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Original Article

# A Descriptive Study to Assess the Knowledge of the Nursing Officers Regarding the Effectiveness of Mitchell's Relaxation Technique On Physiological and Psychological Parameters of Patients with Selected Cardiovascular Disorders at Selected Hospitals, Kanpur, UP

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## Abstract

A descriptive study was conducted to assess the knowledge of nursing officers regarding the effectiveness of Mitchell's relaxation technique on physiological and psychological parameters of patients with selected cardiovascular disorders in selected hospitals at Kanpur, Uttar Pradesh. The study included 100 nursing officers selected through an appropriate sampling technique. Data were collected using a structured questionnaire consisting of socio-demographic variables and knowledge-related items. The findings revealed that the majority of nursing officers (62%) belonged to the age group of 21–30 years, 78% were females, and 65% had GNM qualifications. About 52% had less than 5 years of professional experience, and a significant majority (92%) had no previous knowledge regarding Mitchell's relaxation technique. Regarding knowledge levels, 12% of the nursing officers had average knowledge, 87% had poor knowledge, and only 1% had good knowledge. Chi-square analysis showed that there was no significant association between knowledge and age ($\chi^2 = 2.14$) and gender ($\chi^2 = 0.72$), whereas a significant association was found with educational status ($\chi^2 = 11.68$), professional experience ($\chi^2 = 13.02$), and previous knowledge ($\chi^2 = 16.54$) at 0.05 level of significance. Thus, the research hypothesis ($H_1$) was accepted and the null hypothesis ($H_{01}$) was rejected. The study concludes that nursing officers have moderate knowledge regarding Mitchell's relaxation technique and highlights the need for educational interventions to improve their knowledge and promote its application in clinical practice.

**Keywords:** Mitchell's Relaxation techniques, physiological parameters, psychological parameters and cardiovascular disorders.



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## Introduction

The two main global causes of morbidity and mortality, cardiovascular disease (CVD) and hypertension, have a substantial impact on quality of life (QoL). The World Health Organization (WHO) estimated that 17.9 million people died from heart disease each year, accounting for around 32% of all fatalities worldwide. These diseases are frequently made worse by stress, anxiety, and poor psychological health, which creates a vicious cycle. Hypertension is one of the most prevalent modifying risk factors for CVD. According to current estimates, about 1.28 billion people worldwide between the ages of 30 and 79 are affected by high blood pressure. Because it rarely shows symptoms and progresses without giving any clear indications, hypertension has gained the unwanted moniker "silent killer." It is the main cause of myocardial infarction, strokes, and chronic renal illness because it gradually affects blood vessels and other organs.

Because CVD and hypertension are often linked to extreme stress, anxiety, and a reduced quality of life, patients with these conditions deal with problems beyond their physical health. In this sense, relaxation techniques are tried-and-true methods for lowering stress and anxiety levels and generally enhancing psychological wellbeing. Progressive muscle relaxation (PMR) and diaphragmatic breathing are two relaxation techniques that help people identify and reduce physical tension by contracting and relaxing muscle groups. They also promote relaxation by increasing parasympathetic nerve activity, which leads to emotional tranquility. The effectiveness of relaxation techniques in lowering stress and enhancing quality of life in individuals with CVD and hypertension is examined in this systematic study.[1]

Any approach, process, procedure, or action that aids in relaxation, achieving a state of improved tranquility, or lowering levels of pain, worry, stress, or rage is referred to as a relaxation technique (also known as relaxation training). Among other health benefits, relaxation techniques can reduce blood pressure, ease muscle tension, and slow heart and breathing rates. They are frequently used as a component of larger stress management programs. Another method for relaxation is Mitchell's Relaxation Technique (MRT). This approach is based on mutual inhibition of muscles and diaphragmatic breathing, which means that while one group of muscles is engaged, the other group's muscles are relaxed. The psycho-immunological relationship between the mind and body is the emphasis of MRT, an auditory relaxation technique that includes breathing, muscle exercises, and guided imagery. According to studies, Mitchell's Relaxation Technique significantly boosts immunity, lowers stress, anxiety, sadness, and pain, and enhances quality of life. Additionally, MRT is a very successful, non-invasive, safe, affordable, and simple technique, which has increased attention to it[2].

