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Research Article

A cross-sectional study of psychiatric morbidity in a tertiary care teaching hospital

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ABSTRACT
Background: Mental health disorders constitute a major public health concern worldwide. The World Health Organization estimates that one in four individuals will experience a mental health disorder at some point in their lives. Psychiatric morbidity often coexists with physical illnesses, especially in tertiary care hospitals, where patients present with complex and chronic medical conditions. Chronic medical illnesses contribute substantially to global morbidity and mortality, and are frequently complicated by psychiatric comorbidities. The coexistence of physical and psychological disorders negatively affects treatment adherence, disease outcomes, quality of life, and overall prognosis. Despite this, psychiatric morbidity often remains underdiagnosed in patients attending tertiary-care hospitals, particularly in resource-limited settings.
Aim: To assess the prevalence and pattern of psychiatric morbidity among patients attending a tertiary care teaching hospital.
Material and Methods: This observational, cross-sectional study was conducted among 76 patients with established diagnoses of chronic medical illnesses, recruited from the outpatient and inpatient departments of medicine and allied specialties. Sociodemographic details and clinical parameters were recorded using a semi-structured proforma. Psychiatric morbidity was assessed using the General Health Questionnaire-28 (GHQ-28) for psychological distress, the Hospital Anxiety and Depression Scale (HADS) for screening depression and anxiety, and the Mini-International Neuropsychiatric Interview (MINI) for diagnostic confirmation. Statistical analysis was performed using SPSS version 25.0. Descriptive statistics were used for baseline characteristics. Chi-square tests and logistic regression analyses were applied to determine associations and independent predictors, with $p < 0.05$ considered statistically significant.
Results: Psychiatric morbidity was identified in 65.79% of patients. The most common diagnoses were depression (26.32%) and anxiety disorders (18.42%), followed by adjustment disorder (13.16%) and somatoform disorders (7.89%). Female patients had significantly higher psychiatric morbidity (76.47%) compared to males (57.14%, $p = 0.041$). Psychiatric morbidity was most prevalent among those with chronic kidney disease (80.00%) and diabetes mellitus (72.73%), both showing statistically significant associations ($p = 0.041$ and $p = 0.032$, respectively). Multivariable logistic regression analysis revealed that female gender (OR 2.10, $p = 0.038$), low socioeconomic status (OR 2.72, $p = 0.024$), diabetes mellitus (OR 2.48, $p = 0.031$), and chronic kidney disease (OR 3.12, $p = 0.021$) were independent predictors of psychiatric morbidity.
Conclusion: Psychiatric morbidity is highly prevalent among patients with chronic medical illnesses, particularly in women and those with diabetes or chronic kidney disease. These findings highlight the urgent need for routine psychiatric screening and integrated psychosocial interventions in tertiary-care hospital settings to improve holistic patient care.

Keywords: Psychiatric Morbidity; Chronic Medical Illness; Depression; Anxiety; Predictors.

INTRODUCTION

Chronic medical illnesses such as diabetes mellitus, cardiovascular disease, chronic kidney disease (CKD), and chronic respiratory disorders now account for the majority of morbidity and mortality worldwide, reshaping the clinical landscape of hospitals and outpatient care alike. As populations age and survival with noncommunicable diseases improves, patients are living longer with complex, multimorbidity profiles—and, critically, with an often-overlooked burden of psychiatric symptoms and disorders. Against this backdrop, the present study examines psychiatric morbidity among adults with chronic medical conditions in a tertiary-care setting, with the twin aims of describing its pattern and identifying key sociodemographic and clinical correlates.[1] The co-occurrence of chronic physical disease and mental disorders is not incidental. Global estimates underscore the high prevalence of common mental disorders, particularly depressive and anxiety disorders, across all regions and age groups, with

