

DETERMINANTS OF DEPRESSION AND ANXIETY IN NURSES WORKING AT TERTIARY CARE HOSPITAL HYDERABAD

Imran Saleem¹, Parveen Akhtar², Mairaj Hafeez³

¹MSN Scholar People Nursing School LUMHS JAMSHORO SINDH PAKISTAN, Imransil1900@gmail.com

²Director People Nursing School LUMHS JAMSHORO SINDH PAKISTAN, parveenimdad@gmail.com

³Assistant Professor People Nursing School LUMHS JAMSHORO SINDH PAKISTAN, Hafeezmiraj@gmail.com

Abstract

Nurses are frequently exposed to heavy workloads, staff shortages, emotional stress, workplace challenges, and demanding patient-care responsibilities specially those who are working in tertiary care hospitals. These factors affect their psychological well-being and contribute to depression and anxiety. Identifying the factors associated with these mental health problems is important for improving nurses' well-being and the quality of patient care.

A quantitative, descriptive cross-sectional study will be conducted among nurses working at a tertiary care hospital in Hyderabad to identify the factors contributing to depression and anxiety among nurses working in a tertiary care hospital Hyderabad. This study will also assess and determine the level of anxiety and depression among nurses working in tertiary care hospital Hyderabad. Participants will be selected using an appropriate sampling technique. Data will be collected through a structured questionnaire containing socio-demographic and work-related factors and a standardized tool for assessing depression and anxiety and this will be analyzed using SPSS version 27, to summarize the findings descriptive statistics will be used while appropriate inferential statistical tests will be applied to determine the association between contributing factors and levels of depression and anxiety. A p-value of <0.05 will be considered statistically significant. The study is expected to identify the magnitude of depression and anxiety among nurses and determine important contributing factors such as workload, working hours, inadequate staffing, workplace stress, lack of administrative support, and other occupational and socio-demographic factors. The findings of this study will provide evidence for hospital administrators and nursing managers to develop appropriate psychological support, stress-management strategies, adequate staffing policies, and a healthier work environment for nurses. Improving nurses' mental well-being may ultimately contribute to better quality of patient care.

KEYWORDS: Depression, anxiety, contributing factors, occupational stress, tertiary care hospital.

1. INTRODUCTION

Nursing is an honorable profession, and nurses are the heart and soul of the healthcare system. Nursing is one of the most trusted caring professions within the health care sector focused on the care of individuals, families and communities so they may attain, maintain or recover optimal health and quality of life. Nurses are engaged in a moral endeavour, thus confront many challenges in making the right decision and taking the right action. When nurses cannot do what they think is right, they experience moral distress that leaves a moral residue.(1)

Depression and anxiety among healthcare professionals, particularly nurses, have become a global concern due to their potential impact on both personal well-being and patient care outcomes. According to the World Health Organization (WHO), mental health conditions such as depression and anxiety are leading causes of disability worldwide, affecting more than 300 million people globally. Among healthcare professionals, nurses are particularly vulnerable due to the demanding nature of their work, frequent exposure to suffering, high patient loads, shift work, and organizational stressors. The prevalence of these conditions among nurses varies across countries and healthcare settings, with studies reporting that between 20% to 50% of nurses experience symptoms of depression or anxiety at some point in their careers.(2)

The presence of depression and anxiety in nurses not only affects their personal health but also has significant implications for patient safety and healthcare quality. Research has shown that nurses experiencing high levels of stress, depression, or anxiety are more likely to report fatigue, decreased concentration, and impaired decision-making abilities, which can contribute to medical errors, compromised patient care, and reduced job satisfaction.(3)

In tertiary care hospitals, where patient acuity is high and workload demands are significant, the risk of occupational stress leading to mental health problems is even greater. Nurses in these settings often face long and irregular shifts,

exposure to critical incidents, emotional labor associated with patient suffering, and high expectations from management and families. These factors collectively increase the vulnerability of nurses to depression and anxiety.(4) Several factors have been identified as contributors to depression and anxiety among nurses. Work-related stressors, including high patient-to-nurse ratios, long working hours, mandatory overtime, and inadequate staffing, are consistently reported as significant predictors of psychological distress.(5)

