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Original Research Article

Prevalence and Clinical Correlates of Depression in Patients with Chronic Medical Illness

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Abstract: ***Background*:** Depression is one of the most common psychiatric disorders observed among patients suffering from chronic medical illnesses. The coexistence of depression with chronic diseases such as diabetes, hypertension, chronic kidney disease, and chronic obstructive pulmonary disease can significantly worsen clinical outcomes, reduce treatment adherence, and impair quality of life. Early detection and management of depression in such patients are therefore essential. ***Aim and Objectives*:** To determine the prevalence of depression among patients with chronic medical illnesses and to evaluate its association with various demographic and clinical factors. ***Materials and Methods*:** This hospital-based observational cross-sectional study was conducted in the Department of Psychiatry, Geetanjali Institute of Medical Sciences, Jaipur, over a period of 6 months. A total of 50 patients with chronic medical illnesses were included in the study. Socio-demographic and clinical data were collected using a structured proforma, and depression was assessed using a standardized depression screening scale. Statistical analysis was performed to determine the association between depression and different variables. ***Results*:** The prevalence of depression among patients with chronic medical illness was 42%. Depression was more common among female patients and those with longer duration of illness (≥5 years), showing statistically significant associations. Variables such as age group, socioeconomic status, marital status, and type of chronic illness did not show statistically significant associations with depression. ***Conclusion*:** Depression is highly prevalent among patients with chronic medical illnesses and is influenced by several demographic and clinical factors. Routine screening and early psychiatric intervention are essential for improving treatment outcomes and overall quality of life.

Keywords: Depression, Chronic medical illness, Prevalence, Psychiatric comorbidity, Quality of life.

INTRODUCTION

Depression is one of the most common psychiatric comorbidities encountered in patients suffering from chronic medical illnesses, and its presence significantly affects disease outcomes, treatment adherence, quality of life, and overall prognosis. Chronic medical illnesses such as diabetes mellitus, cardiovascular diseases, chronic kidney disease, chronic obstructive pulmonary disease, cancer, and neurological disorders impose prolonged physical suffering, functional limitations, and psychological stress on patients, thereby increasing their vulnerability to depressive disorders. The interaction between chronic medical conditions and depression is complex and bidirectional, wherein the presence of a chronic disease can precipitate depressive symptoms, while depression itself can worsen the course and outcomes of the underlying medical illness. According to the World Health Organization, depression is a leading cause of disability worldwide and contributes substantially to the global burden of disease, particularly among individuals living with chronic health conditions [1]. Studies have consistently demonstrated that the prevalence of depression is significantly higher among patients with chronic medical illnesses compared to the general population, with reported prevalence rates ranging from 20% to 60% depending on the type and severity of the illness, diagnostic criteria, and study population [2].

The coexistence of depression with chronic medical illness poses serious clinical challenges because depressive symptoms often remain under-recognized and

undertreated in medical settings. Physicians frequently focus primarily on the management of the physical illness, overlooking the psychological aspects of patient care. As a result, many patients with chronic diseases experience persistent depressive symptoms that negatively influence their functional status, treatment compliance, and healthcare utilization. Depression in patients with chronic illness has been associated with poorer clinical outcomes, increased morbidity and mortality, longer hospital stays, and higher healthcare costs [3]. Moreover, depressive symptoms may reduce patients' motivation to adhere to prescribed medications, dietary modifications, and lifestyle changes, thereby compromising disease management and recovery [4].

The pathophysiology linking chronic medical illness and depression is multifactorial and involves biological, psychological, and social mechanisms. Biological factors include neuroendocrine dysregulation, inflammatory processes, neurotransmitter alterations, and the direct effects of chronic disease on the central nervous system. Chronic inflammation, commonly observed in conditions such as diabetes and cardiovascular diseases, has been implicated in the development of depressive symptoms through cytokine-mediated alterations in brain function [5]. In addition, chronic pain, physical disability, fatigue, and sleep disturbances associated with long-standing medical conditions contribute to the development of depressive symptoms. Psychological factors such as fear of disease progression, loss of independence, financial burden, and reduced social functioning also play a significant role in the development and persistence of depression among these patients [6].

