

Assessment of the Prevalence of Depression and Anxiety Among Health Personnel Working in Psychiatric Hospital in Hyderabad

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ABSTRACT

Background: Depression and anxiety are common occupational mental health concerns among healthcare personnel, particularly in psychiatric hospital settings where staff are exposed to emotionally demanding patient care, workload pressure, shift duties, and workplace stressors. Psychological distress among healthcare workers may reduce job performance, impair communication, increase absenteeism, and affect the quality and safety of patient care. **Objective:** This study aimed to assess the prevalence of depression and anxiety among healthcare personnel working in a psychiatric hospital in Hyderabad and to examine their association with selected demographic and occupational characteristics. **Methods:** A descriptive cross-sectional study was conducted among 99 healthcare personnel working at Sir CJ Institute of Psychiatry Hospital, Hyderabad. Participants included doctors, nurses, and paramedical staff selected through non-probability convenience sampling. Data were collected using a structured questionnaire containing demographic variables and the Depression, Anxiety and Stress Scale-21. Data were analyzed using SPSS version 27. Descriptive statistics were calculated, and associations between demographic variables and depression and anxiety were assessed using inferential statistical tests, with $p < 0.05$ considered statistically significant. **Results:** Participants included 33 doctors, 33 nurses, and 33 paramedical staff. Most participants were aged 30–35 years, and the majority worked night shifts. Age, residence, and shift duty were significantly associated with both anxiety and depression, whereas education and profession were not significantly associated with either outcome. **Conclusion:** Depression and anxiety were present among healthcare personnel working in the psychiatric hospital, with age, residence, and shift duty emerging as significant associated factors. Regular mental health screening, stress management programs, confidential psychological support, and fair shift regulation are needed to improve staff well-being and patient care quality. **Keywords:** Anxiety, Depression, Healthcare Personnel, Psychiatric Hospital, Prevalence, Shift Duty.

INTRODUCTION

Mental health problems among healthcare personnel have become an important occupational and public health concern because psychological distress can affect both worker well-being and quality of patient care. Anxiety and depression are among the most commonly reported mental health conditions in healthcare settings, particularly in environments characterized by high workload, emotional demands, long duty hours, night shifts, and continuous exposure to critically or psychiatrically ill patients (1). Healthcare workers are frequently required to make rapid clinical decisions, manage patient suffering, communicate with families, and maintain professional performance despite physical and

emotional fatigue. These pressures may increase vulnerability to depressive and anxiety symptoms, reduce job satisfaction, impair concentration, and contribute to burnout, absenteeism, reduced clinical efficiency, and compromised patient safety (2).

Healthcare personnel working in psychiatric hospitals may face additional occupational stressors compared with those in many other clinical settings. Psychiatric care often involves close and prolonged interaction with patients experiencing severe emotional distress, behavioral disturbance, aggression, self-harm risk, or impaired insight. Doctors, nurses, and paramedical staff in psychiatric institutions may therefore experience repeated emotional strain, fear of workplace violence, high responsibility for patient safety, and difficulty maintaining psychological detachment from distressing clinical encounters. These conditions can contribute to sustained anxiety and depressive symptoms, especially when combined with staff shortages, rotating shifts, inadequate institutional support, and limited access to psychological counseling services (3). Because psychiatric healthcare workers are responsible for supporting the mental health of others, their own psychological well-being is essential for safe, compassionate, and effective care delivery (4).

Previous international studies have shown that depression, anxiety, and stress are common among healthcare workers across different countries and clinical settings. Evidence from studies conducted during and after health system crises has demonstrated that healthcare personnel experience substantial psychological burden, with symptom levels influenced by workload, working conditions, professional role, coping strategies, and demographic factors (5). Studies among doctors, nurses, and other healthcare workers have also reported variation in the prevalence of anxiety and depression according to age, gender, education, work experience, department, and shift pattern, suggesting that occupational and demographic characteristics may shape vulnerability to psychological distress (6). However, reported prevalence rates vary widely across studies because of differences in study populations, measurement tools, healthcare systems, and sociocultural contexts (7).

