

Factors Contributing to Increased Stress among Bedside Nurses Working in Tertiary Care Hospitals in Karachi, Pakistan

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ABSTRACT

Introduction: Nurses are facing stress due to work related factors which highly impacting their career by suffering from heavy workloads, insufficient staffing, turnover, limited resources, and the prolong duties hours which elevated their stress respectively into their profession.

Objective: To determine the factors contributing to increased stress amongst bedside nurses working in public and private tertiary care hospitals at Karachi, Pakistan.

Methodology: An analytical Cross-sectional study was conducted in both Public Dr. Ruth K. M. Pfau, Civil Hospital Karachi, and Private Kharadar General Hospital (KGH) where data were collected amongst 200 nurses, from June to August, 2024, and Convenient sampling technique was used to assess the self-structured questionnaire from RN, BSN, MSN whereas, RM, CMW, CHN, LHV, and nursing students were not included in this study setting.

Results: The results revealed that, stress amongst nurses were identified more on female 126 (63%), unmarried 124 (62%) women whose age between 20-30 86(43%), residing in urban 172(86%) Muslim 127(63.5), Punjabi 84(42.5%), had BSN degree 64(32%) mainly were from 40(20%) from medical department than other units, were suffering more stress from; clinical environment 133 (66.5%), lack of support from nursing administration 140(70%), miscommunication between health care provider (colleagues or doctors) 151(75.5%), making mistake in treating patient 153(76.5%), doctors commanding 141(70.5%), shortage of healthcare provider in emergency situation 163(81.5%), pressure from unit managers, doctors and supervisors 113(56.5%), by working constantly doing night shift duties 128(64%), having additional responsibility and long working hours by the management 138(69%), ineffective or unsupportive may create a negative work environment 160(80%), lack of professional development opportunities; training, educational facilities, promotion 155(77.5%), lack of safety and security 139(69.5%), busy by the paper work and documentation 152(76%). Herein, X² test also used to evaluate the association between the factors and the socio demographic variables in which hospitals, age, gender, religion and ethnicity were highly significantly associated as (P-value < 0.05)

Conclusion: The nursing profession is comprises the stress of bedside nurses which directly impacts on nurse's health, patient-care, and health system of the country.

Keywords: Nurses, Stress, Workload, Lack of Support from Nursing Administration, Shortage of HealthCare Provider.

INTRODUCTION

Stress is considered a natural part of life, and when it is manageable, it is seen as healthy and not harmful (Wright, Bogan, & Wyatt, 2013). However, job-related stress arises from the interaction between work demands and the individual, potentially leading to both physical and mental harm, which negatively affects job performance (Unaldi Baydin, Tiryaki Sen, Kartoglu Gurler, Dalli, & Harmanci Seren, 2020; Richardson & Rothstein, 2008)

Nursing, in particular, is considered a highly stressful profession due to demanding workloads, excessive responsibilities, limited authority, and high expectations. These challenges often lead to job free, burnout, turnover, and a decline in professional performance (Jacobs & Lourens, 2016). The International Council of Nurses reports that work-related stress costs the U.S. economy between \$200–300 million annually, with nearly (90%) of employees' medical issues attributed to job stress (Hassard, Teoh, Visockaite, Dewe, & Cox, 2018).

In Iran, studies show that 7.4% of nurses are absent from work every week due to physical and mental health problems, with nurses reporting the highest levels of work-related stress (80%) compared to other healthcare professionals (Ghabaee, Amir, Velshkolaei, & Rajabzadeh, 2016). Also Prolonged occupational stress can severely affect employees' overall wellbeing, increasing the risk of conditions such as heart disease, high blood pressure, diabetes, and mental health disorders, including anxiety and depression (Liu et al., 2017).

Additionally, today's nurses are experiencing stress as a result of work-related factors that have a significant impact on their careers.

These factors primarily include heavy workloads, inadequate staffing, limited resources, and nursing managers' prolonged duties, which increase stress levels due to their complex and multifaceted roles and responsibilities from the organization (Johansson et al., 2013; Ebrahimi & Iran J Nurs, 2012; Ketelaar et al., 2013).