Interpersonal conflicts with colleagues, lack of support from supervisors, and organizational inefficiencies can exacerbate these stressors. Additionally, personal and socio-demographic factors such as age, marital status, financial difficulties, and prior mental health history may also influence susceptibility to depression and anxiety. Nurses with less clinical experience or inadequate coping mechanisms are particularly at risk, as they may find it challenging to manage the combined pressures of workload and emotional strain.(6)

2. AIM OF THE STUDY

The aim of this study is to explore the contributing factors to depression and anxiety among nurses working at tertiary care hospital.

OBJECTIVES OF THE STUDY

- To identify the factors contributing to depression and anxiety among nurses working in a tertiary care hospital.
- To assess the level of anxiety among nurses working in a tertiary care hospital.
- To determine the level of depression among nurses working in a tertiary care hospital.

3. METHODOLOGY

The cross-sectional study was conducted. The study was conducted at Lique University Hospital (LUH), Hyderabad/Jamshoro a leading tertiary care and teaching hospital in Sindh, Pakistan, affiliated with Lique University of Medical & Health Sciences. Originally established in the late 19th century and subsequently expanded, Lique university Hospital (LUH), now accommodates approximately 2,000 beds across its two main campuses in Hyderabad and Jamshoro. The hospital offers a comprehensive range of specialized services, including emergency and intensive care, diagnostic facilities, and rehabilitation, catering to patients from across Sindh and neighboring provinces. duration 06 months after approval of research proposal. Sample size was calculated using raosoft software according to following parameters. Confidence Level: 95%,Margin of Error: 5%,Population: 323,Sample Size: 176. Purposive sampling technique was utilized. Inclusion Criteria were include, Registered nurses with valid PNMC license working at bedside, Both genders male and female were included in the study, Nurses working in all shifts were included in study, Participants having age 18 years and above were included in the study, Nurses at least 01 year of experience were included in the study. Exclusion Criteria were include, Participants Less than 01 year of experience were excluded from the study ,Incomplete information provided by participants were excluded from the study.

DATA ANALYSIS

Data was analyzed through Statistical package for social sciences SPSS version 27, descriptive statistics used for frequency and percentages and inferential statistics used by applying parametric and non-parametric tests to observe association. Level of significance considered as p value less than 0.05.

ETHICAL CONSIDERATIONS

The study conducted only after obtaining formal approval from the Ethical Review Committee (ERC) of Lique University of Medical & Health Sciences (LUMHS) to ensure adherence to ethical standards and protection of participants' rights and well-being. All participants provided with detailed information about the study, including its purpose, procedures, potential risks, and anticipated benefits, and voluntarily provide written informed consent to participate. Participants' personal information will be kept strictly confidential, and all collected data will be anonymized to prevent identification in any reports, publications, or presentations. Participants had the full right to withdraw from the study at any time without facing any negative consequences, ensuring that their participation remains completely voluntary.

4. RESULTS

TABLE NO.01: AGE DISTRIBUTION AMONG SUBJECTIVES(N = 176)

AGE	Frequency	Percent	Mean	SD
18-27	21	11.9	35	+ 6
28-37	36	20.5		

38-47	88	50.0		
48 and above	31	17.6		
Total	176	100.0		

The age distribution of the participants indicates that the largest proportion of nurses were in the 38–47 years age group (n = 88, 50.0%), followed by those aged 28–37 years (n = 36, 20.5%). Participants aged 48 years and above comprised 17.6% (n = 31) of the sample, while the smallest group was 18–27 years (n = 21, 11.9%). The mean age of the participants was 35 years (SD = 6), indicating a moderately distributed age range

TABLE NO.02: GENDER DISTRIBUTION AMONG SUBJECTIVES

Gender	Frequency	Percent
Male	68	38.6
Female	108	61.4
Total	176	100.0

The gender distribution of the participants shows that the majority were female (n = 108, 61.4%), while male participants constituted 38.6% (n = 68) of the sample. This indicates that females represent a larger proportion of the nursing workforce in the study setting, which is consistent with the general trend in the nursing profession. The predominance of female participants may influence the findings related to depression and anxiety, as gender differences can play a role in psychological health outcomes.