In South Asian and Pakistani healthcare settings, anxiety and depression among healthcare personnel remain particularly important because mental health concerns may be underrecognized due to stigma, limited institutional screening, and cultural barriers to seeking psychological support. Healthcare workers in Pakistan often face demanding workloads, constrained resources, long working hours, and limited access to structured occupational mental health programs. In Sindh, social and cultural constraints may further discourage healthcare personnel from openly discussing psychological distress or seeking timely care. Despite these concerns, local evidence on depression and anxiety among staff working specifically in psychiatric hospitals remains limited. This gap is important because psychiatric hospital personnel may experience distinct occupational exposures that differ from those of general hospital workers (8).

Although existing literature supports the high burden of anxiety and depression among healthcare workers, there is still insufficient local evidence regarding the prevalence and demographic correlates of these conditions among doctors, nurses, and paramedical staff working in psychiatric hospitals in Hyderabad. Understanding the magnitude of depression and anxiety in this workforce is necessary for planning regular mental health screening, stress management programs, shift regulation, counseling services, and supportive institutional policies. Identifying associations with demographic and work-related factors such as age, residence, education, profession, and shift may also help administrators recognize higher-risk groups and design targeted interventions. Therefore, this study aimed to assess the prevalence of depression and anxiety among healthcare personnel working at a psychiatric hospital in Hyderabad and to examine their association with selected demographic and occupational characteristics.

MATERIALS AND METHODS

A descriptive cross-sectional observational study was conducted to assess the prevalence of depression and anxiety among healthcare personnel working in a psychiatric hospital setting. This design was

selected because it allowed measurement of depression and anxiety levels and their association with selected demographic and occupational characteristics at a single point in time. The study was carried out at Sir CJ Institute of Psychiatry Hospital, Hyderabad, over a period of six months. The study population comprised healthcare personnel directly involved in hospital services, including doctors, nurses, and paramedical staff.

Participants were selected through a non-probability convenience sampling technique. Eligible participants included male and female healthcare personnel aged 30 to 60 years who were working at Sir CJ Institute of Psychiatry Hospital, Hyderabad, and who were willing to participate after providing informed written consent. Doctors, nurses, and paramedical staff were included because these groups are directly involved in clinical and patient-care-related responsibilities within the psychiatric hospital environment. Healthcare personnel who were not working in the selected hospital, non-technical staff, and individuals who refused or were unwilling to provide consent were excluded from the study.

The sample size was calculated using the OpenEpi sample size calculator with a 95% confidence level and 5% margin of error. An additional 10% was added to account for possible non-response, resulting in a final estimated sample size of 99 participants. A total of 99 healthcare personnel were recruited, including 33 doctors, 33 nurses, and 33 paramedical staff. Participants were approached during their duty shifts, and the purpose of the study was explained before data collection. Written informed consent was obtained from each participant before inclusion.

Data were collected using a structured questionnaire consisting of two sections. The first section recorded demographic and occupational characteristics, including participant identity code, age, residence, education level, profession, and work shift. Age was categorized into groups, residence was classified as urban or rural, education was categorized as higher or lower education, profession was classified as doctor, nurse, or paramedical staff, and shift duty was categorized as morning, evening, or night shift. The second section included the Depression, Anxiety and Stress Scale-21 items, which was used to assess symptoms of depression and anxiety among participants.

The Depression, Anxiety and Stress Scale-21 is a self-report instrument designed to measure negative emotional states. In this study, the depression and anxiety subscales were used to assess the emotional status of healthcare personnel. Responses were recorded on a four-point Likert scale ranging from 0 to 3, where 0 indicated that the statement did not apply at all, 1 indicated that it applied to some degree or some of the time, 2 indicated that it applied to a considerable degree or a good part of the time, and 3 indicated that it applied very much or most of the time (9,10). Scores were categorized according to standard severity levels as normal, mild, moderate, severe, and extremely severe. The tool has acceptable internal consistency, with reported Cronbach's alpha values of 0.94 for the total DASS-21 score and 0.85 for the depression and anxiety subscales.

