



## A Study on Stress among Female Staff Nurses Working in the Intensive Care Units of Govt. Medical College Hospital, Thiruvananthapuram

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### Abstract

**Background:** *Nursing is a rewarding but stress filled profession. Every day the nurse confronts suffering, grief and death especially those who work in intensive care units of hospitals. It is hardly surprising that nurses confronted by such events and tasks on a regular basis experience high levels of stress and their difficulties appear to be further worsened by personal and organizational issues. Stress thus becomes a major cause of low productivity, high absenteeism, poor decision making and poor morale<sup>8</sup>.*

**Objectives of this study:** *To assess prevalence of stress and the factors which contribute to stress among female staff nurses working in the intensive care units of Govt. Medical College, Thiruvananthapuram, a tertiary care center in Kerala.*

**Materials and Methods:** *The study was conducted among consenting female staff nurses working in the intensive care units of Govt. Medical College, Thiruvananthapuram, a tertiary care center in Kerala. The 16 different ICUs selected were the Cardiology ICU, Cath ICU, Critical Care ICU, Surgery ICU, Medicine ICU, Trauma ICU, Burns ICU, Fever ICU, Orthopedics ICU, Cardiothoracic ICU, Casualty ICU, Medical Neurology ICU, Surgical Gastroenterology ICU, Neurosurgery ICU, Urology ICU and Transplant ICUs (Liver and Kidney).*

*A Descriptive Cross sectional Survey approach was used for the study. A questionnaire was used to collect information from the participants. Work related stress and personal stress were independently assessed.*

**Results:** *The study revealed that 97.1% nurses working in ICUs reported moderate work related stress and 2.9% have severe work related stress. 2.9% have mild personal stress and 97.1% have moderate level personal stress. But exact conclusions could not be drawn on the exact domestic or professional factors which led to stress.*

**Keywords:** *Stress, Intensive care units.*

### Introduction

Nursing is a highly rewarding but stressful occupation<sup>1</sup>. According to Hingley, every day the nurse confronts suffering, grief and death<sup>1</sup>.

Consequently nurses have been found to be prone to burnout and job dis-satisfaction that ultimately affects the quality of patient care. Stressful factors for nurses in ICU include a closed atmosphere,

time pressures, excessive noise or unduly quiet atmosphere, sudden swings from intense to mundane tasks, poor sleep, unpleasant sights and sounds and long hours of work.

Nurses are trained to deal with these factors but chronic stress takes a toll when there are additional stressors like home stress, conflict at work, inadequate staffing, poor team work, inadequate training and poor supervision<sup>4</sup>. Stress is known to cause emotional exhaustion in nurses and lead to negative feelings towards those involved in their care and work. There is growing recognition that the stressors imposed on women affect their physical, mental and emotional wellbeing. While most challenges may have some positive effects- such as bringing stimulation, excitement and enthusiasm to work, stress may become counterproductive.

## Materials and Methods

### Operational definitions

- 1) **Stress** - "A physical or psychological stimulus that can produce mental tension or reactions that may lead to illness<sup>2</sup>."
- 2) **ICU:** Is a special department of hospital that provides intensive care to seriously ill patients.
- 3) **NURSE:** Is a person who is qualified with a diploma or degree who is trained to care for the sick or infirm, especially in a hospital<sup>5</sup>.

### Objectives

1. To assess the prevalence and severity of stress among ICU staff nurses.
2. To identify the factors leading to stress among female nurses in ICU.

**Population:** Female nurses working in intensive care units of Medical college Hospital Thiruvananthapuram with more than six months experience in the ICU who were willing to participate in the study.

**Period of the study:** This study was conducted in staff nurses working in intensive care units of Medical College Hospital Thiruvananthapuram for

a period of 4weeks from November 15 to December 15, 2016.

**Sampling method:** Census

**Sample size:** n=100

### Inclusion Criteria

- The staff nurses who are having more than 6 months experience in intensive care units of Medical College Hospital, Thiruvananthapuram.
- ICU nurses who are willing to participate in this study.
- ICU nurses who are working in all shifts

### Exclusion Criteria

Staff nurses working outside the intensive care units. Nurses with less than 6 months continuous experience in ICU.

