

# Factors Associated to Stress of Nurses Working in Private Hospitals in Lalitpur District of Nepal

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## ABSTRACT

**Background:** Job stress is an emotional and physical reaction due to the imbalance between individual's priorities and responsibilities to the job. Nurses specifically are profoundly vulnerable to job stress since they have to perform tedious tasks repeatedly. If these problems are not treated on time, stress may increase resulting in the negativity to their work performance.

**Objectives:** The study is aimed at assessing the level of job stress among nurses working in selected private Hospitals of Nepal.

**Methodology:** A descriptive design was adopted for the study. A total of 254 nurses were included by using random sampling technique. Data was collected with self-administered structured questionnaire. Similarly, data was presented by using descriptive statistics to reveal demographic information. Mean, rank and extent of stressor were calculated and student's 't' test and Analysis Of Variance (ANOVA) test were used to look for associations.

**Results:** Majority of participants (92%) were in moderate and high level job stress. Lack of career facilities was discovered as the major factor causing most frequent and more severe stress. Job stress would vary from hospitals to hospitals and units to units. It was intrigued that years of work experiences, education, age, marital status, children status and types of family had no direct role in job stress in nursing.

**Conclusion:** Dearth of sufficient career incentives is seen as a major stressor. In order to bolster the morale of the nurses, adequate incentive and motivation needs to be provided to them so as to lessen job stress in nursing. Stress differed according to different hospitals and different working units.

**Key words:** Job stress, Nurses, Work Performance

## INTRODUCTION

Stress can be defined as the emotional and physical reaction since it is caused by imbalance between individual's priorities and resources. [1] As far as nurses are concerned, stress among them is prone to take place since they have to perform tedious and complex nature of task repeatedly such as dealing with woes and suffering, death, etc. [1] It is stated that nursing is a highly stressful profession. Job stress among nursing professionals is becoming a crucial issue in health care delivery system. [1-3] Extreme stress may produce some noticeable effects such as

hypertension, dyslipidemia, diabetes and other cardiovascular disorders. [4,5] If these problems are not treated on time, further stress may get triggered. Consequently, it may affect work performance, productivity and quality patient care, impairs employee's immune system, which is crucial for any professional activity. Job stress dwindles productivity; increases management pressure, and makes workers ill. [5]

The most seemingly apparent factors of job stress in nursing are problems associated with co-workers in term of communication gap, pressure of senior, lack of information, etc. that resulting in extreme

emotional overload. [5-7] There are several work place stressors such as work load, feeble relationship with other staff, indecisive leadership and rigid management stance, poor group cohesion, lack of adequate supervision, handling of too many and complicated patients which may invite unprecedented casualties. [8] Keeping its nature in consideration, nursing may be universally accepted as a stressful profession. Prolonged stress among nurses increases chance of medical errors and decreases quality of care. [9,10] Another similar kind of survey shows that nursing profession nevertheless has a tinge of progress in managing many physical hazards associated to work but devoid of the same level of progress in the field of mental health. [11]

Therefore, this study has attempted to examine the level of occupational stress amongst nurses working in selected private hospitals of Lalitpur district.

## **MATERIALS AND METHODS**

**Research Design:** A descriptive cross sectional study design was used for the study.

### **Research Site, Population, and Sampling and sample size of the Study**

This study was conducted from February 2015 to August 2015 in private hospitals of Lalitpur district of Nepal. First of all, ethical clearance was obtained from research committee of Kathmandu University (KU) School of education, Bal Kumari since this study was conducted as a partial fulfillment of MPhil in Education. Likewise, written permissions were taken from administrations of the selected private hospitals and from the every participant. During the time of research, there were total 578 nurses in all those selected private hospitals. Sample size was determined by using a sample size calculating formula. [12] Calculated sample size was 236.

### **Tools and Instrumentation**

In order to measure stress, Expanded Nursing Stress Scale (ENSS) was used which was borrowed from Susan French

with her permission. [6] Then it was modified; four relevant items were added, under lack of career ladder and 2 items related to male gender in nursing were deleted as per the expert's suggestion. Finally the ENNS instrument incorporated total 59 items, which could assess the stress from two perspective; frequency and severity. Three point likert scales was there to measure frequency of stress and five point likert scales was for assessing the severity of stress of nurses.