Depression and anxiety were treated as the main outcome variables. Demographic and occupational characteristics, including age, residence, education, profession, and work shift, were treated as independent variables. Depression and anxiety severity categories were operationally defined according to DASS-21 scoring guidelines. Age group, residence, education, profession, and shift duty were analyzed to determine whether these characteristics were associated with depression and anxiety levels among healthcare personnel.

To reduce information bias, data were collected using the same structured questionnaire for all participants. Participants were given clear instructions before completing the questionnaire, and guidance was provided where needed. The questionnaire was translated according to the local language to improve participant understanding. Confidentiality was maintained by using coding where required, and participant names were kept confidential. Completed questionnaires were stored safely to maintain data security and integrity.

Data were entered and analyzed using Statistical Package for Social Sciences version 27. Descriptive statistics were used to summarize demographic and occupational characteristics. Frequencies and percentages were calculated for categorical variables, including age group, residence, education, profession, shift, and depression and anxiety severity categories. Inferential statistical tests were applied to assess associations between demographic variables and depression and anxiety. Spearman's correlation analysis was used to assess relationships between selected demographic variables and depression and anxiety scores, while chi-square analysis was used to examine the association between age group and depression and anxiety categories. A p-value of less than 0.05 was considered statistically significant.

Ethical approval was obtained from the ethical committee of The Rising Star Institute of Nursing, Hyderabad. Permission to conduct the study was obtained from the concerned Medical Superintendent. Written informed consent was obtained from all participants before data collection. Participation was voluntary, and confidentiality of all collected information was maintained throughout the study. Data were handled securely, questionnaires were kept in safe custody, and coding was applied where necessary to protect participant identity.

RESULTS

A total of 99 healthcare personnel participated in the study. The largest age group was 30–35 years, comprising 37 participants, followed by 36–40 years with 31 participants, 41–45 years with 22 participants, and 46–50 years with 9 participants. Regarding profession, the sample was equally distributed among nurses, doctors, and paramedical staff, with 33 participants in each professional category. Night-shift workers represented the largest proportion of participants, accounting for 63 of the 99 respondents, while 21 participants worked evening shifts and 15 worked morning shifts. Residence and education were also recorded; however, the category totals for these variables exceeded the total sample size and are therefore presented exactly as collected.

Table 1. Demographic and occupational characteristics of healthcare personnel

Variable	Category	Frequency (n)	Percentage (%)
Age group	30–35 years	37	37.4
	36–40 years	31	31.3
	41–45 years	22	22.2
	46–50 years	9	9.1
Profession	Nurses	33	33.3
	Doctors	33	33.3
	Paramedical staff	33	33.3
Shift	Morning	15	15.2
	Evening	21	21.2
	Night	63	63.6
Residence	Urban	62	62.0*
	Rural	38	38.0*
Education	Higher education	65	65.0*
	Lower education	35	35.0*

*Percentages for residence and education are shown according to the recorded category totals.

The age distribution showed that more than two-thirds of participants were between 30 and 40 years of age. Specifically, 68 participants were aged 30–40 years, representing 68.7% of the total sample. Participants aged 41–50 years accounted for 31 participants, or 31.3% of the sample. The occupational distribution was balanced across professional groups, with nurses, doctors, and paramedical staff each contributing exactly one-third of the study population. Shift distribution was uneven, with night-shift workers forming the dominant group at 63.6%, compared with 21.2% in evening shifts and 15.2% in morning shifts.

The relationship between selected demographic and occupational variables and anxiety was assessed using reported inferential statistics. Residence and shift showed statistically significant associations with anxiety, with p-values of 0.001 and 0.04, respectively. Education and profession were not significantly

associated with anxiety, with p-values of 0.10 for each variable. Age was also significantly associated with anxiety, with a p-value of 0.001.

