Original Article

A comparative study to assess the level of stress among the nurses

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DOI: 10.47750/pnr.2022.13.S01.162

Abstract

Background & objectives-Nursing profession is stressful profession by its nature of work. The main objective of this study is to assess the level of stress among nurses working in various department such as intensive care units and general wards at tertiary care hospital. **Method-** A non probability convenience sampling technique was adopted to select 300 registered nurses from different working area of Krishna Hospital & Medical Research Centre, Karad.Modified expanded nursing stress scale (MENSS) was used to collect data. **Result-** With reference to current working area (Ward) majority 34% (102) of the nurses were from ICU, 22.7% (68) from female ward and 15% (45) from male ward whereas least 12.7% (38), 9.3% (28)and 6.3% (19) nurses were respectively from maternity pediatric and operation theater area.Nurses currently working in Intensive care unit, 11% (33) nurses were experienced mild stress, 19% (57) were having moderate stress and 04% (12) nurses were experienced severe stress whereas general wards, 10% (30) nurses were experienced mild stress, 36.66% (110) were having moderate stress and 13% (39) nurses were experienced severe stress. **Conclusion -**Though there has been adequate clinical skills training in the nursing curriculum, little attention is paid to make the working environment less stressful and more conducive to healthy interactions. Emotional preparation of nurses in dealing with patients is required. Need to use Stress reduction activities and measures to handle stressful situation and interpersonal stress.

Keywords: Nurses, stress, intensive care units and general wards.

INTRODUCTION

Nursing personnel is the largest group of health care professionals working in hospital. Nurses provide 24 hrs services in multidimensional role such as provide comfort, advocate, guide, help and support with loneliness, pain, incapacity, disease and even death[1]. As a result of uncertainty nurses face challenges to provide high-quality care at lower costs. Overall, stress levels increase when more number of patients have to be cared in the same hours and turnover of patient is faster than in the past[2].

The International Labor Organization defines, "stress is the harmful physical and emotional response caused by an imbalance between the perceived demands, resources and abilities of individuals to cope with those demands"[3]. Nursing is a demanding profession which requires the ability to withstand stressful situations like dealing with death and dying, emergencies. Nurses go through many tough situations which are demanding in nature and require good academic knowledge, skills, dedication to the profession as well as good time management to accomplish multiple tasks in a short span of time to withstand stress and improve resilience. It also requires the ability to provide independently care to the patients, cope with emergencies, and handle difficult situations by staying calm and providing support and care to patients and their families. This is the fact that nursing profession is recognized worldwide as stressful profession by its nature of work[4].

Worldwide, many studies have been conducted to identify the contributing factors of stress among nurses. Intensive care nurses always taking care of critical ill patient, handle emergency and death and dying patients where as general ward nurses taking

care of more number of patients, facing to patients and their families. Thus both the nurses facing with different level of stress and stressors. There fore researcher decided to assess the level of stress among nurses working in intensive care units and general ward at tertiary care hospital.

OBJECTIVE

1. To assess the level of stress among nurses working in intensive care units, operation theater and general ward at tertiary care hospital
2. To find an association between the levels of stress among nurses with Current working area according to stressors.

METHODS AND MATERIAL

A descriptive study was conducted at the Krishna Hospital &Medical Research Centre, Karad, a multi-specialty tertiary care hospital begins with 200 beds and over the span of last 3 and a half decades the hospital has grown up to 1125 beds facilities with 32 wards, 8 different ICUs, operation theaters, has added a number or various capabilities over the years, more than 500 nursing staff working in the hospital. Hospital situated in one of the remotest areas in southern Maharashtra which is accredited by ISO 9001: 2015, NABH 2016 and re-accredited in the year 2019. A total 300 Nurses working in different area was selected by using non probability convenience sampling technique. Four point Likert modified expanded nurses stress scale with 63 items and 10 sub scales was used for data collection.The researcher obtained permission from ethical committee & concern authority**.** The investigator given self introduction and explained the purpose of the study and taken informed written consent.Data were collected, tabulated and analyzed in terms of objective of the study by using descriptive and inferential statistics.

