Compare the Level of Stress and Coping Strategies Adopted by the Staff Nurses Working in Various Patient Care Settings

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Abstract:
Background: There is obvious need to have the safest working environments and the best quality of health care delivery to patients by nurses working in the hospitals. Effective stress management and adaptive coping strategies adopted by nurses is one of the very important steps towards this goal. The current study was conducted with the objective of comparing the level of stress and coping strategies adopted by the staff nurses working in various patient care settings. Methods: A descriptive comparative design was chosen, by using proportion to size stratified random sampling, 240 staff nurses were selected from three strata-general ward, private ward, ICU/ Emergency units. Data were collected by self-report method using sociodemographic proforma, Perceived Stress scale and coping scale. Results: Among staff nurses working in general wards, private wards and ICU, severe stress was experienced by ICU staff (42%) while majority of the staff nurses in general wards and private wards were experiencing moderate level of stress. There was no significant difference between the coping strategies adopted by staff nurses working in general wards, private wards and ICU. The present study also observed that majority of the staff nurses were using emotional based coping strategies i.e. strategy of turning to religion being used the most. Among the avoidance based coping techniques, use of alcohol and drug were the least used strategy. The staff nurses who adopted emotion based coping and problem based coping experienced lower stress level while those who use avoidance coping experienced severe stress level. The staff nurses who were young, novice, unmarried, having less number of dependents in family, earning low salary were found to have significantly associated with higher stress level. Conclusion: The present study concludes that if there were effective management of stress among ICU and novice nurses, the work place errors can be minimized; productivity can be increased to maximum and ultimately can enhance quality patient care.

Keywords: Staff nurses, stress, coping strategies, Patient care settings

1. Introduction

We are living in world, which is fast changing in physical, economic and social context. Most of us are under stress sometime or the other. Work stress has been identified as a key factor in service delivery in every organization and in most field of work. How this work stress affects nurses in healthcare institutions, how they cope with it and the resultant effect of the coping strategies on their output forms the crux of this work.[1]Stress as "a relationship between the person and environment that is appraised by the person as taxing or exceeding his resources and endangering his well-being (Lazarus and Folk man)[2]. Coping is the process of managing demands that are appraised as taxing or exceeding the resources of the persons.[3] (Taylor SE).The coping is not a onetime action that someone takes; rather, it is a set of responses occurring over time by which the environment and the person influence each other.[3]
Several studies have attempted to identify and explain various stressors among nurses. Grey P etal. (1981)[4] in their study identified three major sources of stress were identified: work load, feeling inadequately prepared to meet the emotional demands of patients and their families, and death and dying. Ceslowitz S B (1989) [5] commented that nurses who experienced increased levels of burnout used the coping strategies escape/avoidance whereas self-controlling and confronting nurses who experience decreased levels of burnout used the coping strategies of planful problem solving, positive reappraisal seeking social support and Self-controlling. Bianchi ERF

(2009) [6] found work conditions as the major source of stress for nurses and use of positive reappraisal, self-controlling skills, and social support to cope with job stress. Nurses are using coping strategies based on personal resources. Singh GP(2013)[7] identified work related stress is common among emergency nursing staff. Zyga S, et al (2016)[8] reported Intensive Care Unit nurses mainly adopted the strategy of denial while strategies focused on emotions were mostly adopted by females. Age and marital status did not affect significantly the choice of coping strategies.

There is a significant association between work environment and stress and low to moderate level of stress is experienced by nursing staff working in rural health care set up reported by Jondhale A etal (2013)[9]. A study by Jose TT etal (2013) [10]states that 60.38% experience low stress, 38.46% experience moderate stress and stress was high among 1.15% of the subjects. Significant association is found between stress and professional qualification, marital status, and area of work. There is significant association between coping and marital status.

Objectives of the study were: To compare the level of stress among staff nurses working in general wards, private wards and emergency/intensive care units; To compare the coping strategies adopted by the staff nurses working in general wards, private wards and emergency/ intensive care units; To find the association between level of stress and coping strategies adopted by the staff nurses and to find the association between level of stress with socio demographic and selected profession related variables.

2. Materials and Methods

The study was conducted at M.O.S.C. Medical College Hospital Kolenchery, a tertiary care hospital with bed strength over 1200.The study was conducted among staff nurses working in different inpatient units of the hospital. The study population of 680 nurses was divided into three clusters as general wards, private wards and emergency/ICU units. Byproportion to size stratified random sampling, random allocation of 240 staff nurses was done by lottery method from each strataas generalwards:60, private wards:60, emergency/ICU:120.Staff nurses working in inpatient care units and those who are present at the time of data collection were included in the study whereas the staff nurses working as physician assistants, involved in outpatient based care and those who are unwilling for participation were excluded.

