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Stress Among Nurses working in Intensive Care Unit at Tertiary care Hospital, Nepal

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ABSTRACT

Introduction: Stress is a major issue for intensive care unit (ICU) nurses due to their demanding work environment. They perform complex assessments, high-intensity treatments, and continuous care, dealing with intricate patient health issues and advanced technology. This constant high-pressure setting makes stress a persistent challenge for ICU nursing professionals.

Objectives: This study aims to assess level of stress and its association with selected demographic variables among nurses working in the Intensive care at Tertiary care Hospital of Nepal.

Methodology: A cross-sectional study was conducted at selected Tertiary care Hospital of Nepal, from July 2022 to March 2023. A total of 69 respondents were selected by using a nonprobability consecutive sampling technique. A self-administered questionnaire was used to gather the data and stress was assessed using the Expanded Nursing Stress Scale (ENSS). SPSS V 22 was used to analyse the data using descriptive and inferential statistical techniques.

Results: The findings of the study revealed that out of 69 respondents, 88.4% of respondents reported moderate levels of stress followed by mild stress 7.2 %, whereas a very small number of respondents 4.3% had severe stress. There was significant association between stress and the type of family $p=0.010$.

Conclusion: The study shows majority of the intensive care nurses has moderate level of stress, few has mild and severe level of stress. Thus the study concludes that the intensive care nurses are working in moderate stressful conditions.

INTRODUCTION

Nurses constitutes the biggest group of healthcare service team, and stress is one of the major concern in nursing. Caring is one of the essential element in nursing practice that exceeds combination of work environment and personal factors. Stress occurs when nurses attempt to manage a patient's nursing care within the confines of their scope of practice of care.¹

Different studies on nurses' stress have already been conducted in hospital settings that shows workplace stress leads to physical and psychological problems in nurses leading to physiologic changes and forcing them to deviate from their normal functions and work environments.^{2,3}

It is considered as a global issue, with 0.68 to 9.20% of the world's nurses suffering from it.⁴ A study conducted in High Income countries indicate that respondents moderate level of stress.⁵ A study conducted in Vietnam found that 18.5%, 39.8% had stress, 39.8 % anxiety followed by depression 45.3%.⁶ A study conducted in Dhaka showed 90% of the nurses has some kind of stress that has led them to change in behaviour.⁷

Different studies from Nepal shows about 99.6% of nurses have some level of stress in Nepal^{7,8}

A study conducted in Dharan Nepal showed that the majority of respondents 56% had moderate stress followed by mild stress 34%, and severe stress 6%, whereas a very small number of respondents, 4 % had no stress in their job setting.³

Mostly stress is exacerbated in environments where verbal and physical aggression among nurses are more, the demand for services, nursing shortages, high work overload, lack of social support from co-workers, excessive paperwork, and high expectations from superiors, organizations, and patients are the contributing factor for stress among nurses.

METHODOLOGY

A cross-sectional study was conducted from July 2022 to March 2023 in a selected intensive care unit of Tertiary care Hospital. Out of 83 nurses working in Intensive care unit 69 nurses were selected who had least 6 months of working experience in intensive care unit using a non-probability consecutive sampling technique, which was calculated using the formula $n = \frac{N}{1+N(e)^2}$. Ethical approval was obtained from IRC (647/2022) of Nobel Medical College Teaching Hospital and a verbal and written consent was obtained from each nurses, who has worked in the ICU for at least 6 month. The study employed a self-administered questionnaire with two sections to collect data. The sociodemographic data of the nurses were presented in the first section and the Expanded Nurses Stress Scale (ENSS)⁹, created by French et al., was used in the second section to measure the stress level of nurses. Formal permission was obtained through email for the author to use ENSS before data collection. ENSS is reliable ($\alpha=.96$) and valid tool. The reliability was obtained in 10% (7) of total sample using Cronbach’s coefficient alpha where, $\alpha = 0.97$. ENSS contains 57 items in nine sub-scales: death and dying (7 items), inadequate emotional preparation (3 items), workload (9 items), uncertainty concerning treatment (9 items), conflict with physicians (5 items), problems relating to peers (6 items), problems relating to supervisors (7 items), patients and their families (8 items), and discrimination (3 items). The responses were measured on a 5-point Likert scale 1= never stressful, 2= occasionally stressful, 3=frequently stressful, 4 = extremely stressful, 0= does not apply. The ENSS score ranges from 0 to 228. The score was interpreted using the range of scores listed below: Stress levels range from 58–114 for mild, 115–171 for moderate, and 172-228 for severe.¹⁰ PSS version 22 was used to enter and analyse the data. Descriptive statistics (such as percentage and frequency, mean, and standard deviation) were used to describe the data, and the association between the variables was ascertained using the inferential statistical.

RESULTS

Among the 69 respondents who participated in this study the mean age of the respondents was 23.85 years , more than half of the respondents 37(53.6%) were married, almost half of the respondents had joint family 30(43.5 %), most of the respondents 56(81.2%) had < 20,000 monthly income. majority of the respondents 41(57.9%) had completed bachelor nursing, almost all respondents 63(91.3 %), the majority of respondents 40(57.9 %) had ≥ 2 years of nursing experience, most of the

respondents 50(72.5 %) were working in general ICU and most of the respondents 62(89.9 %)were working in shift duty (Table1).