### **Validity and Reliability**

Comprehensive literature review, consultation with nurse professionals, health authorities and peers was done extensively in order to maintain validity of the instrument. For reliability, pretesting of the instrument was done among 10% of total subject. In order to evaluate internal consistency of the 59 items of the instrument, Cronbach's alpha was calculated. Cronbach's alpha of pretest was .78 and in final study it was .97

### **Data Collection Procedure**

For data collection, Researcher herself visited every nurse individually, presented herself as a researcher, and then stated the objective of the study. Systematic random sampling technique was adopted for this study. The prepared questionnaires were distributed to 289. Written consent was taken from the participants before starting to fill the questionnaire. Researcher allowed ample time to complete the questions. Only 254 nurses returned the questionnaire after completion

### **Statistical Analysis**

Data was coded, entered and analyzed on SPSS 16 version. Descriptive statistics was used to reveal information on demographic variables of the participants. Inferential statistics were adopted as a means to see differences and relationships across selected demographic variables and job stress. Data was analyzed using SPSS 16.0 software. For deciding suitability of parametric or non-

parametric test, normality and Levene's test were done. Since, normality test and Levene's test permitted to use parametric tests with small degree of violation because of borderline value of those test, so parametric test t test and Analysis Of Variance (ANOVA) test were used to see association between selected demographic variables and job stress. However, Non-parametric (Kruskal Wallis) test was also used to verify the significant values explored by parametric test. Similarly relationship among defined ten factors of stress was examined by using Pearson

correlation on the basis of guideline provided. [13]

### Ethical Consideration

Researcher determinedly keeps an eye on the ethical aspects for this study. First of all, ethical clearance was obtained from research committee of Kathmandu University (KU) School of education, Bal Kumari since this study was conducted as a partial fulfillment of MPhil in Education. Likewise, written permissions were taken from administrations of the selected private hospitals and from the every participant.

## RESULT

Table 1: Frequency of Personal Attributes of Participants (n=254)

	Variables	Categories	Frequency	Percent
1	Age in years	20-29	229	90.5
		30-39	17	6.7
		40 and above	7	2.8
		Total	253	100
2	Ethnicity	Brahmin	55	21.7
		Chhetri	46	18.2
		Newar	81	32.0
		Others	71	28.0
		Totals	253	100
3	Religion	Hindu	216	85.0
		Buddhist	30	11.8
		Christian	7	2.8
		Islam	1	0.4
		Total	254	100
4	School of SLC	Public	75	29.5
		Private	178	70.1
		Total	253	100
5	Nursing Education	PCL	185	73.1
		Bachelor & Above	68	26.9
		Total	253	100
6	College of Last Nursing Education	Public	36	14.2
		Private	218	85.8
		Total	254	100
7	Marital Status	Married	98	38.6
		Unmarried	156	61.4
		Total	254	100
8	Children status	Having Children	40	16.3
		Not having Children	205	83.7
		Total	245	100
9	Types of family	Nuclear	170	68.5
		Joint	78	31.5
		Total	248	100
10	Years of experience	Bellow 1	45	17.9
		1-5	165	65.5
		6-10	25	9.9
		11-15	7	2.8
		Above 15	7	2.8
		Total	249	100

The majority of participants (90%) were in range of age of 20-29 years (mean = 24.5 years). Majority of participants were Hindu. Similarly, a majority of participants were from private school and had competed

PCL only. Most participants were unmarried and only very few had children. Most participants were from nuclear families and had less than five years' experience (table 1).Hospital wise, majority of participants

were from hospital B and unit wise majority of participants were from ICUs/CCUs as shown in table 2. Out of 10 factors related to job stress, the most frequently and severely occurring factor of stress was related to their future career ladder with the mean of 2.35 in frequency and 3.92 in severity followed by

death and dying, work load and so on as shown in table 3. Table 4 shows that majority of participants (50% & 41.7% respectively) were in moderate and high level of job stress (n=254). Only 8.3% participants were in low level of job stress.

**Table 2: Frequency of Institutional Attributes of Participants (n=254)**

Categories	Hospitals		Categories	Working Units	
	Frequency	Percentage		Frequency	Percentage
Hospital A	33	17	Medical Wards	47	18.5
Hospital B	92	36.2	Surgical Wards	38	15
Hospital C	10	3.9	Operation theatre	5	2
Hospital D	20	7.9	ICU/CCU	48	19
Hospital E	41	16.1	Maternity Wards	8	3
Hospital F	7	2.8	Paediatric Ward	11	4.3
Hospital G	7	2.8	Unco Ward	27	10.6
Hospital H	10	3.9	Emergency Wards	32	12.6
Hospital I	34	13.4	Others	38	15

Note: ICU=Intensive Care Unit, CCU= Coronary Care Unit, Unco Wards=Oncology Wards