TABLE NO.03: QUALIFICATION OF SUBJECTIVES

Qualification	Frequency	Percent
Diploma	15	8.5
Post RN	78	44.3
Generic BSN	83	47.2
Total	176	100.0

The distribution of educational qualifications shows that nearly half of the participants held a Generic BSN degree (n = 83, 47.2%), followed closely by those with a Post RN qualification (n = 78, 44.3%). A smaller proportion of participants held a diploma in nursing (n = 15, 8.5%).

TABLE NO.04: SHIFTS

Shift	Frequency	Percent
Morning	62	35.2
Evening	70	39.8
Night	44	25.0
Total	176	100.0

The distribution of work shifts indicates that the largest proportion of participants worked evening shifts (n = 70, 39.8%), followed by morning shifts (n = 62, 35.2%). A smaller proportion of nurses were assigned to night shifts (n = 44, 25.0%).

TABLE NO.05: EXPERIENCE

Experience	Frequency	Percent
1-3 years	24	13.6
4-6 years	58	33.0
07 and above	94	53.4
Total	176	100.0

The distribution of work experience shows that more than half of the participants had 7 years or more of experience (n = 94, 53.4%), followed by those with 4–6 years of experience (n = 58, 33.0%). A smaller proportion of participants had 1–3 years of experience (n = 24, 13.6%).

TABLE NO.06: FACTORS CONTRIBUTING TO DEPRESSION AND ANXIETY

Factors	Frequency	Percent
Excessive workload	72	40.9
Duty rotation	29	16.5
Lack of sleep	31	17.6
Fear of making clinical errors	23	13.1
Dealing with critical patients	21	11.9
Total	176	100.0

The findings indicate that the most commonly reported factor contributing to depression and anxiety among nurses was excessive workload (n = 72, 40.9%). This was followed by lack of sleep (n = 31, 17.6%) and duty rotation (n = 29, 16.5%). Other contributing factors included fear of making clinical errors (n = 23, 13.1%) and dealing with critical patients (n = 21, 11.9%). These results suggest that workload-related stress is the primary contributor to psychological distress among nurses.

TABLE NO.07: ANXIETY LEVEL AMONG SUBJECTIVES

Anxiety	Frequency	Percent
Low	60	34.1
Moderate	67	38.1
Severe	49	27.8
Total	176	100.0

The distribution of anxiety levels among participants shows that the majority of nurses experienced moderate anxiety (n = 67, 38.1%), followed by low anxiety levels (n = 60, 34.1%). A considerable proportion of participants also reported severe anxiety (n = 49, 27.8%).

TABLE NO.08: DEPRESSION LEVEL AMONG SUBJECTIVES

Depression	Frequency	Percent
Low	86	48.9
Moderate	84	47.7

Severe	6	3.4
Total	176	100.0

The distribution of depression levels among participants indicates that nearly half of the nurses reported low levels of depression (n = 86, 48.9%), while a comparable proportion experienced moderate depression (n = 84, 47.7%). A very small percentage of participants reported severe depression (n = 6, 3.4%).