substantial years lived with disability attributable to these conditions.[1] In parallel, the broader epidemiologic transition has driven a steep rise in noncommunicable diseases, which now dominate the global disease burden in both fatal and non-fatal outcomes, increasingly concentrating in low- and middle-income countries as well as among disadvantaged groups within wealthier nations.[2] Within this changing burden, the interface between mental and physical health has become a major determinant of clinical outcomes, quality of life, and health system costs. Multiple mechanistic pathways plausibly link chronic illness and psychiatric morbidity. Biological routes include chronic inflammation, hypothalamic–pituitary–adrenal axis dysregulation, autonomic imbalance, and neuroendocrine perturbations; behavioral routes include reduced physical activity, maladaptive coping, and substance use; and social routes include poverty, caregiving strain, stigma, and health-care barriers. These pathways operate bidirectionally, with mental disorders increasing the risk of incident chronic disease, and chronic disease elevating the risk of subsequent psychopathology. The diabetes–depression dyad is emblematic: longitudinal syntheses show that depression confers a substantially increased risk of incident type 2 diabetes, while diabetes modestly elevates the risk of later depression, supporting a bidirectional model with shared and reciprocal drivers.[3] Cardiovascular disease illustrates the clinical salience of these links. Depressive symptoms and disorders are more prevalent in patients with coronary heart disease than in the general population and have been associated with adverse prognosis, including higher mortality and recurrent events.[4] Emotional distress can amplify physiologic stress responses, impair adherence to cardioprotective regimens, and reduce participation in rehabilitation—mechanisms that plausibly explain worse outcomes. In routine cardiology practice, however, depression and anxiety often remain under-recognized and undertreated, despite their potential to influence angina control, functional status, and rehospitalization. A similar pattern holds in chronic respiratory disease. Individuals with chronic obstructive pulmonary disease (COPD) carry a high burden of anxiety and depressive symptoms, which are in turn associated with increased exacerbation risk, poorer exercise tolerance, and diminished health-related quality of life. Meta-analytic evidence suggests associations running in both directions—COPD increases risk of depression and anxiety, and these conditions worsen COPD outcomes—underscoring the clinical payoff of systematic case-finding and integrated psychosocial support.[5] CKD adds further complexity. Patients across the CKD continuum, including those not yet on dialysis, frequently experience major depressive episodes and other psychiatric syndromes, driven by symptom burden, dietary and fluid restrictions, uncertainty about prognosis, uremia-related neurocognitive effects, and health-service disruptions. Evidence indicates a meaningful point prevalence of major depression in CKD populations and links psychiatric morbidity to hospitalization and mortality risk.[6] For nephrology teams, early detection of mental disorders is therefore not only patient-centered but potentially prognostically important. From a health-systems vantage, psychiatric morbidity in chronic disease undermines self-management, medication adherence, and glycemic or blood-pressure control; it also increases acute care use and total costs. Conversely, collaborative approaches that integrate mental health into routine chronic-disease management improve both psychological and biomedical outcomes. In randomized trials among patients with comorbid depression and poorly controlled diabetes and/or coronary heart disease, team-based care that combines measurement-based treatment, care management, and specialist supervision produced superior control of hemoglobin A1c, blood pressure, and LDL cholesterol, alongside greater depression remission, compared with usual care.[7] These findings support a "treat-to-target" paradigm spanning mind and body.

MATERIAL AND METHODS

This was an observational, cross-sectional study conducted at a tertiary care teaching hospital. The study was designed to assess the psychiatric morbidity among patients suffering from chronic medical illnesses. A total of 76 patients with established diagnoses of chronic medical illnesses were included in the study. Patients were recruited from the outpatient and inpatient departments of medicine and allied specialties.

Inclusion Criteria

- Patients aged 18 years and above.
- Patients with a confirmed diagnosis of chronic medical illness (e.g., diabetes mellitus, hypertension, chronic kidney disease, chronic obstructive pulmonary

disease, ischemic heart disease, or other long-standing medical disorders).
- Patients who provided informed consent.