Measurements of diastolic and systolic blood pressure, oxygen consumption, heart rate, or respiration rate—all of which can fluctuate—can be used to gauge the relaxation response.[3]

By counting the breaths while expanding the abdomen and inhaling deeply through the nose, stopping, and then contracting the abdomen and expelling slowly and thoroughly through the mouth, diaphragmatic breathing techniques concentrate on the breath and slow the breath rate. To lower respiratory rate, this kind of deep breathing technique involves creating a pattern of inhalation and exhalation.

Diaphragmatic breathing is inexpensive because it requires no special equipment or environment and is simple to learn. Additionally, diaphragmatic breathing is a conveniently available treatment for stress management because it may be self-administered when an individual recognizes a stress trigger. Diaphragmatic breathing has been shown to improve mental and physical well-being.[4]

An estimated 1.58 million people die from coronary heart disease each year in India, with 300,000 of



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those deaths occurring in Uttar Pradesh alone. Experts at a conference of the Cardiological Society of India noted that urbanization, changes in lifestyle, genetics, poor diet, tobacco use, hypertension, and diabetes are major causes of the threefold increase in cases over the past thirty years.[5]

**Objectives**

1. To assess the knowledge level of nursing officers regarding Mitchell's relaxation technique on physiological and psychological parameters.
2. To find out the association between the knowledge of nursing officers regarding Mitchell's relaxation technique on physiological and psychological parameters with their selected demographic variables

**Hypothesis**

$H_1$: There will be a significant association between the knowledge of nursing officers regarding Mitchell's relaxation technique on physiological and psychological parameters with their selected demographic variables

**Materials and Methods**

**Research approach:** Present study used Descriptive research approach.

**Research design:** In this study the research design used is Descriptive research design

**Variables:**

- **Dependent Variable:** Knowledge of nursing officers regarding Mitchell's relaxation technique on physiological and psychological parameters is the dependent variables used in the present study.
- **Demographic Variables:** Age, Gender, educational status, Professional experience and previous knowledge regarding Mitchell's relaxation techniques are demographic variables in the present study.

**Population:** In the present study the population comprises of nursing officers working in selected hospitals.

**Target population:** In this study. The target population was nursing officers working in selected hospitals at Kanpur, UP.

**Accessible population:** In this study, the accessible population was nursing officers working in Rama Hospital and LPS cardiology Kanpur.

**Sample:** The sample for the present study comprises of nursing officers who met the inclusion and exclusion criteria.

**Sample size:** The sample size for the present study consists of 100 nursing officers from Rama hospital and LPS cardiology at Kanpur, UP

**Sampling technique:** In the present study, convenient sampling technique has been used for the selection of nursing officers.

**Sampling criteria:**

**Inclusion criteria:**

Nursing officers;

- Knows Hindi and English.
- willing to participate in the study.



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- with at least six months of clinical experience.

**Exclusion criteria:**

Nursing officers;

- not available at the time of study.
- unwilling to participate.

**Methods of data collection:**

Data was collected using a structured questionnaire.

**Development of Research Tool**

A structured research tool was developed to assess the knowledge of nursing officers regarding Mitchell's relaxation techniques. The tool was designed based on existing literature, expert opinions, and validated pain assessment frameworks. The tool underwent content validation by a panel of medical surgical nursing and cardiac experts to ensure its relevance, clarity, and reliability.

**Description of the tool**

The research tool consisted of two sections:

**Section A:** Structured questionnaire for collecting the demographic variables

**Section B:** Structured questionnaire to assess the nursing officer's knowledge regarding Mitchell's relaxation techniques.

