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ASSESSING OCCUPATIONAL STRESS AMONG NURSES AT TERTIARY CARE HOSPITALS OF PESHAWAR PAKISTAN

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Abstract

Background: Occupational stress among nurses is a growing concern worldwide, particularly in tertiary care hospitals where workload, emotional demands, and limited resources create challenging work environments. Prolonged exposure to stress can negatively affect nurses' physical and psychological health, job performance, and quality of patient care.

Objective: This study aimed to assess the prevalence and major sources of occupational stress among nurses working in tertiary care hospitals of Peshawar, Pakistan.

Methods: A descriptive cross-sectional study was conducted among 347 nurses working in three major tertiary care hospital of Peshawar Pakistan. Participants were selected using convenience sampling. Data were collected

through a structured questionnaire based on a Likert scale and analyzed using SPSS version 23. Descriptive statistics were used to summarize the findings.

Results: The findings revealed that more than 70% of nurses experienced high levels of occupational stress. Major stressors included heavy patient workload (84.7%), frequent overtime (71.1%), long duty hours (52.4%), inadequate sleep during on-call duties (68%), and limited managerial support (60.3%). Environmental factors such as noise (70.3%) and insufficient breaks (69.4%) also contributed significantly to stress. Many nurses reported feelings of emotional exhaustion, lack of recognition, and restricted autonomy in clinical decision-making.

Conclusion: Occupational stress is highly prevalent among nurses in tertiary care hospitals in Peshawar. Organizational, environmental, and managerial factors play a major role in increasing stress levels. Effective interventions such as improved staffing, supportive leadership, adequate rest periods, and better working conditions are urgently needed to enhance nurse well-being and quality of care.

Introduction

Nursing is one of the professions that have been identified to be challenging and hard world over. Patients are under the care of nurses, and nurses are left to work long hours, deal with high patient count, and deal with emotionally challenging situations (1). These circumstances predispose the nurses especially to occupational stress, which may adversely affect their physical, psychological well-being, job satisfaction, and quality of care provided to patients. The recent meta-analytic results in Pakistan indicate that the occupational stress in nurses is widespread with many implications on the professional life and patient care outcome (2).

Occupational stress is a nursing problem that occurs when the job demands surpass the ability of an individual to cope up. It includes physical stress, emotional burnout, excessive workload, unclear roles and organization problems. Burnout, decreased job performance, and turnover intentions have all been related to work-related stress (3). The literature review of research throughout the world indicates that stressful workplace conditions are directly linked to the adverse health conditions such as anxiety, depression, and burnout among health professionals who work in the nursing profession (4).

There are organizational variables that influence the level of stress among nurses, including leadership support, organizational culture, and staffing ratios (5). A recent systematic review highlighted the fact that positive organizational culture and enabling climate are invariably related with a reduced degree of work-related stress in nurses, and such negative cultures are closely linked to aggravated stress and diminished work satisfaction. The organizational culture may suppress or aggravate stress, which is why the workplace changes are necessary to improve the well-being of nurses (6).

Various researches have recorded a high rate of occupational stress among nurses in tertiary care environments in Pakistan. Indicatively, a cross-sectional survey of Pakistani nurses revealed that low income, workload, strict leadership and family pressures were major stressors that led to psychological distress (7). Similar local studies have demonstrated that occupational stress has great influence on the emotional responses of the nurses and their psychological well-being as a whole where emotional exhaustion and support systems often mediate their effect (8).

In addition to nurses who endure stress, patients who are in their care, also suffer as a result of stress. Pakistan emergency department evidence suggests that work stress and burnout have a connection with patient satisfaction, highlighting the impact of nurse stress on the wider healthcare consequences (9). On the same note, research among tertiary care hospitals in Lahore has reported that job stress has negative impacts on the quality of life and professional functioning among nurses (9).