**Table 3: Factor wise Mean, SD, and Rank of Frequency and Severity Stress (n=254)**

SN	Factors	Frequency				Severity				
		N	M.	SD	Ra.	N	M.	SD	Ra.	Leve
1	Death and dying	254	2.26	.37	2	253	3.46	.75	4	Mod
2	Conflict with physician	254	2.10	.37	5	253	3.26	.85	7	Mod
3	Inadequate emotional Preparation	254	2.05	.40	8	253	3.12	.90	9	Mod
4	Problems relating to peers	252	2.05	.44	6	253	3.08	.95	10	Mod
5	Problems relating to Supervisor	252	2.05	.44	7	254	3.58	.94	2	Mod
6	Work load	252	2.17	.35	3	254	3.43	.87	6	Mod
7	Uncertainty regarding to treatment	253	2.03	.36	9	253	3.44	.88	5	Mod
8	Patient and family	252	2.10	.34	4	253	3.54	.88	3	Mod
9	Discrimination	252	1.68	.59	10	252	3.13	.13	8	Mod
10	Future Career Ladder	252	2.35	.51	1	253	3.92	.95	1	High

Ra=Rank, N = Number, Leve = Level, M=Mean, Mod=Moderate

Both ANOVA test and Kruskal Wallis test show that stress among nurses significantly varied among different hospitals ( $p = .002$  &  $= 0.008$  respectively). Similarly, stress significantly varied among different working units as well. ( $p = .000$  &  $0.000$  respectively). However, ANOVA test reveals that no statistically differences exist across age group ( $p = .823$ ), experience ( $p = .127$ ) and job stress of nurses as shown in table 5. Table 6 depicts that level of qualification, marital status, types of families and children status had no

significant effect in job stress ( $p = .263$ ,  $.167$ ,  $.319$  &  $.733$  respectively) in nursing. Pearson correlation test shows that there were positive correlations among 10 factors of stress taken into considerations highlighted by table 7.

**Table 4: Over all prevalence of job stress (n=254)**

Stress Category	Frequency	Percent
Mild stress	21	8.3
Moderate stress	128	50.0
High stress	105	41.3
Total	254	100.0

**Table 5: Differences in job stress based on different Hospitals, Working Units, Age & Experiences of Participants (n=254).**

Variables	Defined Categories	ANOVA Test				Kruskal Wallis test	
		N	Mean	SD	F	P	P
	Hospital A	33	3.21	.97	3.250	.002	0.008
	Hospital B	92	3.52	.58			
	Hospital C	10	3.12	1.06			
	Hospital D	20	3.11	.83			
	Hospital E	41	3.43	.53			
	Hospital F	7	3.78	.54			
	Hospital G	7	3.56	.53			
	Hospital H	10	3.73	.50			
	Hospital I	34	3.42	.56			
Working Units	Medical ward	47	3.02	.84	5.841	.000	0.000
	Surgical ward	38	3.51	.66			
	Operation theatre	4	2.94	.59			
	ICU/CCU	47	3.22	.59			
	Maternity ward	7	4.14	.70			
	Pediatric ward	11	3.11	.72			
	Unco ward	26	3.47	.46			
	Emergency ward	31	3.76	.61			
Others	38	3.60	.56				
Age in years	20 -29	229	3.38	.68	.440	.823	
	30-39	17	3.56	.92			
	40 & above	7	3.20	.42			
Years of experiences	Below 1	45	3.26	.75	1.814	.127	
	1-5	165	3.37	.67			
	6-10	25	3.63	.70			
	11-15	7	3.59	1.00			
	Above 15	10	3.69	.55			

**Table 6: Differences of job stress based on education level, marital status, types of family and children status of participants (n=254)**

Variables	Defined types	N	Mean	SD	t- value	P
Level of Nursing Education	PCL	186	3.36	.70	-1.121	.263
	Batchlor & above	68	3.47	.69		
Marital Status	Unmarried	156	3.34	.71	1.386	.167
	Married	98	3.47	.67		
Types of Family	Nuclear family	170	3.36	.72	-999	.319
	Joint family	178	3.45	.64		
Children Status	Having children	40	3.43	.83	341	.733
	Not having children	205	3.38	.68		

**Table 7: Relationship among Factors of Stress (n=254)**

Factors	Death & Dying	Conflict	Emotional preparation	Peers	supervisors	Work load	Uncertain	Patient & family	Descrimi.	Carrier
Death & dying	1									
Conflict Physic.	.55	1								
Emotion prep.	.51	.64	1							
Peers	.42	.53	.64	1						
Super.	.34	.51	.48	.48	1					
Work Load	.42	.54	.56	.57	.71	1				
Uncertainty	.41	.52	.54	.54	.60	.74	1			
Patient/ family	.41	.51	.49	.49	.62	.68	.77	1		
Descrimi	.24	.31	.28	.328	.43	.47	.60	.60	1	
Carrier	.32	.41	.35	.45	.53	.61	.61	.67	.51	1

Note: Conflict= conflict with physician, emotional preparation= inadequate emotional Preparation, uncertain= uncertainty regarding treatment, discrimi= discrimination.