Exclusion Criteria
- Patients with previously diagnosed primary psychiatric disorders prior to the onset of medical illness.
- Patients with acute confusional states, delirium, or other severe cognitive impairments that could interfere with assessment.
- Patients unwilling to participate.

Data collection was carried out using a semi-structured proforma designed to record comprehensive information on each participant. Sociodemographic details such as age, sex, education level, marital status, employment status, socioeconomic status, and place of residence were obtained. Clinical parameters included the type and duration of chronic medical illness, presence of comorbidities, treatment details, and history of substance use. To assess psychiatric morbidity, standardized and validated instruments were employed. The General Health Questionnaire-28 (GHQ-28) was administered to evaluate overall psychological distress, while the Hospital Anxiety and Depression Scale (HADS) was used to screen for the presence of anxiety and depressive symptoms. For diagnostic confirmation of psychiatric disorders, the Mini-International Neuropsychiatric Interview (MINI)was conducted.

Statistical Analysis

All data were entered and analyzed using SPSS version 25.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were applied: means and standard deviations for continuous variables, and frequencies and percentages for categorical variables. Chi-square test and Fisher's exact test were used for comparison of categorical data. Independent sample t-test or Mann-Whitney U test was applied for continuous variables, depending on data distribution. Logistic regression analysis was performed to determine predictors of psychiatric morbidity among patients with chronic medical illnesses. A p-value of <0.05 was considered statistically significant.

RESULTS

Sociodemographic Characteristics

The study included 76 patients with chronic medical illnesses. As shown in Table 1, the majority of participants belonged to the middle-aged group of 46–60 years (34.21%), followed by those aged above 60 years (26.32%). Patients aged 31–45 years accounted for 23.68%, while the youngest age group of 18–30 years comprised 15.79% of the study population. Gender distribution revealed a slight male predominance with 55.26% males and 44.74% females. In terms of marital status, most patients were married (76.32%), whereas 13.16% were unmarried and 10.53% were widowed or divorced. These findings reflect those middle-aged and married individuals formed the bulk of the study cohort.

Distribution of Chronic Medical Illnesses

The spectrum of chronic medical conditions is depicted in Table 2. Diabetes mellitus was the most common chronic illness, affecting 28.95% of the patients, followed by hypertension (23.68%). Ischemic heart disease was present in 15.79%, while 13.16% of participants were diagnosed with chronic kidney disease (CKD). Chronic obstructive pulmonary disease (COPD) and other chronic respiratory illnesses were observed in 10.53% of cases. A smaller proportion of patients (7.89%) had other long-standing medical conditions, including autoimmune and chronic liver diseases. These data highlight that metabolic and cardiovascular illnesses were the most prevalent underlying chronic conditions among the study population.

Psychiatric Morbidity

Psychiatric morbidity was observed in a significant proportion of patients, as presented in Table 3. Depression was the most frequent diagnosis, identified in 26.32% of patients, followed by anxiety disorders in 18.42%. Adjustment disorder was diagnosed in 13.16%, while somatoform disorders were seen in 7.89%. Importantly, 34.21% of patients did not meet criteria for any psychiatric disorder. Overall, psychiatric morbidity was present in nearly two-thirds of the sample (65.79%), underscoring the substantial burden of psychological disorders among patients with chronic medical illnesses.

Gender and Psychiatric Morbidity

The association between gender and psychiatric morbidity is shown in Table 4. Among females, 76.47% had psychiatric morbidity compared to 57.14% of males. Conversely, psychiatric morbidity was absent in 42.86% of males compared to only 23.53% of females. This association was statistically significant ($p = 0.041$), suggesting that female patients were more likely to experience psychiatric morbidity than males.

Type of Chronic Medical Illness and Psychiatric Morbidity

As presented in Table 5, psychiatric morbidity was most prevalent among patients with CKD (80.00%) and diabetes mellitus (72.73%). COPD/respiratory illness also showed a high rate (75.00%), though the association narrowly missed statistical significance (p = 0.062). By contrast, patients with ischemic heart disease (50.00%) and hypertension (55.56%) had lower rates of psychiatric morbidity. Statistical analysis demonstrated significant associations for diabetes mellitus (p = 0.032) and CKD (p = 0.041), indicating that these illnesses independently contributed to higher psychiatric morbidity.