Other unique causes of stress among nurses in tertiary care facilities in Peshawar and the surrounding areas have also been identified to include inadequate holidays, lack of the autonomy of decision making, and political influence at work (10). These results demonstrate such a complicated interaction of workplace factors, personal susceptibility, and systematic forces that contribute to the stressful experience of nurses. The nurses in Pakistan have huge and varied patient population in the tertiary care hospitals and the high patient inflows increase the pressures on the nursing staff. One of the outcomes of this work stress among nurses is not only an individual but is also, as a consequence, reduced job satisfaction, burnout, absenteeism, and impaired patient care delivery (11).

Although this was evidenced, there is a lack of research that addresses specifically the nurses in tertiary care in Peshawar. Local data is essential, since healthcare settings in the region may have unique stressors which cannot be observed in larger researches. High patient volume and limited resources, combined with workforce shortages, make it possible to consider the study of the occupational stress of Peshawar and consider specific measures that can address nurse health, retention, and the quality of healthcare.

Thus, the research is expected to evaluate the rates of occupational stress, as well as the factors that can determine it among tertiary care nurses in Pakistan. This research aimed to provide the policymakers, administrators, and nursing leaders with evidence-based recommendations to improve the support systems and improve healthcare outcomes by pinpointing the potential stressors associated with workload, working environment, co-worker relationships, and organizational culture.

Materials & Methods

Study Design

A descriptive cross-sectional study design was used to assess the occupational stress among nurses working in major tertiary care hospitals of Peshawar.

Study Setting

The study was conducted in three major tertiary hospitals of Peshawar, KPK, which are the most culturally and ethnically diverse hospitals in Peshawar. Patients from different races and cultures come here for treatments.

Study Duration

This study was completed over the total duration of six months.

Sample Size

The study population was consisted of nurses who were culturally and ethnically diverse and working in three tertiary care hospitals in Peshawar. The total population was 3500 Nurses in the three tertiary care hospitals. The total sample at the selected hospitals was 347 using a sample size calculator open epi, and taking a 95% confidence interval with a 5% margin of error.

Sampling Technique

A convenient sampling technique was used to select participants from target population.

Inclusion & Exclusion Criteria:

Registered Nurses who have one-year experience on bed side, aged between 25 to 60, and who were willing to be involved in research. Those nurses who were on leave or were unwilling to give consent were excluded. Disable nurses and nurses on managerial position were also excluded.

Data Analysis:

Data were thoroughly reviewed for any inconsistencies or missing values and address any incomplete or contradictory responses. Descriptive Statistics were used to calculate the frequency, percentage, and distribution of responses to summarize level of occupational stress among nurses using spss version 23. To perform a descriptive analysis, the responses on five-point Likert scale were recoded into three groups, namely, Disagree (strongly disagree and disagree), Neutral (undecided) and Agree (agree and strongly agree) to aid the interpretation process.

Ethical Consideration

A written letter of permission was obtained from the institute before data collection. After gaining the permission letter, an administrative approval was taken from the hospital. Written consent was taken from subjects for participation voluntarily and the right to refuse. The subjects' information and all data should be kept confidential, and data just be used for academic purposes was clearly written in the consent form.

Results

The demographic data of the respondents is given in Table 4.1. Most respondents were of the 25–34 years' age group (77.8%), meaning that most of the nurses were young individuals in their early professional life. The sample population was mainly composed of females (79.3%), according to the gender ratio that is usually representative of the nursing field. The level of professional qualification among the participants was high, given that majority of respondents had a Bachelor of Science in Nursing degree (95.7%). About the marital status, over fifty percent

of the nurses were not married (56.5%). Most of them had been serving as charge nurses (80.7%), a smaller percentage of them were nursing interns (13.5%), and the head nurses (5.8%). Majority of the respondents belonged to general wards (69.5%), ICU (16.7%), and emergency departments (13.8%). Regarding the family structure, a high percentage of them inhabited joint families (68.0%), thus it could affect work-life balance and stress levels. In general, the results reveal that the study population comprised primarily of young, well-educated female nurses in the clinical frontline positions.

