Work related stress among nurses in a teaching hospital of Pokhara, Nepal

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ABSTRACT

Introduction: Nurses, as the largest and most diverse group of healthcare professionals, often experience significant work-related stress that affects their physical, emotional, and mental well-being, as well as patient care. The objective of this study was to assess the level of work-related stress among nurses in a teaching hospital of Pokhara. **Methods:** A descriptive cross-sectional research design was adopted for this study which was conducted among nurses working in inpatient department of Gandaki Medical College Teaching Hospital and Research Centre (GMCTHRC), Kaski, Nepal. Probability simple random sampling technique was used to select 123 nurses. Structured standard tool i.e. Expanded Nursing Stress Scale (ENSS) was used for data collection and the data were collected using self-administered structured questionnaire. Descriptive statistics (frequency, percentage, mean, median and standard deviation) and inferential statistics (chi-square test) were used to analyze the data. **Results:** Among 123 respondents, 48.8% of them had moderate level of stress, 31.7% of respondents had mild stress and 19.5% of respondents had severe level of stress. The level of stress is statistically associated with the age (p=0.026), religion (p=0.012) and working unit (p=0.031). **Conclusions:** Nurses working in the hospital have some degree of stress. It is essential for hospital administration to identify its underlying causes and implement appropriate stress management strategies.

Keywords: Nurses, stress, work.

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INTRODUCTION

Stress is a progressive intense and progressive relationship between an individual and the environment. Work related stress implies the physical and emotional reactions which arise when workers notice a discrepancy between their effort and the corresponding reward.[1] It is a normal reaction to new situations, adjustments, or difficulties that call for adjustment.[2] Nurses who had long nightshift duty, poor rest period, disproportionate and overloaded work had high stress level.[3] The most widely acknowledged causes of stress among nursing staff are interpersonal disputes, a lack of resources, lengthy workdays, and a lack of social and emotional support to cope with pain and death in the hospital.[4]

Work-related stress among nurses has an impact on both individual and organizational performance, as well as the quality of care provided.[5] It is linked to musculoskeletal problems, elevated anxiety and depression, high levels of burnout, reduced job satisfaction, frequent absenteeism, and strong turnover.[6] A study was conducted in a Mid-western hospital of America to assess the impact of perceived stress and coping adequacy on the health of Nurses, illustrates 92% of nurses had moderate-to-very high stress level, 67% had moderate stress level and 25% showed their stress level as "high" to "very high.[7] A study conducted in 139 nurses of tertiary care institutions Islamabad, Pakistan revealed that 55.4% of nurses

had moderate level of stress, 41.7% of them had mild stress level and 13.7% had severe stress.[8]

Study conducted among 253 nurses working in tertiary care hospital, Goa showed that 59.3% of them had moderate, 36.8% had severe, and 2.4% had very severe stress.[9] Similarly, the findings of the study done in Nobel Medical College and Teaching Hospital, Biratnagar, Nepal, among 300 nurses revealed that 91.7% of them experienced moderate level of stress, whereas 5.3% experienced as high.[10] Studies across different regions indicate that a considerable proportion of nurses experience different levels of stress, which can impact their mental and physical well-being, job performance, and patient care. While extensive research has been conducted in many countries, but in Nepal very few published studies were found on similar issue. Hence, this study aimed to assess work related stress among nurses in a teaching hospital of Pokhara, Nepal.

METHODS

A descriptive cross-sectional research design was adopted to assess work related stress among nurses. This study was conducted in Gandaki Medical College Teaching Hospital and Research Center Pvt. Ltd. Pokhara, Kaski which was selected purposely. Nurses having six months and more work experiences and working in the in-patient department were included in the study population. Out of total 241 nurses, the target population was 168 nurses. Sample size was calculated using standard Cochran's formula as, Sample size (n) = (Cochran's formula) and was 123. Consideration of 49.84% prevalence level of stress among the nurses at Koshi COVID Treatment Center, Biratnagar; B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan and Nobel Medical College Teaching Hospital, Biratnagar with 95% confidence interval and 5% permissible error, sample size was calculated.[11] Probability simple random sampling technique with lottery method, without replacement was used to select the desired sample. In lottery method, at first each ward was denoted with specific code letter then every staffs of each ward were provided with serial numbers to be selected as a sample. Data was collected from March 17 to March 28, 2025. Ethical clearance was obtained from Gandaki Medical College Institutional Review Committee (Ref. No. 47/081/082-S). Informed consent was obtained from each participant by clarifying the purpose of the study prior to the data collection. Respondents' dignity, privacy and confidentiality was maintained.