## DISCUSSION

This is a quantitative cross sectional study to assess factors associated to stress of nurses working in private hospitals. In the present study participants were young adult

between 20-29 years of age .Most of them were Hindu, unmarried and had PCL level of education only. The findings disclosed the secret that half of the nurses were in moderate level of job stress whereas 42%

endured high level of job stress. This figure resembles to findings of many similar kinds of international study where majority of nurses (more than 80%) were significant level of job stress. [14,15] Asad Zandi also contended that it might be because of job insecurity in private hospitals, which triggers high stress among nurses. [16] Regarding prevalence of job stress among nurses' findings of this study is slightly higher than the findings of other recent international studies where more than 50% nurses were in job stress. [8,15] The finding of the study is significantly high as compared to the study conducted in Sri Lanka where only 21% nurses were in job stress. [16]

The findings of this study were similar to the findings of Rawal and Pardeshi where there was significant relationship of job stress across many hospitals. [17] Regarding other demographic variables, age has no role in job stress. It may be due to young sample population; lack of variance in age, this finding was contrary, to two other studies conducted in India where there were significant relationship between age and occupational stress. [14,18] Likewise, in this study there was no relationship of job stress with education, family types, marital status, children status, and years of experiences. In contrary, a Chinese study shows that younger and callow nurses had more stress. [19] As per finding of the study conducted in Iran, single nurses had more stress than married ones but in this study marital status did not influence stress among nurses. [15]

Similarly, in this study education level of nurses had no role in job stress, which was similar to the study findings of Mahamoudi, Vahedi, & Hasani. [20] Nevertheless, findings of this study reverse to the findings of other studies as mentioned in Alhajar, education level of nurses is indirectly proportional with job stress. [7] This reverse finding indicates that either our nursing curriculum does not have adequate stress related contents or skill acquiring models or it lacks taking of regular feedback

from service sectors regarding how the nurses are doing in stress related matters.

Concerning causes of stress, majority of nurses pointed lack of career facilities, workload, and problems related to supervisors, problems created by patient visitors were major causes of stress in nursing. Except career ladders, other findings are similar to the findings of other international studies conducted in different settings. [1,6,15] Regarding relationship among factors of stress taken into consideration, there were strong correlations noted with a predominance of association occurring within each factors. This finding is accords with findings of Patricia. [21] Additionally, this study, assessed whether there was misfit between individual attributes and organizational as per the concepts of personal environment fit theory of stress. [22] This study discovers that age, year of education, education, marital status, children status and types of family have nothing to do with stress among nurses. Nevertheless, stress varies across different hospitals and working units. This study solely indicates that job stress was mainly caused by organizational problems rather than by individual attributes.

This study assessed the extent of stress triggered by lack of motivation and lack of incentive. Intriguingly, lack of career incentives appeared as no. 1 stress triggering factor. The concept of augmentation of incentives to make nursing profession more tempting is derived from JDCM model. [23] It is explored that prolonged stress triggers heart diseases, diabetes, and hypertension, this basic concept is derived from Selye's Fight and Flight theory. [24] Likewise, this study explores that majority nurses pointed that they were in stress because of lack of career facilities. This means if working environment lacks reward it ultimately results in negative outcome, which is highlighted by transactional model and reward punishment model of job stress. [25,26]



During the pretest internal consistency of questionnaire was  $\alpha = 0.78$ . After pretest Cronbach's Alpha of 59 items was 0.97 which would be highly acceptable. It seemed that after translation in Nepali, probably meaning of items might become obviously terse clear so that factor's internal consistency had improved in large scale study than pre test.

## CONCLUSIONS

Ninety two percent of participants were in significant level of job stress. Stress among nurses significantly varied among different hospitals and different working units. Among 10 factors of job stress taking into consideration, lack of career ladder which comprised four sub factors; lack of future career ladder, lack of job security, lack of motivation and inadequate salary appeared as prime cause of job stress in nursing. The concept 'The higher the work load; the more the incentives' should be understood and implemented. It is natural that human beings like to work in a scheduled way rather than in an unpredictable manner. It may be the reason why majority of factors of stress are highly related with uncertainty regarding patient treatment.

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