Table 4.1: Demographic Characteristics of Respondents (n = 347)

Variable	Category	Frequency (n)	Percentage (%)
Age	18–24	43	12.4
	25–34	270	77.8
	35–44	33	9.5
	45–54	1	0.3
Education	Diploma	13	3.7
	BS Nursing	332	95.7
	MSN	2	0.6
Gender	Male	72	20.7
	Female	275	79.3
Marital Status	Married	151	43.5
	Unmarried	196	56.5
Designation	Charge Nurse	280	80.7
	Head Nurse	20	5.8
	Internee	47	13.5
Ward	Emergency	48	13.8
	ICU	58	16.7
	General	241	69.5
	Nuclear	106	30.5

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Family Type	Joint	236	68.0
	Extended	5	1.4

Table 4.2 shows the perception of nurses on perceptions about workload and time related stressors. The most notable result was connected with the excessive workload of the patient when 84.7% of the respondents affirmed that patient numbers were significantly large, which was the strongest reported stressor in this area. On the same note, a high percentage of nurses (71.1) indicated that physical fatigability was due to overtime work. Over half of the respondents found duty hours to be excessive (52.4%), and reported poor sleep during on-call work hours (68.0%), which are concerning issues with regards to work-rest balance. There was also time pressure as 64.8 percent of the respondents claimed that they had been worried about deadlines that were too short. The emotional and professional pressure was evident through the fact that 62.1 percent said they were highly anxious in crisis situations and 62.3 percent were of the opinion that excessive workload led to the likelihood of them and patients being injured. In addition to this, over fifty percent of the nurses expressed helplessness (53.9%), as well as the fact that they had no power (55.3) to carry out their duties. These results indicate that workload, extended working hours, and lack of rest are some of the leading causes of occupational stress among nurses.

Table 4.2: Workload and Time-Related Stress Factors (n = 347)

Statement	Disagree n (%)	Neutral n (%)	Agree n (%)
Overtime causes tiredness	63 (18.2)	37 (10.7)	247 (71.1)
Patient workload high	25 (7.2)	28 (8.1)	294 (84.7)
Duty hours high	103 (29.7)	62 (17.9)	182 (52.4)
Short deadlines worry	62 (17.9)	60 (17.3)	225 (64.8)
Insufficient information	101 (29.1)	68 (19.6)	178 (51.3)
Crisis anxiety	80 (23.1)	47 (13.5)	219 (62.1)
Unfair duties	106 (30.6)	63 (18.2)	178 (51.3)
Extra work due to leave	106 (30.6)	47 (13.5)	194 (55.9)
Risk of injury	84 (24.2)	46 (13.3)	216 (62.3)

Helplessness	88 (25.4)	72 (20.7)	187 (53.9)
Lack of authority	85 (24.5)	70 (20.2)	192 (55.3)
Against judgment	97 (28.0)	76 (21.9)	174 (50.1)
Life-impact decisions	124 (35.7)	80 (23.1)	143 (41.2)
Lack of sleep	74 (21.4)	37 (10.7)	236 (68.0)

Table 4.3 shows the occupational stress causes based on organizational and interpersonal factors. Poor managerial support became a significant issue with 60.3 percent of the respondents indicating that they lacked support of supervisors in a conflict situation. Likewise, a majority (more than half), of the nurses believed that the management was too critical (58.0%), and their job was not sufficiently recognized (54.8%). The presence of communication barriers was also visible since 53.6% of the surveyed respondents have stated that they have problems communicating with their superiors, and 49.6% of the respondents has indicated that nobody cares about their concerns. Monetary pressure took the form of dissatisfaction with salary among 52.4 percent of nurses. Stress was also caused by interpersonal relationship where 38.8 percent felt that coworkers did not accept him socially and 33.4 percent felt that paramedical staff were not cooperative. Though a significant percentage of nurses indicated favorable work relationship contacts, the results indicate that organizational culture and leadership practice have a significant impact on the level of stress. In general, the lack of proper leadership support, poor communication, and recognition were the major organizational stressors revealed in this study.