### Statistical Analysis

Data was entered in Microsoft excel. Data analysis was performed using SPSS ver.17.0. Quantitative variables were expressed as mean and standard deviation. Qualitative variables were expressed as proportion. Association between qualitative variables was analyzed by chi-square test. A p-value of <0.05 was considered as of statistical significance.

### Results

There were 104 participants in the study.

Average age of the study population was  $31 \pm 5.6$  years. Age ranged from 23-45 years. Majority (31.7%) of the patients were in the age group of 25-30 years.

Majority of nurses in the study population 67(64.5%) were Hindus, 30(28.8%) were Christians and 7(6.7%) were Muslims.

74(71.2%) of the participants were married and 30 (28.8%) were unmarried. Regarding the educational qualification, maximum number of participants were GNM (general nursing) 65 (62.5%) followed by BSC Nursing 32(30.8%) and MSC Nursing 7 (6.7%).

Regarding the monthly income in Indian Rupees, participants with monthly income of <20000 Rs were 14(13.5%), 20001-30000 were 21(20.2%),

30001-40000 were 34(31.7%), 40001-50000 were 33(31.7%), >50000 were 2(1.9%).

37.5% of the participants have <5 years of experience, 40.4% have 5-10 years and 22.1% have >10 years of experience. 53.8% of the Participants have <2 years of experience in present ICU, 26.9 % have 2-4 years and 19.2 % have >4years of experience in the current ICU.

Participants with two children were 30 (28.8%), one child were 29 (27.9%), and no children were 45 (43.3%).

Regarding the occupational status of spouse, 63 (85.1%) of participant’s spouse were employed, 11 (14.9%) were unemployed.

**Stress score**

	N	Minimum	Maximum	Mean	S D
Work related stress score	104	43	72	53.2	5.0
Personal stress score	104	38	62	49.6	5.3

Average work related stress score among study population was 53.2±5.0 and its ranges from 43-72 and average personal related stress score was 49.6± 5.3 and and its ranges from 38-62. Less than 33.3% of the total Stress score was considered as mild stress, 33.3-66.7% was moderate stress and >66.7% considered as severe stress in each section.

**Work related stress**

Work related Stress	Frequency	Percent
Moderate	101	97.1
Severe	3	2.9
Total	104	100.0

97.1% of the participants have moderate work related stress and 2.9% have severe work related stress.

**Personal stress**

Personal Stress	Frequency	Percent
Mild	3	2.9
Moderate	101	97.1
Total	104	100.0

2.9% of the study population has mild personal stress and 97.1 % have moderate level stress.

While assessing the relation between the age of the participant and the severity of work related stress, 100% of the participants in less than 25 years, 97% in 25-30 years,96.3% in 30-35 years ,95.5% in 35-40 years and 100% >40 years have moderate level of work related stress. There was *no significant association* between age and working environment (P>0.05). Also there was no significant association between religion and work related stress. (P>0.05).

96.7 % participants in the unmarried group and 97.35% in the married group have moderate level work related stress. But there was no significant association between marital status and work related stress (P>0.05).

97.8% participants with no children, 100% participants with one child and 93.3 participants with two children have moderate level of work related stress. There was *no significant association* between number of children and work related stress.(P>0.05).

96.9% participants in GNM, 100% B Sc Nursing and 85.7% with M Sc Nursing have moderate work related stress. There was no significant association between professional qualification and work related stress. (P>0.05)

100% participants with <20000 monthly income, 100% with 20001-30000 monthly income, 94.1% with 30001-40000 monthly income, 97% with 40001-50000 monthly income and 100% with >50000 monthly income have moderate level of work related stress. So there is no significant association between monthly income and work related stress. (P>0.05).

97.4% participants with<5year experience, 95.2% with 5-10 years experience, 100% with >10 years experience have moderate level of personal stress. There is no significant association between total years of experience and work related stress. (P>0.05).

98.2% participants in <2 years experience in present ICU ,96.4% participants in 2-4 years experience in present ICU and 95% in more than 4 years experience have moderate level of work related stress. There was no significant association

between experience in present I C U and work related stress. (P>0.05).

Regarding personal stress, 100% participants in less than 25 years , 93.9% in 25-30 years ,96.3% in 30-35 years,100% in 35-40 years and 100% in> 40 years have moderate level of personal stress . There is no significant association between age in years and personal stress. (P>0.05).