Table 2. Association of demographic and occupational variables with anxiety

Variable	Statistical Test	p-value
Residence	Spearman's correlation	0.001
Education	Spearman's correlation	0.100
Profession	Spearman's correlation	0.100
Shift	Spearman's correlation	0.040
Age	Chi-square association	0.001

Anxiety was significantly related to residence, shift, and age. The strongest reported association was observed for residence and age, each with a p-value of 0.001. Shift also showed a statistically significant association with anxiety at $p = 0.04$. In contrast, education and profession did not show statistically significant relationships with anxiety, indicating that anxiety levels did not differ significantly by educational category or professional group in the reported analysis.

The relationship between demographic and occupational variables and depression showed a similar pattern. Residence and shift were significantly associated with depression, each with p-values below 0.05. Age was also significantly associated with depression, with a p-value of 0.01. Education and profession were not significantly associated with depression.

Table 3. Association of demographic and occupational variables with depression

Variable	Statistical Test	p-value
Residence	Spearman's correlation	0.040
Education	Spearman's correlation	0.200
Profession	Spearman's correlation	0.200
Shift	Spearman's correlation	0.040
Age	Chi-square association	0.010

Depression was significantly associated with residence, shift, and age. The association with age was statistically significant at $p = 0.01$, while residence and shift were each significant at $p = 0.04$. Education and profession did not show statistically significant associations with depression, with p-values of 0.20 for both variables. These findings indicate that depression varied more clearly by age, residence, and shift pattern than by professional category or educational level.

A combined summary of statistical findings showed that age, residence, and shift were the main variables associated with both anxiety and depression. Age had a stronger association with anxiety than depression, with p-values of 0.001 and 0.01, respectively. Residence also showed a stronger association with anxiety than depression, while shift showed equal statistical significance for both anxiety and depression.

Table 4. Summary of statistically significant associations with anxiety and depression

Variable	Anxiety p-value	Depression p-value
Age	0.001	0.010
Residence	0.001	0.040
Shift	0.040	0.040
Education	0.100	0.200
Profession	0.100	0.200

Overall, the inferential results indicated that anxiety and depression were significantly associated with selected demographic and occupational factors. Age, residence, and shift were consistently associated with both psychological outcomes, whereas education and profession were not statistically significant. Among the reported variables, age and residence demonstrated the strongest associations with anxiety, while age, residence, and shift were all significant for depression. The findings suggest that psychological distress among healthcare personnel varied more by age, residential background, and work shift than by professional role or educational level.

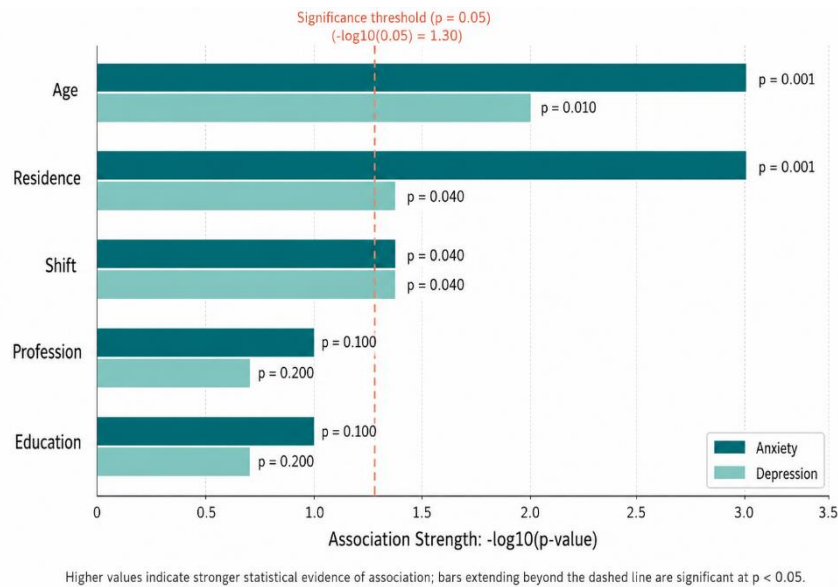


Figure 1. Relative Strength of Demographic and Occupational Associations With Anxiety and Depression