Table 4.3: Organizational and Interpersonal Stress Factors (n = 347)

Statement	Disagree n (%)	Neutral n (%)	Agree n (%)
Not accepted by coworkers	170 (49.0)	39 (11.2)	138 (38.8)
Paramedical staff uncooperative	176 (50.7)	55 (15.9)	116 (33.4)
Management critical	95 (27.3)	51 (14.7)	201 (58.0)
Lack of recognition	112 (32.3)	45 (13.0)	190 (54.8)
Supervisor support lacking	95 (27.3)	43 (12.4)	209 (60.3)
Insecure with management	106 (30.5)	51 (14.7)	190 (54.8)

Management not cooperative	125 (36.0)	46 (13.3)	176 (50.7)
Salary dissatisfaction	110 (31.7)	55 (15.9)	182 (52.4)
Rules unfair	122 (35.1)	59 (17.0)	166 (47.9)
Cannot express views	98 (28.2)	63 (18.2)	186 (53.6)
Concerns ignored	129 (37.2)	46 (13.3)	172 (49.6)

The summary of environmental and facility-related factors that influence the work performance of the nurses would be presented in Table 4.4. Workplace noise was considered to be the most prominent environmental stressor as 70.3% of respondents reported it to be so, meaning that noisy environments adversely impact emotional stability and concentration. On the same note, lack of enough rest breaks was cited by 69.4 percent of the respondents showing inadequate physical and mental rest between shifts. Unfavorable physical environments put an onus on work efficiency as 64.0% of the respondents reported poor concentration caused by poor physical environments. Fifty percent of nurses (50.1) perceived that they found their work challenging due to poor cleanliness and 39.2 percent of the nurses believed that they did not have proper accessibility of basic facilities like water and washrooms. Though, a number of respondents had said that they had favorable working conditions, a number of them had unfavorable environmental conditions. These results highlight the need to enhance physical working conditions to eliminate work-related stress.

Table 4.4: Environmental and Facility-Related Stress Factors (n = 347)

Statement	Disagree n (%)	Neutral n (%)	Agree n (%)
Lack of breaks	75 (21.6)	31 (8.9)	241 (69.4)
Basic facilities lacking	184 (53.0)	27 (7.8)	136 (39.2)
Noisy environment	59 (17.0)	44 (12.7)	244 (70.3)
Poor cleanliness	132 (38.0)	41 (11.8)	174 (50.1)

Table 4.5 provides a summary of the severity of occupational stress across different domains. The highest level of severe stress was observed in the workload and time-related domain (71.1%), indicating that work pressure and long hours were the most significant stress contributors. Environmental stress was also highly prevalent, with 69.4% of respondents

reporting severe stress related to physical working conditions. Organizational and interpersonal factors contributed to severe stress in 60.3% of nurses, highlighting the role of leadership and workplace relationships. Social impact stress was reported by 47.6% of respondents, suggesting that nearly half of the participants experienced difficulties in maintaining social relationships due to occupational demands. Overall, more than 70% of respondents experienced moderate to severe occupational stress, confirming that stress is a major occupational health issue in this population. These findings indicate that occupational stress among nurses in tertiary care hospitals is multidimensional and requires comprehensive organizational interventions.

Table 4.5: Summary of Severity of Occupational Stress (n = 347)

Stress Domain	Severe (%)	Moderate (%)	Mild (%)
Workload & Time	71.1	10.7	18.2
Organizational & Interpersonal	60.3	13.3	27.3
Environmental	69.4	8.9	21.6
Social Impact	47.6	20.2	32.2
Overall Stress	>70	—	—

Discussion

The current research evaluated the levels of occupational stress among tertiary care nurses in Peshawar and showed that the work-related stress levels were high. The findings proved that over 70 percent of the nurses were moderately and severely stressed by their occupations. The stressors most commonly reported were heavy workload with patients (84.7 percent), frequent overtime working (71.1 percent), long working hours (52.4 percent), lack of sleep during on-call work (68 percent) and insufficient managerial support (60.3 percent). Other factors that were significant included environmental factors like noise at work place (70.3%), lack of rest breaks (69.4%). Such results suggest that stress in the workplace is extensive and complex in the tertiary healthcare environment.

In the present research, workload proved to be the most significant predictor of stress, and most of the nurses cited excessive patient assignment and staffing. This observation was in line with

the recent meta-analytic evidence that showed that high patient-to-nurse ratios were closely related to psychological distress and burnout in Pakistani nurses (2). Prolonged understaffing leads to physical fatigue and the inability of nurses to give personal care to patients, which exacerbates the work-related stress.

