Given this context, stress management interventions have become

essential components of occupational health strategies within hospitals. Educational modules aimed at enhancing awareness, promoting coping strategies, and reducing psychological stress can play a significant role in supporting the mental health of nurses [3].

This study was conducted to assess the effectiveness of an educational module designed to address psychological stress and coping mechanisms among staff nurses who worked in COVID wards at a selected hospital in Bangalore. Using a pre-experimental one-group pre-test and post-test design, the study explores both the prevalence of occupational stress and the potential for structured interventions to alleviate it. The insights gained aim to inform healthcare administrators and policymakers about the importance of psychological support and preventive mental health strategies in the workplace [4].

### OBJECTIVES OF THE STUDY

1. To assess the existing level of stress among staff nurses working in COVID wards.
2. To evaluate the effectiveness of an educational module in reducing stress levels among staff nurses in COVID wards.
3. To examine the association between stress levels and selected demographic variables.

### OPERATIONAL DEFINITIONS

- *Assess*: Refers to the statistical analysis of data collected through a multiple-choice questionnaire to determine the level of stress among nurses.
- *Effectiveness*: Denotes the outcome of an intervention in achieving the desired beneficial effect. In this context, it refers to the ability of the educational module to reduce stress levels among nurses.
- *Educational module*: An information booklet designed to provide knowledge and skills for managing stress. It consists of 16 strategies aimed at helping nurses cope with occupational stress.
- *Coping*: Refers to the strategies or interventions implemented to mitigate the impact of stressors in the workplace.
- *Stress*: Defined as the physical and emotional responses that arise when there is a mismatch between job demands and the individual's perceived control over meeting those demands.
- *Nurse*: Nurse is a person formally educated in DGNM/BSc (N/PB BSc) (N) and MSc (N) trained for care of sick or infirm.
- *Covid ward*: It refers to a hospital facility for care of Covid patients at a more intensive level than is needed by other patients.

### ASSUMPTIONS

1. Nurses working in Covid wards may have high occupational stress.
2. Nurses working in COVID wards are likely to possess some knowledge about managing stress.
3. Nurses working in Covid wards may reduce their stress after administering education module.

### HYPOTHESIS

- *H1*: There will be a statistically significant difference between the pre-test and post-test stress levels.
- *H2*: There will be statistically significant association between post-test levels of stress with selected demographic variables.

### DELIMITATIONS OF THE STUDY

1. The study is limited to nurses working in Suprabha Hospital, Bangalore.
2. The study is limited by a sample size of 60 participants.

**Table 1.** Pre experimental design with one group pre-test and post-test.

Group	Before education	Intervention	After education
Staff Nurses	O1: level of occupational stress before giving education module	X: teaching of education module and issuing information booklet	O2: level occupational stress after education module

## **METHODOLOGY**

### **Research Approach**

#### ***Quantitative Approach***

##### ***Research Design***

The present study adopts a pre-experimental research design, specifically utilizing the one-group pre-test and post-test design. This design is selected to evaluate the effectiveness of an educational intervention on reducing occupational stress among staff nurses. In this framework, a single group of participants is assessed before and after the intervention, allowing for a comparative analysis of the impact of the educational module [5–7].

As illustrated in Table 1, the participants (staff nurses) first undergo a pre-test (O1) to determine their initial level of occupational stress. This is followed by the intervention (X), which consists of a structured educational module aimed at stress reduction. The intervention includes both a teaching session and the distribution of an informational booklet. After the intervention, the same group is subjected to a post-test (O2) to evaluate any changes in their stress levels.

##### ***Keys***

*O1*: Pre-test level of occupational stress among the staff nurses.

*X*: Educational module regarding reduction of stress.

*O2*: Post-test level of stress among the staff nurses.

##### **Study Setting**

The study was conducted in Suprabha Hospital, Bangalore.

##### **Study Population**

###### ***Target Population***

Target population of the study was all the Staff nurses who worked in Covid ward at Suprabha Hospital, Bangalore.

###### **Accessible Population**

Accessible population are Staff nurses at Suprabha Hospital, Bangalore.

##### **Sample**

Staff nurses at Suprabha Hospital, Bangalore, who fulfilled the inclusive criteria of sampling criteria.

##### **Sample Size**

60 Samples of staff nurses at Suprabha Hospital, Bangalore.

##### **Sampling Technique**

All the female and male nurses fulfilling inclusive criteria were selected by Non-Probability (convenient) sampling method for this study [6].