TABLE NO.09: ASSOCIATION OF FACTORS WITH ANXIETY

Factors	Anxiety			Total
	Low	Moderate	Severe	
Excessive workload	15	28	29	72
Duty rotation	14	7	8	29
Lack of sleep	10	14	7	31
Fear of making clinical errors	12	9	2	23
Dealing with critical patients	9	9	3	21
Total	60	67	49	176
P-Value	0.01			

The association between contributing factors and anxiety levels among participants was found to be statistically significant ($p = .01$). Nurses experiencing excessive workload reported higher levels of anxiety, with a considerable number falling into the moderate (n = 28) and severe (n = 29) categories. Similarly, lack of sleep was associated with increased anxiety levels, particularly moderate anxiety (n = 14). Duty rotation also showed a relationship with anxiety, with participants distributed across low (n = 14), moderate (n = 7), and severe (n = 8) levels. Fear of making clinical errors and dealing with critical patients were additionally associated with varying levels of anxiety, though comparatively fewer participants reported severe anxiety in these categories.

TABLE NO.10: ASSOCIATION OF FACTORS WITH DEPRESSION

Factors	Depression			Total
	Low	Moderate	Severe	
Excessive workload	30	42	0	72
Duty rotation	21	8	0	29
Lack of sleep	15	15	1	31
Fear of making clinical errors	9	12	2	23
Dealing with critical patients	11	7	3	21
Total	86	84	6	176
P-Value	0.004			

The results indicate a statistically significant association between contributing factors and depression levels among nurses ($p = .004$). Excessive workload was strongly associated with moderate depression (n = 42), with no cases of severe depression reported in this category. Duty rotation was mainly associated with low (n = 21) and moderate depression (n = 8), while lack of sleep showed an equal distribution between low (n = 15) and moderate depression (n = 15), with a minimal number reporting severe depression (n = 1). Fear of making clinical errors was associated with low (n = 9) and moderate depression (n = 12), with a small proportion experiencing severe depression (n = 2).

Similarly, dealing with critical patients showed a gradual increase in depression severity, with some participants reporting severe depression ($n = 3$).

5. DISCUSSION

The present study revealed that half of the participants (50.0%) were aged between 38–47 years, indicating that most nurses were middle-aged and experienced professionals. The mean age of participants was 35 ± 6 years. This finding is consistent with studies conducted in similar tertiary care hospital settings where the nursing workforce is predominantly within mid-career age groups, as reported by various researchers who found that nurses in their 30s and 40s form the largest proportion of hospital staff due to job stability and long-term employment trends. However, some studies have reported a younger nursing workforce, particularly in developing countries, where a higher proportion of nurses are under 30 years due to rapid recruitment and turnover rates. The predominance of middle-aged nurses in the current study may suggest a more stable workforce but also indicates increased exposure to long-term occupational stressors, which may contribute to psychological distress.(7)

The findings showed that the majority of participants were female (61.4%), while males accounted for 38.6%. This is consistent with global nursing workforce patterns where nursing remains a female-dominated profession. Studies by WHO and multiple nursing workforce reports also confirm that females constitute the majority of healthcare workers in nursing roles. In contrast, some studies in certain regions have reported increasing male participation in nursing due to changing social perceptions and job opportunities. Nevertheless, the present findings reinforce the traditional gender distribution in nursing, which may influence mental health outcomes as several studies suggest females report higher levels of anxiety and depression due to psychosocial and emotional factors.(8)

The current study found that most participants held a Generic BSN (47.2%) followed closely by Post RN qualifications (44.3%), while only 8.5% had diplomas. This reflects a trend toward higher educational advancement in nursing practice, which is supported by studies showing increased adoption of BSN programs in clinical settings. Supporting literature suggests that higher education in nursing improves clinical competence and awareness of patient care standards. However, contrary findings indicate that higher qualification may also increase workload expectations and responsibility, leading to greater psychological stress. Thus, despite improved knowledge, nurses with higher education may still experience significant emotional burden.(9)