Various demographic and clinical factors have been identified as important correlates of depression in individuals with chronic medical illness. Age, gender, duration of illness, severity of disease, presence of complications, level of social support, and socioeconomic status are among the factors that influence the risk of developing depression. Studies have reported that female patients, individuals with longer duration of illness, those experiencing severe functional impairment, and patients with multiple comorbidities are more likely to develop depressive symptoms [7]. Additionally, poor social support, unemployment, and financial difficulties further exacerbate psychological distress and increase vulnerability to depression. The presence of depression in chronic illness not only affects mental well-being but also significantly interferes with the patient's ability to cope with the illness and participate actively in their treatment plan [8].

Recognition and early identification of depression in patients with chronic medical illnesses are therefore essential components of comprehensive patient care. Screening tools such as the Patient Health Questionnaire (PHQ-9), Beck Depression Inventory (BDI), and Hospital Anxiety and Depression Scale (HADS) are commonly used in clinical and research settings to detect depressive symptoms in medically ill patients. Integrating mental health screening into routine medical care can facilitate early diagnosis and timely intervention, thereby improving patient outcomes and quality of life [9]. Effective management of depression in this population often requires a multidisciplinary approach involving pharmacotherapy, psychotherapy, lifestyle modification, and coordinated care between physicians, psychiatrists, and other healthcare professionals.

Given the high prevalence and significant impact of depression among patients with chronic medical illnesses, it is important to systematically evaluate the magnitude of the problem and identify the clinical factors associated with its occurrence. Understanding the prevalence and clinical correlates of depression in this population will help in developing targeted screening strategies, improving early diagnosis, and implementing appropriate interventions to reduce psychological morbidity and enhance overall patient care. Therefore, the present study aims to assess the prevalence and clinical correlates of depression in patients with chronic medical illness, thereby contributing to better understanding and management of this important comorbidity in clinical practice [10].

The aim of this study is to determine the prevalence of depression among patients with chronic medical illnesses. The objectives are to assess the severity of depressive symptoms and to evaluate the association between depression and various clinical as well as demographic factors in patients suffering from chronic medical conditions.

MATERIALS AND METHODS

Study Design: Hospital-based observational cross-sectional study.

Study Setting: Department of Psychiatry, Geetanjali Institute of Medical Sciences, Jaipur.

Study Duration: 6 months.

Sample Size: 50 patients with chronic medical illnesses attending inpatient or outpatient departments.

Sampling Method: Convenient sampling technique.

Inclusion Criteria: Patients aged ≥18 years diagnosed with chronic medical illness and willing to participate.

Exclusion Criteria: Patients with known psychiatric illness, severe cognitive impairment, or unwilling to provide consent.

Statistical Analysis: Data were entered into Microsoft Excel and analyzed using SPSS software version 27.0 (SPSS Inc., Chicago, IL, USA) and GraphPad Prism

version 5. Continuous variables were expressed as mean ± standard deviation, while categorical variables were presented as frequencies and percentages. The unpaired t-test was used to compare continuous variables between independent groups, and the paired t-test was applied for within-group comparisons. Categorical variables were analyzed using the Chi-square test or Fisher's exact test as appropriate. A p-value of <0.05 was considered statistically significant.

RESULT

Table 1: Age Group and Depression

Age Group (Years)	Depression Present	Depression Absent	Total	p-value
18–30	3	7	10	0.433
31–45	7	11	18	
46–60	8	6	14	
>60	3	5	8	
Total	**21**	**29**	**50**	

Table 2: Gender and Depression

Gender	Depression Present	Depression Absent	Total	p-value
Male	9	19	28	0.042
Female	12	10	22	
Total	**21**	**29**	**50**	

Table 3: Duration of Illness and Depression

Duration of Illness	Depression Present	Depression Absent	Total	p-value
<5 Years	6	14	20	0.031
≥5 Years	15	15	30	
Total	**21**	**29**	**50**	