The tools used for data collection were: subject intake proforma, Perceived stress scale PSS[11] (10 item), coping scale (60 item). Time taken to administer the tool is 30- 40 minutes. Tools were translated to regional language and back translated to English by bilingual language experts and reliability was assured by test retest method among 5 subjects. The pilot study was conducted to assess the feasibility of the tools. Ethical considerations were taken into account and permission was sought from scientific committee of the institution. Anonymity and confidentiality of the subjects was maintained during the study. With the permission and help of assistant nursing supervisor's meetings was arranged in the service library with staff nurses as per their duty shift and they were given full explanation regarding the need and significance of the study. Afterthat questionnaire was given to the subjects along with an informed written consent form. Time given to read the questions and clarify doubts. The data collection period extended up to one week. The data was then transferred into SPSS 20 and was analyzed using descriptive and inferential statistics.

3. Results

Total of 240 staff nurses working in different in patient care settings were enrolled in the study. 66.7% was aged up to 30years.90% were females.85.4% were Christians. 70.8% belongs to nuclear family, for 35.4% there is no dependent family members. 67.5% were married in that for 60.4% their spouses are employed and 55.8% had 2 children.53.3% travels upto a distance of 10km and 62.5% depends bus as their mode of transport.70% had salary upto 15000 Rs. 89.2% is not suffering from any medical illness.

When the professional attributes of nurses were observed, around 62.5% of nurses possessed diploma in general nursing. Around 74.6% nurses were enrolled as staff nurses and 37.1 have experience up to 5 years. Around 50% works in emergency/ICU units.

3.1. Stress Level among Staff Nurses As Per PSS

Among staff nurses working in private wards, general wards and ICU significantly higher level of stress is experienced by ICU staff nurses (Chi =9.8 df=4   p=0.04*) (Table 1)

3.2. The Coping Strategies Adopted by Staff Nurses as Per Coping Scale

Among the coping strategies most of the staff nurses use emotion based coping strategy to overcome the stressful situation. One-way ANOVA revealed, no significant difference in the coping scores in the domain of problem based coping (F= 0.2 p=0.7); emotion based coping (F=1.2 p=0.2); Avoidance Based Coping (F=2.0 p=0.1) with Area of work. (Table 2)

3.3. Association between Level of Stress and Coping Strategies Adopted by the Staff Nurses

The staff nurses who adopted emotion based coping and problem based coping experienced lower stress level while those who use avoidance coping experienced severe stress level. One-way ANOVA revealed, no significant difference in the mean coping scores in the domain of problem based coping (F= 0.5 p=0.6); emotion based coping (F=1.4p=0.2); Avoidance Based Coping (F=0.9 p=0.4) with level of stress. There is no significant association with level of stress and coping strategies adopted. (table 3)

3.4. Association between Level of Stress with Socio Demographic and Selected Study Variables (Table 4)

As per the table 4, the variables which were significantly associated with stress were Designation (p=0.002), Marital status (p=0.03), Age (p=0.02), Number of dependent family member (p=0.04), Monthly family income (p=0.002).

4. Discussion

The current study findings reveals that ICU Staff nurses experience high stress than staff working in general and private wards and the findings being consistent with the Pounced MC etal 2007 [12] study which reported One-third of ICU nursing staff had severe burnout syndrome and stress. Nurses commonly use emotion based coping strategies than problem based coping and avoidance coping to overcome stressful situations, this is supported by Gholamzadeh, Sharif etal 2011[13]and the study shows that nurses in emergency units applied emotion-focused coping strategies more than problem-focused coping strategies. Turing to religion and positive reinterpretation were more used by the nurses in the emotion based coping and this finding is partially consistent with the study by which shows BaldacchinoD etal[14]strategies used by nurses to cope with job stress, include: situational control of conditions, seeking help, preventive monitoring of situation, self-controlling, avoidance and escape and spiritual coping. Unmarried, young (<30years), nurse trainees, with low salary experience higher stress than experienced older staff nurses who are married and having dependent family members and a study by Wang FS, et al[15] shows that new nurses have comparatively high level of stress than staff nurses who are experienced.

4.1. Limitations

The limitations of the study include use of single setting; small sample size. Nurses specific stress scales were not used, Yet PSS and coping scale was able to measure the level of stress of staff nurses in each working units and the coping strategies adopted by them.

4.2. Strength of the Study

Random sampling and use of standardized tools enhances the generalizability of findings.

4.3. Conclusion

The findings can be utilized by nursing administrators to conduct induction programs especially for novice nurses and to strengthen the counseling cell for staff nurses to manage the stress. Thus staff nurses can reduce their stress by adopting appropriate coping strategy and thereby reduce work place errors, enhance productivity and can deliver quality patient care.