Predictors of Psychiatric Morbidity (Regression Analysis)

The results of the multiple logistic regression analysis are summarized in Table 6. After adjusting for confounding factors, several independent predictors of psychiatric morbidity were identified. Female gender was associated with a two-fold increased risk (Adjusted OR = 2.10, 95% CI = 1.05–4.75, p = 0.038). Low socioeconomic status also significantly predicted morbidity (Adjusted OR = 2.72, 95% CI = 1.14–6.48, p = 0.024). Among clinical variables, diabetes mellitus (Adjusted OR = 2.48, 95% CI = 1.09–5.65, p = 0.031) and chronic kidney disease (Adjusted OR = 3.12, 95% CI = 1.18–8.25, p = 0.021) were significant independent predictors. Although older age (>60 years) and unemployment showed increased odds, they did not reach statistical significance. Duration of illness beyond five years also did not independently predict morbidity. These findings emphasize that female gender, low socioeconomic status, diabetes, and CKD are the strongest contributors to psychiatric morbidity in this patient group.

Table 1. Sociodemographic Profile of Patients (n=76)

Variable	Frequency (n)	Percentage (%)
Age Group (years)		
18–30	12	15.79
31–45	18	23.68
46–60	26	34.21
>60	20	26.32
Gender		
Male	42	55.26
Female	34	44.74
Marital Status		
Married	58	76.32
Unmarried	10	13.16
Widowed/Divorced	8	10.53

Table 2. Distribution of Chronic Medical Illnesses

Medical Illness	Frequency (n)	Percentage (%)
Diabetes Mellitus	22	28.95
Hypertension	18	23.68
Ischemic Heart Disease	12	15.79
Chronic Kidney Disease	10	13.16
COPD / Chronic Respiratory Illness	8	10.53
Others (e.g., autoimmune, liver)	6	7.89

Table 3. Psychiatric Morbidity among Patients

Psychiatric Disorder (MINI)	Frequency (n)	Percentage (%)
Depression	20	26.32

Anxiety Disorders	14	18.42
Adjustment Disorder	10	13.16
Somatoform Disorders	6	7.89
No Psychiatric Disorder	26	34.21

Table 4. Association between Gender and Psychiatric Morbidity

Gender	Psychiatric Morbidity Present (n=50)	Absent (n=26)	Total (n=76)	p-value
Male	24 (57.14%)	18 (42.86%)	42	0.041*
Female	26 (76.47%)	8 (23.53%)	34	

Table 5. Association between Type of Chronic Medical Illness and Psychiatric Morbidity

Illness Category	Morbidity Present (n=50)	Morbidity Absent (n=26)	P-Value
Diabetes Mellitus	16 (72.73%)	6 (27.27%)	0.032*
Hypertension	10 (55.56%)	8 (44.44%)	0.184
CKD	8 (80.00%)	2 (20.00%)	0.041*
COPD/Respiratory Illness	6 (75.00%)	2 (25.00%)	0.062
IHD	6 (50.00%)	6 (50.00%)	0.271

Table 6. Multiple Logistic Regression Analysis of Factors Associated with Psychiatric Morbidity (n=76)

Predictor Variable	Adjusted OR	95% CI	p-value
Female Gender	2.1	1.05 – 4.75	0.038*
Age > 60 years	1.85	0.92 – 3.96	0.084
Low Socioeconomic Status	2.72	1.14 – 6.48	0.024*
Unemployment	1.95	0.88 – 4.32	0.091
Diabetes Mellitus	2.48	1.09 – 5.65	0.031*
Chronic Kidney Disease	3.12	1.18 – 8.25	0.021*
Duration of Illness > 5yr	1.67	0.78 – 3.59	0.186