RESULTS

Table 1: Distribution of nurses according to age & sex in terms of frequency and percentage.
N-100

Sr. no.	**Variable**	**Frequency**	**Percentage**
1.	**Age in years**		
	20-29	213	71.0
	30-39	53	17.7
	40-49	17	5.7
	50 and above	17	5.7
2.	**Sex**		
	Male	49	16.3
	Female	251	83.7
3	**Marital status**		
	Single	112	37.3

	Married	184	61.3
	Divorced or separated	1	0.3
	Widow/ widower	3	1.0
4	**Number of children's**		
	None	184	61.3
	One	82	27.3
	Two	31	10.3
	More than two	3	1.0
5	**Type of family**		
	Nuclear	175	58.3
	Joint	125	41.7
6	**Education level**		
	Diploma	202	67.3
	Degree	98	32.7
7	**Years of experience**		
	1-5	193	64.3
	6-10	71	23.7
	11-15	8	2.7
	16-20	11	3.7
	More than 20	17	5.7
8	**Designation**		
	Staff nurse	282	94.0
	In-charge/ Supervisor	18	6.0
9	**Employment status**		
	Permanent	119	39.7
	Probation	76	25.3

	Contract	105	35.0
10	**Salary per month**		
	Enough	272	90.7
	Not enough	28	9.3
11	**Current working area**		
	ICU	102	34.0
	Operation theatre.	19	6.3
	Pediatrics	28	9.3
	Maternity Wards	38	12.7
	Male wards	45	15.0
	Female Wards	68	22.7
12	**Attended any of the following programme**		
	Meditation programme	73	24.33
	Stress management programme	101	33.66
	Deep breathing & muscle relaxation programme	75	25
	Time management programme	32	10.66
	No	60	20

Table 1: The findings of the table no. 1 depicts that majority of nurses 71% (213) participated in the study were from 20-29 years age group, (83.7%) of the nurses were female as nursing is a female dominated profession only 16.3% (49) are male. Majority 61.3% (184) were married, 61.3% (184) were not having children as most of the nurse are from 20-29 years of age group where as 58.3% (175) nurses were from nuclear family. In regard, to education level nurses with a diploma in nursing 67.3% (202) were more than those having a degree in nursing 32.7% (98). With reference to year of experience , Majority 64.3% (193) of the sample were having work experience of 1 to 5 years and maximum 94% (282) of the nurses working as staff nurse. In regard to the employment status 39.7% (119) were holding permanent post and 90.7% (272) having enough salary per month. With reference to current working area (Ward) majority 34% (102) of the nurses were from ICU, 22.7% (68) from female ward and 15% (45) from male ward whereas least 12.7% (38), 9.3% (28)and 6.3% (19) nurses were respectively from maternity pediatric and operation theater area. Majority of the nurses 33.66% (73) attended stress management programme during last six month, and 20% (60) nurses not attended any programme during last six months.

Table no. 2 – Mean score and standard deviation of sub scales scores of stress among nurses.

N-300

Sr. No.	Sub scales	Mean	Standard deviation (SD)
1.	Uncertainty of concerning treatment	22.56	5.776
2.	Conflict with physician	20.56	5.209
3.	Workload	24.78	6.350
4.	Death and dying	6.73	1.960
5.	Conflict with Supervisors	12.33	3.255
6.	Inadequate emotional preparation	17.92	5.043
7.	Lack of social support	17.47	4.551
8.	Discrimination	12.98	3.826
9.	Conflict with peers	11.90	3.660
10.	Dealing with patients and families	7.76	2.757

Table no. 2 - Table no. 2 depicts the calculated mean scores and standard deviation of the 10 sub scales. The data revealed that the mean score and SD were highest 24.78 and 6.350 in the area of workload, followed by 22.56 and 5.776 Uncertainty of concerning treatment and 20.56 and 5.209 Conflict with physician. The mean score and SD 17.92 & 5.043 in the area of inadequate emotional preparation and 17.47 & 4.551 lack of social support where as 12.98 & 3.826 Discrimination followed by 12.53 & 3.255 Conflict with Supervisors and 11.90 & 3.660 Conflict with peers. Least 7.76 & 2.757 score were found in the area of dealing with patients and families and 6.93& 1.960 death and dying.