The study showed that most nurses worked evening shifts (39.8%), followed by morning (35.2%) and night shifts (25.0%). These findings are consistent with previous studies reporting that rotating and evening shifts are common in tertiary care hospitals due to the need for continuous patient care. Several studies have found that nurses working evening or night shifts experience significantly higher levels of anxiety and depression, with the prevalence of anxiety ranging from 35% to 55% and depression from 30% to 45%, largely due to disrupted sleep patterns and increased occupational stress. In contrast, other studies have reported no significant association between shift work and mental health outcomes. For example, some researchers found comparable rates of anxiety (18% vs. 20%) and depression (15% vs. 17%) among day- and night-shift nurses when adequate staffing, sufficient rest breaks, and organizational support were available. These contradictory findings suggest that the impact of shift work on nurses' mental health may depend more on workplace conditions, staffing adequacy, and individual coping mechanisms than on shift timing alone. In the present study, shift rotation may still have acted as an important occupational stressor contributing to anxiety and depression among nurses.(10)

More than half of the participants (53.4%) had 7 or more years of experience. This is consistent with studies conducted in long-established hospital systems where experienced nurses dominate the workforce. Supporting studies suggest that increased experience enhances coping mechanisms and clinical confidence. However, contrasting evidence indicates that long-term exposure to workplace stress may lead to burnout, emotional exhaustion, and increased risk of depression and anxiety. The current findings suggest that despite high experience levels, nurses may still be vulnerable to psychological distress due to chronic occupational stressors.(11)

The study identified excessive workload (40.9%) as the most common contributing factor, followed by lack of sleep (17.6%) and duty rotation (16.5%). Fear of clinical errors (13.1%) and dealing with critical patients (11.9%) were also reported. These findings are strongly supported by numerous studies which consistently identify workload as the primary stressor among nurses in tertiary care settings. Research indicates that high patient-to-nurse ratios significantly increase emotional exhaustion and psychological distress.(12)

Similarly, sleep deprivation and shift rotation have been widely reported as major predictors of anxiety and depression. However, some studies have shown that coping mechanisms, organizational support, and resilience training can reduce the impact of these stressors, which may explain variation in severity across different settings.(13)

The present study found that 38.1% of nurses experienced moderate anxiety, 34.1% had low anxiety, and 27.8% suffered from severe anxiety. This indicates that a significant proportion of nurses are experiencing clinically relevant anxiety symptoms. These findings are consistent with studies conducted in hospital settings where moderate anxiety is most commonly reported due to workload pressure and emotional demands. Supporting literature shows similar trends in South Asian healthcare systems.(14)

However, some studies in well-resourced healthcare systems report lower levels of severe anxiety, suggesting that institutional support, staffing adequacy, and mental health services play a protective role. The relatively high level of anxiety in this study indicates the need for improved psychological support mechanisms.(15)

The study revealed that 48.9% of nurses had low depression, 47.7% had moderate depression, and only 3.4% had severe depression. This indicates that while severe depression is uncommon, a large proportion of nurses experience mild to moderate depressive symptoms. These findings are supported by studies showing that healthcare workers frequently experience subclinical depression due to chronic workplace stress. However, some studies report higher rates of severe depression in under-resourced hospitals, which contrasts with the present findings.(16)

A statistically significant association was found between contributing factors and anxiety levels ($p = .01$). Excessive workload and lack of sleep were strongly associated with moderate and severe anxiety. These findings are supported by multiple studies which confirm workload and sleep deprivation as major predictors of anxiety among nurses. However, some studies have reported weaker associations when organizational support and staffing levels are adequate, indicating contextual variation.(17)

A significant association was also found between contributing factors and depression levels ($p = .004$). Excessive workload, lack of sleep, and clinical responsibilities were strongly associated with moderate depression. These findings are consistent with studies showing that chronic occupational stress leads to depressive symptoms in nurses. However, some literature suggests that depression severity may be influenced more by personal coping strategies and social support rather than workload alone.(18)

6. CONCLUSION

The study identified the major factors contributing to depression and anxiety among nurses working in a tertiary care hospital. Excessive workload emerged as the most significant contributing factor, followed by lack of sleep, duty rotation, fear of clinical errors, and caring for critically ill patients. The findings also showed that most nurses experienced moderate levels of anxiety and depression, while a smaller proportion reported severe levels. These results highlight the need for workplace interventions aimed at reducing occupational stress, promoting mental well-being, and improving the overall quality of nursing care.

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