This cross-sectional study, conducted between November 2015 and April 2016, involved 124 nursing staff from three teaching hospitals affiliated with Zahedan University of Medical Sciences. The study used the Osipow Job Stress Scale (60 questions across 6 subscales) and Goldberg's General Health Questionnaire (28 questions across 4 subscales) to assess stress levels among participants. The majority of the nurses were female (72.06%), with a mean age of 31.39 years, and more than half were married (55.60%). Most participants held a Bachelor of Science in Nursing (BSN) degree (70.20%), compared to those with a Diploma (20.20%) or Master of Science in Nursing (MSN) (9.70%). The data analysis revealed that job stress was significantly associated with factors such as gender, job experience, workplace, ward, work shifts, and type of employment (P < 0.05). Most nurses experienced low levels of stress (62.90%) compared to moderate or severe levels (Gorgich et al., 2017).

This cross-sectional study, conducted in two tertiary care hospitals, used the DASS-21 scale to assess stress levels among 431 nurses. The findings revealed that female and married nurses (55.7%) with a mean age of 31.43 years (SD = 9.4) experienced significant stress due to several factors. These included lack of job satisfaction, conflicts with supervisors and nursing administration, disputes with patients and their families, interpersonal conflicts within the nursing team, inadequate recognition for their work, insufficient salaries, excessive workloads, and limited access to essential equipment and medications. All these factors were found to contribute significantly to job stress, with a P-value < 0.05. The

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study further highlighted that female nurses were more prone to moderate levels of stress (18.8%) compared to mild (11.8%), moderate (16.3%), and severe levels of stress (Kaushik et al., 2021).

Another cross-sectional study of 230 nurses in three districts of private tertiary care hospitals in Karachi, Pakistan, from August 2017 to August 2018 revealed that 124 (55.1%) of the nurses, with a mean age of 26.5 ± 2.4 years, experienced more stress than 101 (44.9%) of the male nurses. The majority of the nurses were in the diploma program (66.7%), followed by those in the BSN (26.2%) and Post RN BSN (7.1%) degrees, and those with 1–5 years of work experience (91.6%) were more stressed than those in the emergency department (69.3%), the intensive care unit (33.3%), and the general ward (29.3%) (Atif Mahmood et al., 2020).

METHODOLOGY

Descriptive Cross-sectional study was conducted in Public and Private tertiary care hospitals in Karachi, Pakistan; Public setting was Dr. Ruth k. M. Pfau, Civil Hospital Karachi, and Private setting was Kharadar General Hospital (KGH) from June to December, 2024. Convenient sampling technique was used to achieve a sample size 200. All RN, BSN, MSN who agreed to participate were included in this study, whereas those Nurses who were RM, CMW, CHN, and LHV, and those who were not willing to give informed consent were excluded from the study setting. The approval was taken from the Ethical Review Committee of College of Nursing Civil Hospital, Karachi. Written informed consent was also taken before data collection, and also maintained anonymity, and confidentiality throughout the study period. A tool of Self-Structured Questionnaire was checked by the IRB of the Ethical Review Committee of College of Nursing Civil Hospital, Karachi. A panel of three experts in nursing who had specialty, analyzed the content validity of the tools before using it to ensure that all

questions had consistency, and carried the anticipated meaning of the study. The data were analyzed on SPSS licensed V-16 software. For the Quantitative variable, frequencies and percentages; whereas, for the inferential statistics X² test was used. Cronbach alpha calculated from the 10% of the sample size was 0.88. Descriptive and inferential variables are shown in the tables given below.