Overtime and long working hours were also frequent among over two-thirds of the respondents in this study. Most of the nurses reported that long working hours and a lack of rest adversely impacted their health and mental state. These findings have been attributed to similar studies in the past where longer hours of working were associated with emotional exhaustion, sleeping disturbances, and poor work performance (7). These findings point to the necessity of controlled scheduling to the organization and equitable assignment of tasks.

Another significant issue that was discovered during this study was sleep deprivation, as 68% of the nurses indicated that they experience poor sleep when they are on-call. The quality of sleep has been found to mediate the correlation between work stress and negative mental health in occupational stress. There is evidence that abnormal shifts and lack of rest are major risk factors contributing to anxiety, depression and lack of cognitive abilities among nurses (13). Poor sleep can thus affect the safety of the nurses as well as the quality of care to the patients.

The management and organizational support was very critical in forming stress experiences in this study. About 60 percent of nurses expressed their dissatisfaction with the leadership practices and supervisory support. Poor communication, low recognition and participation in decision-making were prevalent. These results are consistent with a more recent systematic review that demonstrated positive organizational culture and supportive leadership to have a significant effect on the reduction of work-related stress and the increase of job satisfaction (14). The enhancement of the leadership potential and the facilitation of participatory management can thus be of help as stress-dealing techniques.

Participants were also very high in environmental stressors. Over 70 percent of them claimed that noise, overcrowding and poor ventilation impacted negatively on their work performance and comfort. Almost 69% said that lack of break facilities were a cause of fatigue and irritation. The international evidence is used to prove these findings by showing that poor physical work

environments are linked to increased fatigue, less concentration, and poor productivity (15). Stress reduction may thus be helped by enhancing infrastructure and the provision of special resting spots.

In this study, emotional and psychological reactions to occupational stress were apparent. There was a lot of frustration, emotional exhaustion and discouragement that were reported by many nurses. These effects are in line with the initial symptoms of burnout. Past studies have established that emotional exhaustion mediates the connection between work stress and mental health effects amongst nurses (8). Such symptoms can turn to extreme burnout and loss of involvement unless psychological assistance is provided in time.

Even though, patient outcomes were not quantified, available literature indicates that nurse stress has negative impacts on care quality and safety. Research has attributed high stress levels to errors in medication, low levels of patient satisfaction and poor safety culture (9,13). Thus, alleviation of occupational stress can indirectly enhance patient experience and clinical outcomes.

Factors that were context-specific also had effects on stress patterns in this study. Problems that the participants expressed were low promotion chances, political influences, and poor leave policy. The same problems have been reported in regional researches on workplace politics and professional autonomy at Pakistani healthcare facilities (10). These could compromise organizational commitment and professional motivation.

In the policy aspect, the results indicate that institutional changes should be wholesome. To alleviate stress, recruitment of nurses, equitable workload allocation, enhancement of leadership training, and flexible scheduling systems could be helpful. There is some evidence that organizational-level intervention is more effective as compared to individual coping strategies (16). Also, the counseling services, peer-support groups, and stress management programs can contribute to the increased resilience.

Limitations & Strength

It has a number of limitations that should be identified. It is also restricted by convenience sampling and cannot be generalized and the causal inference is also not possible due to cross-sectional design. Self-reports can also have recall and social desirability. The longitudinal studies and mixed methodology should be employed in the future to obtain a better image regarding the dynamics of stress and the effectiveness of the interventions.

However, this study provides good localized information on the work stress among the nurses in tertiary care hospitals in Peshawar. The research offers practical implications on the healthcare administrators and policy makers since it establishes a relationship between the quantitative findings and the organizational and environmental factors.

Conclusion

To sum it up, the issue of occupational stress among nurse practitioners in Peshawar tertiary care hospitals is quite common and is contributed by workload, extended hours, poor sleep, poor managerial support and poor working conditions. To overcome these issues, it is necessary to consider evidence-based organizational changes necessary to create a strong nursing workforce and enhance healthcare quality.

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