95.5% participants in Hindu religion,100% in Christian religion and 97.1% in Muslim religion have moderate level of personal stress. There is no significant association between religion and personal stress. (P>0.05).

96.9% participants with GNM ,96.9% with B.Sc Nursing ,97.1% with M.Sc Nursing have moderate personal stress. There is no significant association between professional qualification and personal stress (P>0.05).

100% participants with <20000, 100% with 20001-30000, 94.1% with 30001-40000, 97% with 40001-50000 and 100% with >50000 rupees monthly income have moderate personal stress. There is no significant association between monthly income and personal stress. (P>0.05)

97.4% with <5 years working experience ,97.6% with 5-10 years experience ,and 95.7% with >10 years experience have moderate stress .There is no significant association between total years of experience and personal stress .(P>0.05).

96.4% participants with <2 years experience in present ICU ,100% participants with 2-4 years experience and 97.1% with >4years experience in present ICU have moderate personal stress. There was no significant association between number of years of experience in present ICU and personal stress.(P>0.05)

95.6% participants with no children, 100% participants with one child and 97.1% with 2 children have moderate stress. There was no significant association between number of children and personal stress. (P>0.05).

96.8% participants with employed spouse and 100% with unemployed spouse have moderate stress .There was no significant association

between employment status of spouse and personal stress.(P>0.05)

### Observations in the study

100% participants in less than 25 years, 97% in 30-35 years, 95.5% in 35-40 years and 100% in more than 40 years have moderate level work related stress. So, there was no significant association between age in years and personal or work related stress. 100% participants in less than 25years, 93.9%in 25-30 years, 96.3 % in 30-35 years, 100% in 35-40 years and 100%in more than 40 years have moderate level of personal stress. There is no significant association between age in years and personal or work related stress.

There were no significant association between religion and work related stress or personal stress There was no significant association between marital status and work related stress or personal stress

There was no significant association between professional qualification and work related stress or personal stress

There was no significant association between monthly income and work related stress or personal stress. There was no significant association between work related or personal stress and their total years of experience in their profession. There was no significant association between personal stress and total years of experience. There was no significant association between work related or personal stress and number years of experience in present ICU..There was no significant association between number of children and work related stress or personal stress. There was no significant association between employment status of spouses and work related stress. There was no significant association between employment status of the spouse and personal stress.

97.1% have moderate work related stress and 2.9% have severe work related stress.

2.9% have mild personal stress and 97.1%have moderate level personal stress.

### Conclusions and Discussion

Work related stress and personal stress are very common in nurses working in the intensive care units<sup>7</sup>. The stress was majority in the moderate level. No significant association has been found regarding the age of nurses, the level of educational qualification, income level, and marital status of nurse, number of children, job and income of spouse, total period worked in the ICU or the duration of professional experience. So it is assumed that other factors need to be studied with regards to the cause behind stress. Further studies need to be pursued to address this issue. Once they are found out, aggressive counter measures need to be installed so that working in ICUs become an enriching experience.

### References

1. Stress and the nurse manager. Peter Hingley and Cary L. Cooper (Eds.), John Wiley & Sons, London & New York, 1986
2. Lazarus, R.S. (1966). Psychological stress and the coping process. New York: McGraw-Hill.
3. The design of a stress-management programme for nursing personnel. Susan Lees and Nick Ellis BA PhD
4. Causes of job stress in nurses: A cross sectional study. Arash Najimi, MSc, Ali moazemi Goudarzi, Gholamreza Sharifirad , PhD. Iranian Journal of Nursing and midwifery research
5. Jennings BM. Work related and burnout among nurses: Role of the work environment and working conditions. An evidence based handbook for nurses . Rockville MD. 2008 April Chapter 26
6. Job related stress among nurses working in Jimma Zone public hospitals , south west Ethiopia : A cross sectional study. Tadesse Dagget. BMC nursing
7. Alleviating job stress in nurses: approaches to reducing job stress in nurses. Roberts R, Grubb PL, Grosch JW Medscape 2012 june. 765974
8. Sources and effects of work related stress in nursing. Eleni Moustaka and Theodoros C. Health Science Journal