DISCUSSION

In this tertiary-care cohort, psychiatric morbidity affected 65.79% of patients with chronic medical illnesses, with 34.21% free of diagnosable disorder. This burden aligns with health-systems evidence showing that people living with long-term conditions are 2–3 times more likely to experience common mental disorders than the general population; the magnitude in our study is at the upper end of that spectrum, plausibly reflecting a hospital-based sample and use of structured case ascertainment.[8] Most participants were 46–60 years (34.21%) or >60 years (26.32%), and 76.32% were married. Indian consultation-liaison psychiatry reports indicate that general-hospital psychiatric morbidity commonly clusters in middle-aged adults who attend medical services for chronic conditions, consistent with our age distribution and setting; reported screening-based morbidity rates around 31–34.5% in unselected medical samples are lower than ours, again reflecting our focus on chronic illness and use of diagnostic interviews.[9] Psychiatric morbidity was more frequent in women (76.47%) than men (57.14%, p = 0.041). This mirrors robust meta-analytic evidence of higher depression burden among females in population-representative samples (female–male ratio typically ~1.7:1 across measurement approaches), providing an explanatory backdrop to the gender effect that also persisted in our adjusted model (Adjusted OR 2.10, 95% CI 1.05–4.75).[10] In our sample, diabetes (28.95%) and hypertension (23.68%) were the most common illnesses, followed by IHD (15.79%), CKD (13.16%), and COPD (10.53%). Cross-national analyses show that depression with chronic diseases—particularly angina/IHD and diabetes—is associated with the largest decrements in overall health status;

our finding of substantial psychiatric morbidity across cardiometabolic conditions (e.g., morbidity in diabetes 72.73% and in IHD 50.00%) is therefore directionally concordant with the literature, while reflecting broader diagnostic coverage beyond depression alone.[11] We found depression 26.32% and anxiety disorders 18.42%, with additional adjustment (13.16%) and somatoform disorders (7.89%). A systematic review of medical outpatients estimated point prevalence of depressive symptoms/disorders at 27.0% (range 17–53%), closely matching our depression figure, and highlighting comparable burdens across clinical departments when standardized tools are used.[12] Psychiatric morbidity among patients with diabetes in our cohort was 72.73%, and diabetes independently predicted morbidity (Adjusted OR 2.48, 95% CI 1.09–5.65). Classic meta-analytic data show depression prevalence 17.6% in type 2 diabetes versus 9.8% in controls (OR 1.6), underscoring an elevated baseline risk; our higher estimate likely reflects inclusion of anxiety/adjustment alongside depression and the greater psychosocial load in tertiary-care attendees.[13] CKD showed the highest illness-specific burden in our study (80.00%) and independently predicted morbidity (Adjusted OR 3.12, 95% CI 1.18–8.25). This direction accords with a CKD meta-analysis reporting depressive-symptom prevalence around 27% overall (with dialysis studies often higher, range 5–58%), again suggesting that our broader diagnostic net and hospital-based sampling capture additional non-depressive morbidity alongside depression.[14] Low SES independently increased odds of psychiatric morbidity in our model (Adjusted OR 2.72, 95% CI 1.14–6.48). A foundational meta-analysis demonstrated a graded association between disadvantaged SES and depression across 51 prevalence, 5 incidence, and 4 persistence studies, supporting SES as a consistent determinant of mental-health inequality and aligning with the strength of the effect we observed.[15]

CONCLUSION

This study highlights a high prevalence of psychiatric morbidity (65.79%) among patients with chronic medical illnesses, with depression and anxiety being the most common disorders. Female gender, low socioeconomic status, diabetes, and chronic kidney disease emerged as significant independent predictors. These findings underscore the need for routine psychiatric screening and integration of mental health services into chronic disease management at tertiary-care hospitals. Early identification and collaborative care can improve both psychological well-being and medical outcomes in this vulnerable population.

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