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Annexure

		Level of stress			Chi-square statistic
		Low stress	Moderate stress	High stress	
Area of working	Private ward	14	31	15	x^2=9.83 Df=4 P=0.04
	General ward	13	33	14	
	ICU/Emergency	15	55	50	

Table 1: Statistical association between level of stress and area of work
n=240
p<0.05 level of significance Chi square test

Coping strategies	Area of work	Mean	Std. Deviation	ANOVA statistic	
				F	P value
Problem based coping	Private ward	57.3	8.5	0.2	0.7
	General ward	57.8	9.1		
	ICU/Emergency	56.8	8.9		
Emotion based coping	Private ward	70.2	9.1	1.2	0.2
	General ward	70.4	9.8		
	ICU/Emergency	68.4	9.7		
Avoidance coping	Private ward	30.7	5.5	2.0	0.1
	General ward	31.9	6.9		
	ICU/Emergency	32.8	7.0		

Table 2: Statistical association between Coping strategies and Area of work   n=240
p<0.05 level of significance one way ANOVA

Coping strategies	Level of Stress	Mean	Std. Deviation	ANOVA statistic	
				F	p value
Problem based coping	Low stress	58.3	8.8	0.5	0.6
	Moderate stress	57.3	8.3		
	High stress	56.5	9.8		
Emotion based coping	Low stress	71.5	10.0	1.4	0.2
	Moderate stress	69.3	9.5		
	High stress	68.4	9.6		
Avoidance coping	Low stress	30.8	7.1	0.9	0.4
	Moderate stress	32.4	6.5		
	High stress	32.3	6.8		

Table 3: Statistical association between Level of Stress and Coping strategies n=240
p<0.05 level of significance one way ANOVA

Variables			Low stress	Moderate stress	High stress	Chi square	Df	Pvalue
Socio demographic variables	Age	Less than 30yrs	22	71	67	**11.747ᵃ**	**4**	**0.019***
		31-40	11	41	23			
		Upto60	3	2	0			
	Gender	Male	0	8	4	2.930ᵃ	2	0.231
		Female	36	106	86			
	Religion	Hindu	4	11	16	5.925ᵃ	4	0.205
		Christian	32	102	71			
		Muslim	0	1	3			
	Education	Diploma Nurse	26	76	48	6.121ᵃ	4	0.190
		B.Sc Nurse	9	30	35			
		PB B.Sc nurse	1	8	7			
	Marital status	Married	30	79	53	**7.324ᵃ**	**2**	**0.026***
		Unmarried	6	35	37			
	Occupation of spouse	Not applicable	7	37	37	5.766ᵃ	4	0.217
		Employed	26	70	49			
		Unemployed	3	7	4			
	No of children	No children	11	44	45	7.842ᵃ	4	0.098
		2children	23	69	42			
		More than 2 children	2	1	3			
	No of dependent family members	No dependent member	11	34	40	12.995ᵃ	6	0.043*
		Up to 2 dependent member	15	45	17			
		Up to 4 members	9	26	25			
		More than 5dependnet member	1	9	8			
	Type of family	Nuclear	24	80	66	.861ᵃ	4	0.930
		Extended	3	11	7			
		Joint	9	23	17			
	Mode of transportation	Hostel	3	7	8	7.960ᵃ	6	0.241
		Bus	19	72	59			
		Two wheeler	13	35	23			
		Car	1	0	0			
	Distance from home (daily traveling distance for work)	Up to 10 km	19	70	39	8.385ᵃ	6	0.211
		11-20km	8	23	27			
		21-40km	8	20	20			
		41-80	1	1	4			
	Monthly income in Rs	Up to 10000	5	18	31	**16.744ᵃ**	**4**	**0.002***
		10001-15000	25	87	56			
		15001-20000	6	9	3			
Profession related variables	Designation	Trainee	6	18	33	**12.03**	**2**	**0.02**
		Staff	28	95	56			
		Head nurse	2	1	1			
	Dept of work					2.859ᵃ	20	0.2
		Pediatric	3	13	12			
		Trauma/emergency	3	13	10			
		Surgery	2	10	10			
		Medicine	4	12	9			
		Cardiology	2	10	6			
		Neurology/neurosurgery	7	15	13			
		Obstetrics and gynecology	2	11	9			
		Psychiatry	4	10	8			
		Cardiac surgery	3	8	5			
		Labour room	6	12	8			
	Year of experience	Up to 5 years	13	40	36	8.643ᵃ	6	0.195
		6-10years	12	48	21			
		11-15 years	7	12	7			
		16 years and above	0	1	2			

Table 4: Statistical association between level of stress with socio demographic and profession related variables   n=240