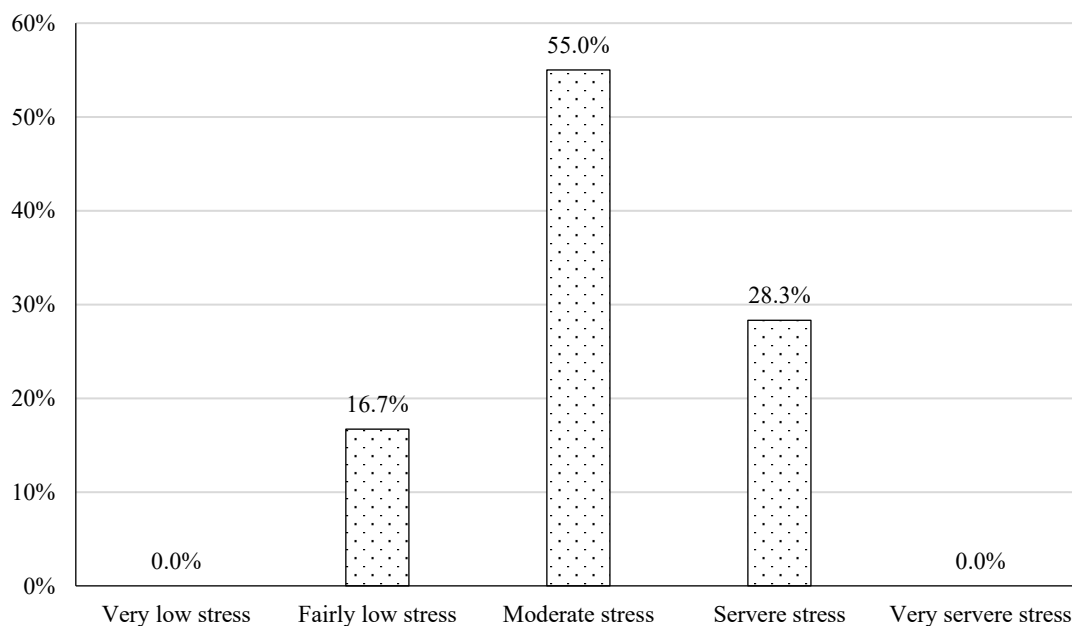
## **RESULT**

The findings of the study reveal significant differences in the level of occupational stress among staff nurses before and after the implementation of the educational module.

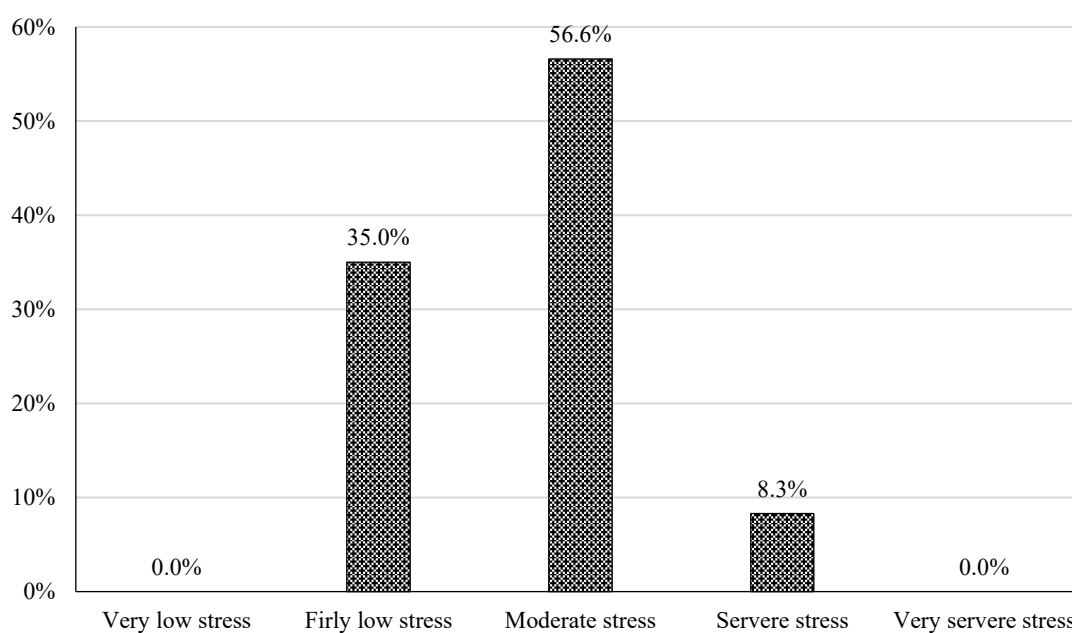
As illustrated in Figure 1, the pre-test results indicated a varied distribution of stress levels among participants. A notable proportion of staff nurses experienced moderate to very severe stress, reflecting a considerable burden of occupational pressure prior to the intervention. Specifically, participants reported stress levels ranging across five categories: very low stress (0%), fairly low stress (16.7%), moderate stress (55.0%), severe stress (28.3%), and very severe stress (0%), with the majority falling in the moderate and higher stress categories. This suggests an urgent need for effective stress management strategies within the clinical setting.