Figure 1 displays the relative strength of reported associations between selected demographic and occupational variables and anxiety/depression using transformed p-values, where higher values indicate stronger statistical evidence. Age showed the strongest association with anxiety ($p = 0.001$; $-\log_{10}[p] = 3.00$) and a strong association with depression ($p = 0.010$; $-\log_{10}[p] = 2.00$). Residence demonstrated similarly strong evidence for anxiety ($p = 0.001$; $-\log_{10}[p] = 3.00$) and remained statistically associated with depression ($p = 0.040$; $-\log_{10}[p] = 1.40$). Shift showed parallel significance for both anxiety and depression ($p = 0.040$ for each; $-\log_{10}[p] = 1.40$), indicating that work timing was consistently related to both psychological outcomes. Education and profession remained below the statistical significance threshold for both anxiety and depression, suggesting weaker evidence of association compared with age, residence, and shift. The figure highlights that age, residence, and shift were the dominant factors linked with psychological distress among healthcare personnel.

DISCUSSION

The present study assessed depression and anxiety among healthcare personnel working in a psychiatric hospital and examined their relationship with selected demographic and occupational characteristics. The findings indicate that psychological distress was present among healthcare personnel and that anxiety and depression were significantly associated with age, residence, and shift duty, while education and profession were not significantly associated with either outcome. These results suggest that psychological distress in psychiatric hospital staff may be influenced more by contextual and work-pattern factors than by professional designation or educational background. This is clinically important because psychiatric healthcare workers operate in emotionally demanding environments where repeated exposure to patient distress, behavioral disturbance, aggression risk, and high clinical responsibility may increase vulnerability to anxiety and depressive symptoms (11,12).

Age showed a statistically significant association with both anxiety and depression, with a stronger association observed for anxiety. This finding suggests that psychological distress may vary across age groups among healthcare personnel. Older workers may experience cumulative occupational strain, prolonged exposure to emotionally demanding clinical situations, greater family and financial responsibilities, and long-term fatigue related to repeated shift duties. In contrast, younger healthcare workers may differ in coping style, workload exposure, or adaptation to institutional routines. Previous studies have similarly reported that demographic factors, including age and work experience, may influence depression, anxiety, burnout, and post-traumatic stress symptoms among healthcare workers, although the direction and strength of these associations can vary across healthcare systems and study

populations (13,14). The significant age-related pattern observed in this study therefore supports the need for age-sensitive mental health support rather than a uniform approach for all staff.

Residence was also significantly associated with anxiety and depression. This finding may reflect differences in commuting burden, social support, living conditions, access to coping resources, and exposure to socioeconomic stressors. Healthcare personnel from rural or distant residential areas may face longer travel time, reduced rest periods between shifts, and additional family or financial pressures, whereas urban residence may be associated with different stressors such as higher living costs and crowded environments (15). Because residence is a categorical variable, the clinical meaning of this association depends on the direction of the relationship and the distribution of symptom severity across urban and rural participants. Nevertheless, the significant p-values indicate that residential background should be considered when evaluating psychological distress among hospital staff.

Shift duty was significantly associated with both anxiety and depression, indicating that work timing may be an important occupational determinant of mental health among psychiatric hospital personnel. Night-shift work was the most common shift category in the sample, and irregular or prolonged duty schedules may disrupt sleep, reduce recovery time, impair social functioning, and increase emotional exhaustion. Healthcare personnel working night shifts in psychiatric settings may also face reduced staffing, increased responsibility, and limited immediate administrative support during difficult patient-care situations. These conditions can contribute to sustained psychological strain. Existing literature supports the relationship between shift work, workload, burnout, and psychological symptoms among healthcare professionals, particularly in high-pressure clinical environments (16,17).