Table 4: Type of Chronic Illness and Depression

Type of Illness	Depression Present	Depression Absent	Total	p-value
Diabetes Mellitus	7	11	18	0.263
Hypertension	5	10	15	
COPD	4	3	7	
Chronic Kidney Disease	5	5	10	
Total	**21**	**29**	**50**	

Table 5: Severity of Depression

Severity	Number of Patients	Percentage (%)	p-value
Mild	9	18	0.001
Moderate	7	14	
Severe	5	10	
No Depression	29	58	
Total	**50**	**100**	

Table 6: Marital Status and Depression

Marital Status	Depression Present	Depression Absent	Total	p-value
Married	15	18	33	0.521
Unmarried	4	7	11	
Widowed/Divorced	2	4	6	
Total	**21**	**29**	**50**	

Table 7: Socioeconomic Status and Depression

Socioeconomic Status	Depression Present	Depression Absent	Total	p-value
Lower	10	9	19	0.284
Middle	8	14	22	
Upper	3	6	9	
Total	**21**	**29**	**50**	

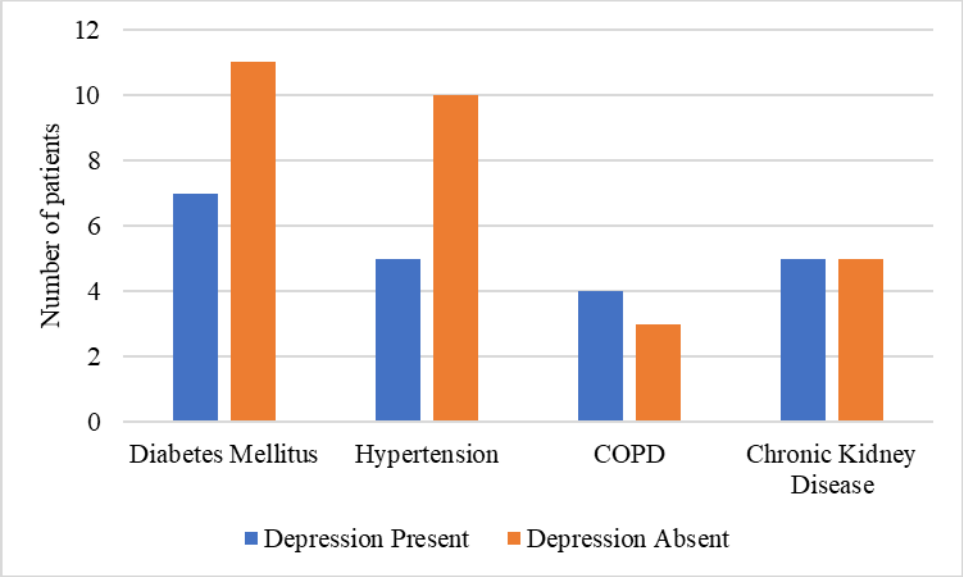

Figure 1: Type of Chronic Illness and Depression

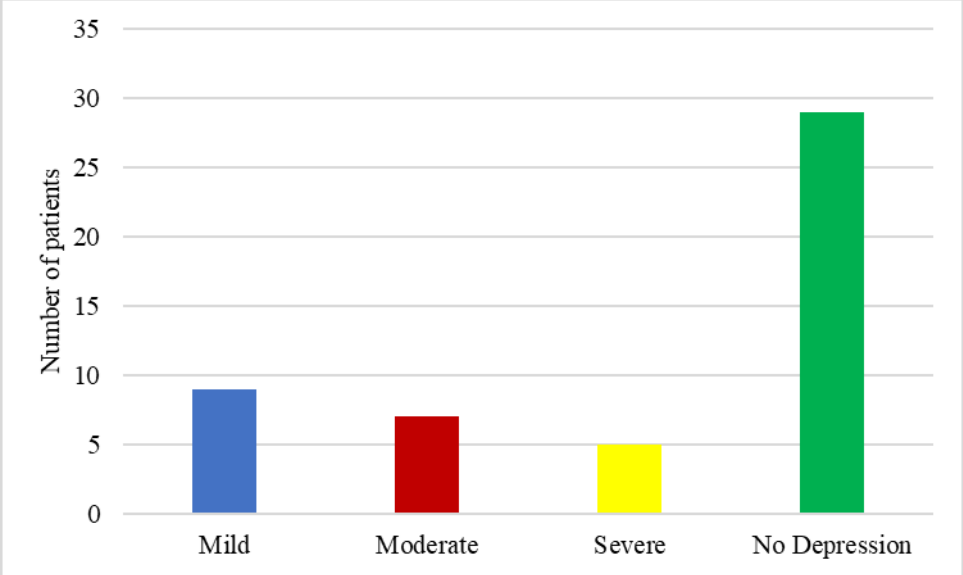

Figure 2: Severity of Depression

Table 1: Age Group and Depression

Among the 50 study participants, the highest number of patients belonged to the 31–45 years age group (18 patients), of whom 7 (38.9%) had depression and 11 (61.1%) did not have depression. In the 18–30 years group, 3 patients (30%) had depression while 7 (70%) did not. In the 46–60 years group, 8 patients (57.1%) had depression and 6 (42.9%) were without depression. Among patients aged >60 years, 3 (37.5%) had depression while 5 (62.5%) did not have depression. The association between age group and depression was not statistically significant ($p = 0.433$).

Table 2: Gender and Depression

Out of the total 50 patients, 28 (56%) were males and 22 (44%) were females. Among males, 9 patients (32.1%) had depression while 19 (67.9%) did not have depression. Among females, 12 patients (54.5%) were found to have depression and 10 (45.5%) were without depression. Depression was observed to be more common among female patients compared to males, and the association between gender and depression was statistically significant ($p = 0.042$).

Table 3: Duration of Illness and Depression

Among patients with duration of illness less than 5 years ($n = 20$), 6 patients (30%) had depression while 14 (70%) did not have depression. In contrast, among those with duration of illness ≥5 years ($n = 30$), 15 patients (50%) had depression and 15 (50%) were without depression. Depression was more prevalent among patients with longer duration of chronic illness, and the association between duration of illness and depression was statistically significant ($p = 0.031$).