RESULTS

According to the demographic domain the majority of the participants are females at 126 (63%). The largest age group is 20-30 years comprises of 86 nurses (43%). Most participants who took part in the study are unmarried 124 (62%), while 70 (35%) are married and small portion of 6 (2%) represent widow/divorced group. On the other hand, 75 of nurses (37%) have no children. 64 (32%) have 1-2 children likewise 55 (27%) nurses have 3-4 children and only 3% (6 nurses) have 4 or more children. In terms of the resistance of participants a large majority, 172 nurses (86%), live in urban areas and 28 nurses (14%) live in rural areas. In contrast to the education level of the respondents, (36%) of nurses hold a Post-RN BSN degree 72 nurses, (30.5%) have a Diploma in Nursing 61 nurses, (32%) have a Bachelor's in Nursing (BSN) 64 nurses and only (1.5%) have a Master's in Nursing (MSN) 3 nurses, Similarly, for the ethnicity the table depicts Punjabi nurses making up the largest group of 85 (42.5%). The majority of the nurses 127 (63.5%) are Muslim. The distribution across wards shows(20%) in the Medical department 40 nurses, Surgical has 25 nurses (12.5%) , Pediatrics comprises 18% (36 nurses), ICU has 23 nurses (11.5%), Emergency is 20 nurses (10%) ,OBS and Gynea is 24 nurses (12%) and other departments like Cardiac, Psychiatric, Orthopedic, and ENT represent smaller portions

Table 1: Socio-Demographic Variables of stress amongst bedside nurses working in Private and Public Tertiary Care Hospitals (n=200).

Variables	Characteristics	Frequencies	Percentages
Gender	Male	74	(37%)
	Female	126	(63%)
Age	21-30 Years	86	(43%)
	31-40 Years	61	(30.5%)
	41-50Years	32	(16%)
	>50Years	21	(10.5%)
Marital Status	Married	70	(35%)
	Unmarried	124	(62%)
	Widow/Divorced	6	(2%)
No. of Children	1-2	64	(32%)
	3-4	55	(27%)
	4 or more	6	(03%)
	Null	75	(37%)
Education Level	Diploma in Nursing	61	(30.5%)
	Bachelor in Nursing (BSN)	64	(32%)
	Post RN BSN	72	(36%)
	Masters in Nursing (MSN)	03	(1.5%)
Residence	Urban	172	(86%)
	Rural	28	(14%)
Ethnicity	Punjabi	85	(42.5%)
	Pakhtoon	34	(17%)
	Sindhi	69	(34.5%)
	Hindustani	04	(02%)
	Balochi	08	(04%)
Religion	Muslim	127	(63.5%)
	Christian	65	(32.5%)
	Hindu	10	(5%)
Department\ Ward	Medical	40	(20%)
	Surgical	25	(12.5%)
	Pediatrics	36	(18%)
	ICU	23	(11.5%)
	Emergency	20	(10%)
	OBS and Gynea	24	(12%)
	Cardiac	11	(5.5%)
	Psychiatric	06	(03%)
	Orthopedic	13	(06.5%)
	ENT	02	(01%)

Table 2: Factors of stress amongst bedside nurses working in Private and Public Tertiary Care Hospitals (n=200).