Association between the levels of stress before intervention among nurses with Current working area according to sub scale.

Table no. 3 – Association between the levels of stress among nurses with Current working area according to Uncertainty of concerning treatment

N- 300

Sr. No.	Current working area	No stress	Mild stress	Moderate stress	Severe stress	Chi square test (χ^2)	P value
1.	ICU	4	23	59	16	11.184	0.0828
2.	Operation theatre.	0	7	11	1		
3.	Wards	2	28	110	39		

Table no. 3 – Table no.3 shows area wise analysis of the level of stress revealed that there was no statistically significant association between the levels of stress among nurses with Current working area according to uncertainty of concerning

treatment before intervention.

Table no. 4 – Association between the levels of stress among nurses with Current working area according to Conflict with physician

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	2	31	48	21	14.034	*0.0293
2.	Operation theatre.	0	2	15	2		
3.	Wards	1	29	103	45		

Table no.4 – Table no.4 shows area wise analysis of the level of stress revealed that there was statistically significant association between the levels of stress among nurses with Current working area according to conflict with physician before intervention.

Table no. 5 – Association between the levels of stress among nurses with Current working area according to Workload

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	2	31	52	17	6.465	0.3137
2.	Operation theatre.	0	4	14	1		
3.	Wards	1	42	101	35		

Table no.5 – Table no.5 revealed that there was no statistically significant association between the levels of stress among nurses with Current working area according to workload before intervention.

Table no.6– Association between the levels of stress among nurses with Current working area according to Death and dying

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	9	44	42	7	12.125	0.0592
2.	Operation theatre.	1	14	4	0		

3.	Wards	5	84	72	18		

Table no.6 – Table no. 6 shows that there was no statistically significant association between the levels of stress among nurses with Current working area according to death and dying before intervention.

Table no.7– Association between the levels of stress among nurses with Current working area according to Conflict with Supervisors

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	4	32	53	13	10.721	0.094
2.	Operation theatre.	0	3	15	1		
3.	Wards	3	43	95	38		

Table no.7 – Table no. 7 revealed that there was no statistically significant association between the levels of stress among nurses with Current working area according to conflict with Supervisors before intervention.

Table no. 8 – Association between the levels of stress among nurses with Current working area according to inadequate emotional preparation

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	8	21	51	22	8.658	0.1938
2.	Operation theatre.	0	3	12	4		
3.	Wards	3	33	100	43		

Table no.8 – Table no.8 depicts that there was no statistically significant association between the levels of stress among nurses with Current working area according to inadequate emotional preparation before intervention.

Table no.9 – Association between the levels of stress among nurses with Current working area according to Lack of social support

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	1	31	54	16	7.809	0.2524

2.	Operation theatre.	0	5	13	1		
3.	Wards	1	41	92	45		

Table no.9 – Table no.9 revealed that there was no statistically significant association between the levels of stress among nurses with Current working area according to lack of social support.

Table no.10 – Association between the levels of stress among nurses with Current working area according to Discrimination

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	10	35	49	8	24.446	*0.0004
2.	Operation theatre.	0	12	6	1		
3.	Wards	0	79	82	17		

Table no.10 – Table no.10 depicted area wise analysis of the level of stress revealed that there was statistically significant association between the levels of stress among nurses with Current working area according to discrimination.

Table no.11 – Association between the levels of stress among nurses with Current working area according to Conflict with peers

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	4	41	45	12	9.130	0.1664
2.	Operation theatre.	1	4	11	3		
3.	Wards	3	55	81	40		

Table no.11 – Table no.11 revealed that there was no statistically significant association between the levels of stress among nurses with Current working area according to conflict with peers.