Following the intervention, the post-test results, shown in Figure 2, demonstrate a marked improvement in stress levels. Remarkably, participants were found to be 0% in the 'very low stress' category after receiving the educational module and information booklet. Stress levels in the moderate (56.6%), severe (8.3%), and very severe (0%) categories were completely eliminated, indicating a substantial positive impact of the educational intervention on reducing occupational stress among staff nurses.

The comparison between pre- and post-test findings highlights the effectiveness of the educational module in enhancing awareness and equipping staff nurses with coping strategies to manage occupational stress. These results support the use of structured educational interventions as a viable method to mitigate stress and improve mental well-being in nursing professionals.



**Figure 1.** Pre-test level of occupational stress score.



**Figure 2.** Post-test level of occupational stress score.

## **IMPLICATIONS OF THE STUDY**

The findings of the study have important implications for nursing practice, administration, education, and research.

### **Implication for Nursing Practice**

- Nurses working in COVID wards are more prone to experiencing stress compared to those in other areas.
- Nurses can be trained in handling occupational stress effectively by breathing exercise and relaxation, time and task management skills meditation, yoga etc.
- Nurses should develop the positive attitude towards their work environment [8].

### **Implication for Nursing Education**

- Nurse educator should develop the positive attitude towards the nursing among the nursing students.
- Nurses at the post graduate level need to develop their skill in conducting health teaching programmes in management of occupational stress among nurses [9].

### **Implication for Nursing Administration**

- The nurse administrator can organize in-service education programs to enhance healthcare professionals' knowledge of managing occupational stress.
- The nurse administrator should post the adequate number of staff nurses in intensive care unit and make sure all the equipment are available and in working condition.
- Nursing administrators should concentrate on the placement of skilful and experienced staff nurses in intensive care unit [10].

### **Implication for Nursing Research**

The finding of the study will serve as the basis for the student nurses to conduct future qualitative and quantitative research on education and to identify the different methods of relaxation which can bring down severity of stress.

### **This Study Will Serve as a Valuable Reference Material for Future Investigations**

- There is significant scope for research in the area of occupational stress among staff nurses.
- Studies can be done in depth to find out the various interventions for the prevention of occupational stress.
- The investigator should present this study's result at seminars, poster sessions and should publish research findings in journals to communicate the findings to nursing professionals.

## **RECOMMENDATIONS**

The findings of the present study may encourage other researchers to conduct further studies involving different variables on a larger scale.

- Similar studies can be conducted using various interventions such as meditation, yoga, or laughter therapy to evaluate their effectiveness in managing occupational stress.
- Comparative studies can be carried out between staff nurses working in government hospitals and those in private hospitals.
- Future research could involve larger sample sizes to allow for greater generalizability of the findings.
- Similar studies could also be extended to other healthcare professionals, including doctors and pharmacists.

## **LIMITATIONS**

- The sample size of the study was small.
- The data collection period was limited to only 4 weeks.
- The study was restricted to staff nurses working at Suprabha Hospital.

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## CONCLUSION

Nurses working in COVID-19 and other infectious wards are commonly more prone to stress due to factors such as heavy workload, shortage of nursing staff, time pressure, patient deaths, uncertainty regarding treatment outcomes, and lack of knowledge about advancements in technology and equipment. To address this, the investigator conducted a study at Suprabha Hospital, Bangalore, aimed at reducing the psychological stress experienced by staff nurses working in COVID wards through the implementation of an educational module. The educational module on stress management strategies includes information on deep breathing exercises, relaxation techniques, time management, task management, and fostering a positive attitude toward oneself and the job, among other approaches. The study concluded that the implementation of this educational module significantly reduced psychological stress among staff nurses.

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