S. No.	Variables	Characteristics	Frequencies	Percentages
1	Are you having stressed from the clinical environment?	YES	133	(66.5%)
		NO	67	(33.5%)
2	Are you stressed by your partners, or with your colleagues?	YES	76	(38%)
		NO	124	(62%)
3	Do you have any house related stress?	YES	79	(39.5%)
		NO	121	(60.5%)
4	Do you have stress by the lack the support from nursing administration site?	YES	140	(70%)
		NO	60	(30%)
5	Do you have any difficulty by working with male nurse?	YES	39	(19.5%)
		NO	160	(80%)
6	Are you stress when miscommunication occur between health care provider (colleagues or doctors)?	YES	151	(75.5%)
		NO	74	(23.5%)
7	Does stress leads to making mistake in treating patient?	YES	153	(76.5%)
		NO	47	(23.5%)
8	Do you feel that the doctor too much commanding on you?	YES	141	(70.5%)
		NO	59	(29.5%)
9	Are you worried about the shortage of healthcare provider in emergency situation?	YES	163	(81.5%)
		NO	37	(18.5%)
10	Are you under pressure from unit managers, doctors and supervisors?	YES	113	(56.5%)
		NO	87	(43.5%)
11	Are you frustrate by working constantly doing night shift duties?	YES	128	(64%)
		NO	72	(36%)
12	Do you worry by having additional responsibility and long working hours by the management?	YES	138	(69%)
		NO	62	(31%)
13	Do you have stress by facing any conflicts between your household and work related responsibilities?	YES	122	(61%)
		NO	78	(39%)
14	Are you worried when you have limited decision making authority and control over patient care?	YES	134	(67%)
		NO	66	(33%)
15	Are you worried that ineffective or unsupportive may create a negative work environment?	YES	160	(80%)
		NO	40	(20%)
16	Does stress cause your health related issues; headaches, anxiety, hypertension or CVS problem during your working hours?	YES	143	(71.5%)
		NO	57	(28.5%)
17	Have you experienced any verbal and physical abuse from patients or their families?	YES	112	(56%)
		NO	88	(44%)
18	Are you concerned about a lack of professional development opportunities; training, educational facilities, promotion?	YES	155	(77.5%)
		NO	45	(22.5%)
19	Do you have any stress arise due lack of safety and security in the workplace environment?	YES	139	(69.5%)
		NO	61	(30.5%)
20	Are you worried about patient health when you busy with paper work and documentation?	YES	152	(76%)
		NO	48	(24%)

Table 2. The above table highlights the carrying factors that contributes towards stress among bedside nurses. Stress is a key concern as it gives birth to anxiety and frequent burnouts. (66.5%) agreed to the fact that stress is caused by clinical environment while 76 (38%) of the nurses agree that work related stressed is mainly due to the peers, co-workers and colleagues. Mostly, 140 (70%) of the respondent revealed that stress at workplace is the result non supportive work environment and lack of support provided by administration. Furthermore, 151 (75%) nurses told that due to the stress their miscommunication occurs between them and doctors, while 153 (76.5%) told that stress leads to making mistakes while treating patients. Since there is a shortage of nurses, 163(81.5%) of the respondents believe that this shortage among healthcare provider also causes stress among them, while stress leads to anxiety, burnout and depression agreed by 143 (71%). 160 (80%) agreed to the fact that in effective support causes negative work environment. Stress is also caused by the factor of security and safety concern at workplace agreed by 139 (69.5%) . 152 (69%) nurses agreed that due to documentation and workload they don't get enough time to pay attention at patient. Stress at workplace is also caused by limited authority and control over nurses at workplace favored by 134 (67%) . 138 (69%), says that long working hours and shifts also contributes towards stress and 128 (64%) nurses agreed that constantly working during nights also causes stress among them. Since the majority of nurses are female so as shown in the data only 79 (39%) have house related stress and the least contributing factor of stress is working with male nurses is around 39 (19.5%). These are the factor that contributes towards stress among nurses and doesn't depict the level or extent stress.

Table 3: Associated Factors of stress amongst bedside nurses working in Tertiary Care Hospitals (n=200).

Variables	Yes (%)	No (%)	P-Value
Hospital type			
• Public	109(72.7%)	41(27.3%)	<0.001
• Private	24(48%)	26(52%)	
Age			
• 20-30	46 (53.5%)	40 (46.5%)	0.005
• 31-40	45 (73.8%)	16 (26.2%)	
• 40-50	27 (84.4%)	05 (15.6%)	
• 50 above	15(71.4%)	56 (28.6%)	
Gender			
• Male	41 (55.4%)	33 (44.6%)	<0.001
• female	99 (78.6%)	27 (21.4%)	
Religion			
• Muslim	84 (73.8%)	43 (26.2%)	0.006
• Christian	48 (65.9%)	17 (34.1%)	
• Hindu	1 (12.5%)	7 (87.5%)	
Ethnicity			
• Punjabi	65 (76.5%)	20 (23.5%)	0.013
• Pakhtoon	16 (47.1%)	18 (52.9%)	
• Sindhi	37 (69.8%)	16 (30.2%)	
• Hindustani	2 (50%)	2 (50%)	
• Balochi	4 (50%)	4 (50%)	
• Other	14 (87.5%)	2 (12.5%)	
Hospital type			
• Public	109(72.7%)	41(27.3%)	<0.001
• Private	24(48%)	26(52%)	

• Chi Square test showed significant as P-Value <0.05.