A structured tool i.e, Expanded Nursing Stress Scale (ENSS) was used for data collection which was adopted and was developed by French et. al.[12] ENSS is a standard tool with Cronbach's Alpha (α=0.96).[12] Additionally, to identify accuracy, clarity and consistency of the tool, pretesting of the instrument was done among 13 nurses of Nobel Children and Women Hospital & Trauma Center Birauta -17, Pokhara.

The research instrument was divided into two parts. The first part contained socio-demographic and work-related information, while second part contained ENSS. The tool consists of 57 items in nine sub scale i.e. death and dying, conflict with physician, inadequate preparation, conflict with peers, problems with supervisors, workload, uncertainty concerning treatment, patients and their families, and discrimination. Five point Likert scale ranging from 0-4 (0= does not apply, 1= never stressful, 2= occasionally stressful, 3=frequently stressful, 4=extremely stressful) was used for measuring the response from nurses. According to ENSS, the score ranged from 0-228 which was categorized as: 0-57 = no stress, 58-114= mild stress, 115-171= moderate stress and 172-228= severe stress. Higher the score indicates the higher level of stress in workplace among nurses. The obtained data was organized, coded and entered and transferred into Statistical Package for Social Science (SPSS) version 20.0. Descriptive statistics (frequency, percentage, mean, median and standard deviation) was used to analyze demographic data as well as level of stress. Inferential statistical method (chi-square test) was used to determine the association between work related stress and selected variables.

RESULTS

Table 1 reveals the socio-demographic related characteristics of the respondent. The mean age of the respondents was 24.32 ± 3.14 years. Most of the (67.5%) of the respondents were aged less than 25 years. Majority (91.9%) of the respondents were from urban area. Most (73.2%) of the respondents followed Hinduism. Similarly, nearly two third (64.2%) of the respondents were unmarried.

Table 1: Sociodemographic characteristics of respondents (N=123)

Variables	Number (n)	Percentage (%)
Age (in completed years)		
<25	83	67.5
>25	40	32.5
Mean age +SD=24.32+3.142; Min=19, Max=38		
Place of residence		
Urban	113	91.9
Rural	10	8.1
Religion		
Hinduism	90	73.2
Buddhism	22	17.9
Christianity	11	8.9
Ethnicity		

Upper caste group	58	47.1
Disadvantaged janajatis	30	24.4
Relatively advantaged janajatis	30	24.4
Dalit	5	4.1
Marital status		
Unmarried	59	64.2
Married	44	35.8

Table 2 shows work related characteristics of the respondents. Among 123 respondents, more than half of the respondents (59.3%) were graduated from proficiency certificate level. More than half (59.3%) of the respondents were working in general units. Majority (95.1%) of the respondents were staff nurse. More than two third (68.3%) of the respondents had less than 5 years of work experience.

Table 2: Work related characteristics of respondents (N=123)

Characteristics	Number (n)	Percentage (%)
Qualification		
Proficiency Certificate Level	73	59.3
Bachelor of Science in Nursing	36	29.3
Bachelor of Nursing Science	14	11.4
Working unit		
General unit	73	59.3
Critical care unit (ICUs, OT)	38	30.9
Emergency unit	12	9.8
Job designation		
Staff nurse	117	95.1
Nurse in-charge	6	4.9
Work experience		
<5 years	84	68.3
>5 years	39	31.7

Table 3 indicates that 48.8% of respondents were experiencing moderate level of stress, nearly one third (31.7%) had mild stress and 19.5% of them had severe level of stress.