Table 4: Type of Chronic Illness and Depression

Among the 50 patients, 18 patients had diabetes mellitus, of whom 7 (38.9%) had depression and 11 (61.1%) did not. Among 15 patients with hypertension, 5 (33.3%) had depression while 10 (66.7%) were without depression. In patients with COPD (n = 7), 4 (57.1%) had depression and 3 (42.9%) did not have depression. Among 10 patients with chronic kidney disease, 5 (50%) had depression while 5 (50%) were without depression. However, the association between type of chronic illness and depression was not statistically significant (p = 0.263).

Table 5: Severity of Depression

Among the total 50 patients, 29 patients (58%) did not have depression. Among those with depression, 9 patients (18%) had mild depression, 7 patients (14%) had moderate depression, and 5 patients (10%) had severe depression. Thus, a total of 21 patients (42%) were found to have varying degrees of depression. The distribution of depression severity among the study participants was statistically significant (p = 0.001).

Table 6: Marital Status and Depression

Among the 33 married patients, 15 (45.5%) had depression while 18 (54.5%) did not have depression. Among 11 unmarried patients, 4 (36.4%) had depression while 7 (63.6%) were without depression. Among 6 widowed/divorced patients, 2 (33.3%) had depression while 4 (66.7%) did not have depression. Although depression was slightly more common among married individuals, the association between marital status and depression was not statistically significant (p = 0.521).

Table 7: Socioeconomic Status and Depression

Among patients belonging to the lower socioeconomic status group (n = 19), 10 (52.6%) had depression while 9 (47.4%) did not. In the middle socioeconomic group (n = 22), 8 patients (36.4%) had depression while 14 (63.6%) did not. Among 9 patients in the upper socioeconomic group, 3 (33.3%) had depression while 6 (66.7%) were without depression. Although depression appeared to be more common among patients from lower socioeconomic status, the association between socioeconomic status and depression was not statistically significant (p = 0.284).