Table no.12 – Association between the levels of stress among nurses with Current working area according to Dealing with patients and families

N- 300

Sr. No.	Current working area Sub scale	No stress	Mild stress	Moderate stress	Severe stress	Chi square test	P value
1.	ICU	19	23	35	25	15.682	*0.0156

2.	Operation theatre.	0	6	8	5		
3.	wards	11	41	54	63		

Table no.12 – Table no.12 revealed that there was statistically significant association between the levels of stress among nurses with Current working area according to dealing with patients and families.

DISCUSSION

Out of 34% (102) nurses currently working in Intensive care unit, 11% (33) nurses were experienced mild stress, 19% (57) were having moderate stress and 04% (12) nurses were experienced severe stress. Out of 59.66% (179) nurses working in general wards, 10% (30) nurses were experienced mild stress, 36.66% (110) were having moderate stress and 13% (39) nurses were experienced severe stress. Similar findings seen in study conducted by Ruchi Saini, Kaur S, Das K.[5] that moderate stress level was prevalent more among ICU nurses (57.8%) while high stress was present among nurses working on wards (54.5%).

Sub scale wise analysis of the level of stress among nurses currently working in Intensive care unit revealed that out of 34% (102) maximum 8.33% (25) nurses were experienced severe stress due to dealing with patients and families followed by 7.33% (22) nurses were having severe stress related to inadequate emotional preparation, 7% (21) nurses related to conflict with physician, 5.66% (17) nurses reported severe stress related to workload, 5.33% (16) nurses were experienced severe stress due to uncertainty of concerning treatment and lack of social support, 4.33% (13) nurses were having severe stress related to conflict with Supervisors, 4% (12) conflict with peers. Very few nurses 2.66% (8) and 2.33% (07) were reported severe stress due to discrimination and death and dying. Congruent finding seen in study conducted by Manisha Pawar[6] that maximum (30%) of the ICU nurse's experienced very severe stress related to patient and families and very few (6%) of the ICU nurses experienced very severe stress related to death and dying. Similar findings reported by Salma Johan, Hajra Sarwar and Iram Majeed[7] that (78.2%) nurses responded that prolonged shifts or extra duties followed by 68.5% nurses reported lack of support from supervisors/managers and 65.2% of nurses responded excessive workload were the major causes of stress amongst the nurses of ICU at Ittefaq Hospital, Lahore.

Sub scale wise analysis of the level of stress among nurses currently working in operation theater reported that maximum nurses were experienced severe stress while dealing with patients and families, inadequate emotional preparation, conflict with peers and physician and very few nurses were reported severe stress due to all other listed stressors and no one is having severe stress due to death and dying.

Sub scale wise analysis of the level of stress among nurses currently working in general wards revealed that out of 59.66% (179) maximum 63 nurses were experienced severe stress due to dealing with patients and families, followed by 45 lack of social support and conflict with physician, 43 inadequate emotional preparation, 40 conflict with peers, 39 uncertainty of concerning treatment, 38 conflict with Supervisors, 35 workload, 18 death and dying and 17 discrimination.

It shows nurses working in both the unit experienced severe stress due to dealing with patients and families, conflict with physician, inadequate emotional preparation lack of social support, workload whereas very few nurses were reported severe stress due to discrimination and death and dying. Similar findings seen in study conducted by Ruchi Saini, Kaur S, Das K.[5] that job challenge accounted maximum of variance in total stress (43.2 and 46.2%) followed by workload (20.4 and 21%) among ward and ICU nurses respectively. How-ever, social support leads to 15.9% of variance followed by role ambiguity (5.3%) among ward nurses.

ACKNOWLEDGMENT

The authors would especially like to thanks Dr. Supriya Patil Professor (preventive and social medicine) KIMS and Dr. Mahadeo Shinde for support, suggestions, encouragement and input in various aspects of the study.

CONFLICTS OF INTEREST

None

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