Table 3: Respondents' level of stress (N=123)

Level of stress	Number (n)	Percentage (%)
Mild (58-114)	39	31.7
Moderate (115-171)	60	48.8
Severe (172-228)	24	19.5
Mean + SD (135.69+35.770), Min=60, Max=214		

Table 4 illustrates that there was statistical significant association of level of stress with age (p=0.026), religion (p=0.012) and working unit (p=0.031).

Table 4: Association between level of stress and selected variables (N=123)

Variables	Level of stress			χ2	p –value
	Mild	Moderate	Severe		
Age (in completed years)					
<25 years	32(38.6)	39(40.5)	12(14.5)	7.283	0.026*
>25 years	7(17.5)	21(52.5)	12(30.0)		
Religion					
Hinduism	29(32.2)	49(54.4)	12(13.3)	8.798	0.012*
Other than Hinduism	10(30.3)	11(33.3)	12(36.4)		
Marital Status					
Unmarried	29(36.7)	36(45.6)	14(17.7)	2.572	0.276
Married	10(22.7)	24(54.5)	10(22.7)		
Qualification					
Proficiency Certificate Level	25(34.2)	35(47.9)	13(17.8)	0.658	0.720
Bachelor level	14(28.0)	25(50.0)	11(22.0)		
Working unit					
General unit	29(39.7)	34(46.6)	10(13.7)	6.931	0.031*
Other than general unit	10(20.0)	26(52.0)	14(28.0)		
Work experience					
<5 years	30(35.7)	38(45.2)	16(19.0)	2.052	0.358
>5 years	9(23.1)	22(56.4)	8(20.5)		

*p-value<0.05 denotes statistical significance; χ2= Chi-square

DISCUSSION

The current study revealed that nearly half (48.8%) of respondents had moderate level of stress while less than one third (31.7%) had mild level of stress whereas less than one fourth (19.5%) had severe stress. It is similar to finding of the study done in tertiary care institutions Islamabad, Pakistan, where 55.4% had moderate stress level and 41.7% had mild stress.[8] It is supported by a study conducted in eight hospitals in Mysore City, India where 55.4% of respondents had moderate stress, while 25.8% had high stress and 18.8% had low stress level.[1] Similarly, the finding is consistent to the study finding of Chitwan Medical College and Teaching Hospital, Nepal where 54.7% of respondents had moderate and 37.6% had severe stress level.[13] Hence, this strongly supports that nurses working in various places in Nepal have similar work related stress.

However, the recent study finding is contrast to study done in Saudi, Arabia, where 76.5% of respondents had moderate stress, 13.8% had low and 9.7% had severe level of stress.[2] Additionally, it is inconsistent to the study finding, 91.7% of respondents had moderate stress level, 5.3% had high and 3% had low stress level which is conducted in Nobel Medical College, Biratnagar, Nepal.[10] Likewise, the finding is contradictory with a study conducted in Klaipėda Country, Turkey where 73.1% of respondents had no stress.[14] This variation in findings of the study may be due to variation in sample size and respondents varied according to study setting.

Finding of the study shows that there was a statistical association of level of stress of respondents with age of respondents (p=0.026). This finding is supported by study conducted in Iraq which showed that there was association of level of stress with age (p=0.006).[15] The study conducted in Zahedan, Iran which showed the association of stress with working ward (p=0.019) which is similar to this study's finding as there is association of level of stress with working unit (p=0.031).[16] However, the study finding is inconsistent with finding of study conducted in Biratnagar, Nepal where there was association of level of stress with marital status (p=0.039).[10] This is also contradictory with the study conducted by Vernekar & Shah, (2018) in Goa, India where there was association of level of stress with marital status (p=0.04).[9]

This study has a limitation. Since it was conducted in only one teaching hospital of Pokhara and among nurses working in in-patient department, the findings cannot be generalized to large population and in other settings.

CONCLUSIONS

Based on the findings of the study, it is concluded that nearly half of the respondents have moderate level of stress, nearly one third have low level of stress and less than one fourth have severe level of stress. Age, religion and working unit tend to effect the level of stress. Therefore, the hospital administration needs to take an initiative to identify the causes of stress among nurses and also plan for conducting different stress management techniques to facilitate nurses coping with work related stress effectively.

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