**Results**

**Section A:**

**Major Findings related to Socio-Demographic Distribution**

- 62% of the nursing officers are belongs to the age group of 21-30 years
- 78% of the nursing officers are females
- 65% of the nursing officers have GNM educational qualification.
- 58% of the nursing officers have less than 5 years of professional experience
- 92% of the nursing officers don't have previous knowledge regarding Mitchell's relaxation technique.

**Section B: Findings related to the knowledge of nursing officers regarding Mitchell's relaxation technique on physiological and psychological parameters.**

| Knowledge Level | Score level | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Poor | 0–10 | 87 | 87 |
| Average | 11–20 | 12 | 12 |
| Good | 21–30 | 1 | 1 |

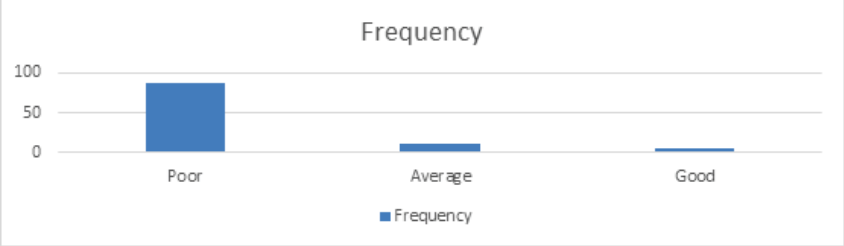


**Figure 01: knowledge of nursing officers**



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**Section C:**

**Association Between Knowledge of nursing officers with their Demographic Factors**

| Sl. No | Variables | Chi-square value | df | P- Value | Significance |
|---|---|---|---|---|---|
| 1 | Age | 2.14 | 4 | 9.488 | Not Significant |
| 2 | Gender | 0.72 | 2 | 5.991 | Not Significant |
| 3 | Educational status | 11.68 | 4 | 9.488 | Significant |
| 4 | Professional experience | 13.02 | 4 | 9.488 | Significant |
| 5 | Previous knowledge | 16.54 | 2 | 5.991 | Significant |

## Conclusion

The present study concludes that the majority of nursing officers possessed average knowledge (12%) regarding Mitchell's relaxation technique on physiological and psychological parameters, while a considerable proportion (87%) had poor knowledge and only a minimal percentage (1%) demonstrated good knowledge. This indicates that overall knowledge among nursing officers is moderate and insufficient for effective clinical application. The socio-demographic findings revealed that most participants were females (78%), belonged to the 21–30 years age group (62%), had GNM qualifications (65% each), and 52% had less than 5 years of professional experience. Notably, a large majority (92%) had no previous knowledge regarding Mitchell's relaxation technique, highlighting a significant gap in awareness.

Based on these findings, the research hypothesis (H1) is accepted, and the null hypothesis (H01) is rejected. Overall, the study emphasizes the need for structured educational programs, in-service training, and workshops to enhance the knowledge and promote the effective utilization of Mitchell's relaxation technique among nursing officers in clinical settings.

## Implication

Nursing Practice: The study's conclusions show that nursing officers' understanding of Mitchell's relaxation technique ranges from moderate to poor, indicating a gap in its use in clinical practice. In order to enhance both physiological and psychological outcomes, nurses should be encouraged to incorporate relaxation techniques into routine patient care, particularly for those with cardiovascular problems.

Nursing Education: The study emphasizes the necessity of adding Mitchell's relaxation technique to the curriculum at the diploma and degree levels in order to improve nursing education. To guarantee proficiency among nursing students, emphasis should be placed on both theoretical knowledge and practical training.

Nursing Research: The study's findings highlight a substantial knowledge vacuum, opening the door for more investigation in this field. To improve the generalizability of results, further research might be carried out in a variety of clinical settings and with bigger sample numbers.

Nursing Administration: The study highlights how crucial nursing administration is to advancing relaxation method knowledge and practice. To improve nurses' competencies, nursing administrators should plan frequent training sessions and in-service education programs.

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**Conflicts of interests:** The authors declare that they have no conflict of interest

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