DISCUSSION

The present study evaluated the prevalence and clinical correlates of depression among patients with chronic medical illnesses and found that 42% of the participants had depression, with varying degrees of severity. This finding is consistent with several previous studies that have reported a high burden of depression among individuals suffering from chronic medical conditions. A study conducted by Patel V *et al.,* reported that approximately 40–45% of patients with chronic medical disorders experienced depressive symptoms, highlighting the strong association between chronic physical illness and mental health problems [11]. Similarly, Katon WJ *et al.,* observed that depression frequently coexists with chronic diseases such as diabetes, cardiovascular diseases, and respiratory illnesses, and it significantly worsens disease outcomes and quality of life [12].

In the present study, depression was found to be more prevalent among females compared to males, and this association was statistically significant. This observation is in agreement with the findings of Albert PR, who reported that women have nearly twice the risk of developing depression compared to men, particularly in the presence of chronic health conditions and psychosocial stressors [13]. Likewise, Piccinelli M and Wilkinson G demonstrated that female gender is a consistent risk factor for depression across different populations and medical conditions due to biological, hormonal, and social influences [14].

The present study also showed that patients with longer duration of illness (≥5 years) had significantly higher prevalence of depression, suggesting that prolonged disease burden may contribute to psychological distress. Similar findings were reported by Egede LE, who found that individuals with long-standing chronic illnesses such as diabetes and hypertension were more likely to develop depressive symptoms due to prolonged disability, treatment burden, and reduced quality of life [15]. Another study by Clarke DM and Currie KC also emphasized that the chronicity and severity of physical illnesses significantly increase the risk of comorbid depression in affected patients [16].

With respect to age distribution, although depression was slightly more common among patients in the 46–60 years age group, the association between age and depression was not statistically significant in the present study. Comparable results were observed in a study conducted by Moussavi S *et al.,* who reported that depression occurs across all adult age groups in patients with chronic illnesses, and age alone may not be a strong determinant of depressive symptoms [17].

Regarding the type of chronic medical illness, the present study found that depression was relatively higher among patients with COPD and chronic kidney disease, although the association was not statistically significant. Similar observations were made by Chapman DP *et al.,* who reported that chronic conditions involving long-term disability, breathlessness, or functional limitations tend to have higher rates of depressive symptoms [18]. In addition, Naylor C et al. highlighted that individuals with multiple or severe chronic conditions often experience psychological distress, which may manifest as depression and anxiety disorders [19].

The present study also examined the role of socioeconomic status and marital status in the occurrence of depression. Although depression appeared more

common among patients belonging to lower socioeconomic groups, the association was not statistically significant. A similar pattern was observed in a study by Prince M *et al.,* which reported that lower socioeconomic conditions, financial stress, and reduced access to healthcare services may contribute to increased vulnerability to depression among patients with chronic illnesses [20].

Overall, the findings of the present study are consistent with previous research demonstrating that depression is highly prevalent among patients with chronic medical illnesses and is influenced by various demographic and clinical factors such as gender, duration of illness, and socioeconomic conditions. Early identification and management of depression in patients with chronic medical diseases are therefore essential to improve treatment outcomes, enhance quality of life, and reduce the overall burden of disease.

CONCLUSION

The present study highlights that depression is a common psychiatric comorbidity among patients with chronic medical illnesses, with an overall prevalence of 42% observed in the study population. The findings demonstrate that depression occurs across different age groups but was more frequently observed among female patients and individuals with longer duration of illness, indicating the influence of both demographic and clinical factors. Although variables such as socioeconomic status, marital status, and type of chronic illness showed varying trends, they were not statistically significant in the present study. The presence of depression in patients with chronic diseases can adversely affect treatment adherence, recovery, and overall quality of life. Therefore, early identification and timely management of depressive symptoms are essential components of comprehensive healthcare. Routine screening for depression in patients with chronic medical conditions, along with integrated psychiatric and medical care, may help improve clinical outcomes, reduce disease burden, and enhance the overall well-being of affected individuals.

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