Education and profession were not significantly associated with anxiety or depression. This suggests that psychological distress affected doctors, nurses, and paramedical staff in a broadly comparable manner within the study setting. The equal distribution of participants across the three professional groups may have allowed a balanced comparison, but the absence of statistical significance indicates that job title alone may not explain differences in psychological distress. In psychiatric hospitals, different cadres may share many common stressors, including patient-related emotional burden, workplace safety concerns, rotating shifts, institutional workload, and responsibility for patient care. Similarly, education level may not independently protect healthcare personnel from anxiety or depression when workplace stressors are shared across the clinical environment. These findings are consistent with evidence that psychological distress among healthcare workers often reflects organizational and occupational pressures rather than only individual educational or professional characteristics (18).

The findings have practical implications for hospital administration and occupational health policy. Regular mental health screening should be incorporated into staff welfare programs, particularly for workers in higher-risk categories such as older staff, personnel with demanding shift schedules, and those affected by residential or commuting challenges. Screening should be linked with confidential counseling, referral pathways, stress management training, peer-support systems, and institutional mechanisms to address workload and shift regulation. In psychiatric hospitals, staff mental health programs are especially important because worker well-being directly affects communication, empathy, clinical judgment, patient safety, and continuity of care. Supportive work environments, psychological safety, and early identification of distress can reduce burnout and improve both staff retention and quality of patient care (19,20).

The study also highlights the importance of interpreting psychological distress as an occupational issue rather than solely an individual problem. Anxiety and depression among healthcare personnel may arise from the interaction between personal vulnerability, institutional workload, shift patterns, and the emotional intensity of psychiatric care (21). Therefore, interventions should not be limited to individual coping advice. Organizational strategies such as fair duty rotation, adequate staffing, rest periods after night shifts, debriefing after difficult clinical incidents, and supervisor support are necessary to reduce preventable psychological burden. These approaches are particularly relevant in settings where cultural

stigma may prevent healthcare workers from openly reporting mental health symptoms or seeking professional help.

The study has several limitations that should be considered when interpreting the findings. The cross-sectional design limits causal interpretation, so the observed associations cannot establish whether demographic or occupational factors directly caused anxiety or depression. The use of convenience sampling from a single psychiatric hospital may limit generalizability to other hospitals or regions. Depression and anxiety were assessed using a self-report questionnaire, which may be influenced by response bias, social desirability, or underreporting due to stigma. The analysis also relied mainly on p-values and did not include adjusted effect estimates, confidence intervals, or multivariable modeling, which limits understanding of the independent contribution of each factor. Despite these limitations, the study provides useful local evidence on psychological distress among psychiatric healthcare personnel and identifies age, residence, and shift duty as important variables for further investigation.

Overall, the findings suggest that anxiety and depression among healthcare personnel working in psychiatric settings are linked with both demographic and occupational characteristics. Age, residence, and shift duty emerged as significant factors, while profession and education did not show significant associations. These results support the need for regular psychological assessment, supportive workplace policies, and targeted interventions for staff groups at greater risk of distress. Strengthening mental health support for psychiatric hospital personnel may improve staff well-being, reduce occupational strain, and contribute to safer and more effective patient care.

CONCLUSION

This study concluded that depression and anxiety were present among healthcare personnel working in a psychiatric hospital in Hyderabad, highlighting psychological distress as an important occupational health concern in this setting. Age, residence, and shift duty were significantly associated with both anxiety and depression, indicating that demographic background and work scheduling may influence the mental well-being of healthcare staff. In contrast, education and profession were not significantly associated with either outcome, suggesting that psychological distress may affect doctors, nurses, and paramedical staff across professional categories. These findings emphasize the need for regular mental health screening, confidential psychological support services, stress management programs, fair shift regulation, and supportive workplace policies to reduce anxiety and depression among psychiatric healthcare personnel and promote safer, more effective patient care.

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