Table 3. Above appears to be the results of a study examining stress levels among clinical workers based on various demographic variables. A higher percentage of respondents from public hospitals reported feeling stressed (72.7%) compared to

those from private hospitals (48%). Thus the p-value of <0.001 indicates a statistically significant difference between the two groups, suggesting that hospital type has a notable impact on perceived stress levels. Level of Stress vary with age. The highest percentage of stressed respondents is in the 40-50 age group (84.4%), followed by those aged 31-40 (73.8%). The p-value of 0.005 indicates a significant association between age and stress levels, with younger individuals (20-30) and older individuals (50+) showing lower stress levels compared to those in the middle age brackets. On the other hand, female respondents reported higher stress levels (78.6%) compared to male respondents (55.4%). The p-value of <0.001 suggested a highest significant difference in stress levels between genders. Additionally, Muslims (73.8%) and Christians (65.9%) report higher stress levels compared to Hindus (12.5%), although the sample size for Hindus is notably small and the p-value of 0.006 indicates a significant association between religion and stress levels. In terms of ethnicity Stress levels were highest among Punjabis (76.5%) and Sindhis (69.8%), while Pakhtoon (47.1. %) and Hindustani (50%) respondents reported lower stress levels and the p-value of 0.01 indicates a significant difference in stress levels among ethnic groups.

DISCUSSION

Stress is an intricate issue and numerous studies show that nurses and other medical professionals experience a variety of stressors during their careers. Nurses are known to be the foundation of any healthcare system.

In addition to other professional obligations, they continue to experience stress as a result of their employment duties. Factors such as workload, lack of support, shortage of workforce, pressure from upper management, lack of career growth opportunities, supportive work environment, procedural injustice, role ambiguity. However, there is a limited research on job stress in relation to health in developing countries (Arshad et al., 2020). A study by Perveen showed that stress level among Intensive care nurses and emergency department nurses was high as compared to general ward nurses (2024).

A similar study presents the findings that inadequate support from supervisors is one of the most common cause of stress among nurses (Badil, Ali and Siddiqui, 2017). In addition, another study reveals that, due to lack of recognition and inadequate salary stress is very much high and moderate respectively among nurses (Zulfiqar et al., 2024.) Furthermore, a cross-sectional study carried out in a hospital revealed that married female nurses experience higher levels of stress as a result of work-related conflict, shortage of equipment, and the unavailability of medications (Jafer, Nasir and Hussain, 2022). Therefore, regardless of their length of employment, the current study finds that bedside nurses experience identical stressors. It has been noted that nurses' stress levels are influenced by their work environment, the care they provide, and the range of services they offer. These difficult circumstances raise the likelihood of experiencing emotional, psychological, and physical issues. Such environment and situations put nursing staff at risk for stress, which can result in burnout, turnover, and a scarcity of qualified nurses (Mahmood et al., 2020).

Limitations:

- The nurses were hesitant to provide information.
- Inadequate resource allocation or funding by the government.

Recommendations: According to the analysis it is perceived that the factors has a positive association between dependent variables while it demonstrates that, the nursing stress would be overcome through better working conditions, motivation, eliminating growth barriers, decrease burnout and stress among staff, ensuring safety, overcome funding issues and, providing work life balance, Policy Reforms that address systemic issues contributing to job dissatisfaction, such as ensuring fair treatment, equal opportunities, and addressing concerns specific to the nursing profession.

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Authorship Contribution:

Conceptualization of Project: K.K,D.Z, S.P, N.T, S.U, Data Collection: U.U, C.P, Data Analysis: D.Z, S.P, N.T, S.U, Literature review: U.U, C.P, K.K,D.Z Drafting. Revision, writing of manuscript: S.P, S.P, N.T, S.U, Others: Budgeting: K.K,D.Z, S.P, N.T, S.U, U.U, C.P.

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