Table 1: Socio-Demographic Characteristics of the Respondents (n = 69)

Characteristics	Number(N)	Percentage(%)
Age in years, Mean age ± S.D	69 (23.85 ± 4.54)	
Age		
< 20	23	33.3
≥ 20	46	66.7
Religion		
Hindu	47	68.1
Muslim	8	11.6
Buddhist	4	5.8
Christian	10	14.5
Marital status		
Married	37	53.6
Unmarried	32	46.4
Type of Family		
Nuclear Family	27	39.1
Joint Family	30	43.5
Extended Family	12	17.4
Monthly Income		
< 20,000	56	81.2
≥ 20,000	13	18.8
Qualification		
Proficiency Certificate Level	28	40.6
Bachelor Nursing	41	59.4
Position		
Staff Nurse	63	91.3
Nursing Officer	6	8.7
Year of Experience		
< 2 year	29	42
≥ 2 year	40	57.9
Types of Intensive Care Units		
Emergency ICU	6	8.7
Neuro ICU	13	18.8
General ICU	50	72.5
Duty Schedule		
Day Duty	7	10.1
Shift Duty	62	89.9

Table 2: Level Stress among Respondents (n=69)

Characteristics	Number	Percentage(%)
Mild Stress (58-114)	5	7.2
Moderate Stress (115-171)	61	88.4
Severe Stress (172-228)	3	4.3

Table 2 illustrates the majority of the respondents have moderate level of stress 61(88.4%)

Table 3: Association between Socio-Demographic Characteristics and Level of Stress among Respondents (n=69)

Characteristics	Mild		Moderate to Severe		Chi-square	p-value
	N	%	N	%		
Age						
< 20	2	8.7	21	91.3%	0.108	0.743
≥ 20	3	6.5	43	93.5		
Religion						
Hindu	2	4.3	45	95.7	1.962	0.161
Non-Hindu	3	13.6	19	86.4		
Type of Family						
Nuclear Family	4	14.8	23	85.2	0.020	0.010
Joint Family/Extended family	0	0	42	100		
Marital Status						
Married	2	5.4	35	94.6	0.402	0.526
Unmarried	3	9.4	29	90.6		
Monthly Income						
< 20,000	5	8.9	51	91.1	1.251	0.263
≥ 20,000	0	0	13	100		
Qualification						
Proficiency certificate Level	2	7.1	26	92.9	0.001	0.978
Bachelor Level	3	7.3	38	92.7		
Position						
Staff Nurse	5	57.9	58	92.1	0.513	0.474
Nursing Incharge	0	0	6	100		
Experience						
< 2 year	3	10.3	26	89.7	0.753	0.686
≥ 2 year	2	5.1	37	94.9		
Duty Schedule						
Day Duty	0	0	7	100	0.609	0.435
Shift Duty	5	8.1	57	91.9		

(*) Statistically significant at p<0.05

Table 3 shows that type of family is associated with level of stress with p(0.010).

DISCUSSION

Stress has long been distinguished as a challenge for nursing Profession. Stress also occurs when there is a continuing desire to realize only the greatest. Stress has been a developing concern among healthcare professionals, especially nurses. The working environment of the intensive care Unit (ICU) is an ongoing source of stress for nurses working there. Intensive care nurses practice during complicated assessments, high-intensity remedies, and continuous nursing attention. Stress is recognized as an inherent feature of the working lifetime of nurses. Internationally, many studies were conducted to identify the sunshine on stressors among nurses; however, relatively few studies were conducted within the Nepalese context. Hence this study was conducted with

the aim of this study to assess stress among nurses working in the intensive care unit.

In this study, 88.1 % of respondents experienced moderate levels of stress. These findings are consistent with a study carried out in Pokhara Nepal.¹⁰ which showed that the majority of nurses were in moderate level stress with 62 % in government hospitals and 75 % in private hospital nurses and in a study conducted at Addis Ababa, Ethiopia, found that the prevalence of stress among nurses was found to be 47.8%.¹⁰ In addition, a descriptive cross-sectional study conducted in Dhaka, Bangladesh found that the majority of nurses had experienced stress with 90%.⁴ Although stress is a part of nurses while working in the intensive care unit, their main responsibility is to deliver holistic care to those who often find themselves in crisis in life.

The degree of stress and the sociodemographic traits is only significantly correlated with the type of family with p =0.010,

in this study but no studies have conducted to show this type of correlation with type of family. Hence it is recommended to conduct a study in intensive care nurses and the level of stress with type of family.

This study shows that age does not affect stress. On the other hand, an investigation conducted among Iranian nurses indicates a strong correlation between stress levels and age.¹⁹ In a similar vein, this study's conclusion that there is no meaningful correlation between stress level and marital status is in line with previous research findings.^{10, 11, 20} According to this study as well as one conducted in Ethiopia, there was no discernible correlation between stress and work experience.¹² On the other hand, a study conducted in Nepal discovered a strong correlation among nurses working in public hospitals.⁹ This could be a difference in the organization.

CONCLUSION

According to the study's findings, the majority of respondents experienced moderate levels of stress and few showed mild and severe level of stress. The increased responsibilities that come with managing patient care put intensive care nurses in a highly stressful work environment. Therefore training of nurses on dealing with stressful situations prior to posting in critical care setting is recommended.

RECOMMENDATION

Healthcare settings need to implement educational programs and refreshment program on "how to manage work stress."

Proper roles and responsibilities must be describes for different level of nursing staff by the hospital administrative.

This study can be also conducted in different level of hospital at different geographical area for more diversity using randomly chosen sample.

LIMITATION OF THE STUDY

As stress lacks a universally accepted definition, everyone experiences stress differently. Therefore, it can occasionally be difficult to interpret such data. Because these surveys are uncommon in our workplace, there is a low level of societal acceptance of them. A few nurses showed reluctance to assist. Similar to this, collecting data was difficult because staff nurses worked different shifts and were extremely busy tending to patients in the intensive care. The study can be generalised as the tool internal consistency was obtained in the similar setting and the standard formula was used to calculate the sample size before data collection.

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CONFLICT OF INTEREST

There are no conflicts associated with this research study.

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