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Original Research Article

Retrospective Analysis of Comorbidities in Patients with Anxiety Disorder

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Abstract

Background: Anxiety Disorders (AD) are the most common psychiatric disorders throughout the world and frequently coexist with other psychiatric or medical comorbidities. These comorbidities may worsen symptom severity, lower treatment response, and increase health care utilization, but their prevalence has only been described in outpatient populations.

Methods: A retrospective observational study of 98 patients with anxiety disorder registered between August 2025 and January 2026 in the Psychiatry OPD/IPD. The retrieved patient records for demographic information, anxiety disorder type and duration, psychiatric comorbidities, medical comorbidities and medication history. Comorbidities included psychiatric, cardiovascular, endocrine, respiratory, neurological and substance use. The analysis was performed using SPSS. Descriptive statistics included mean, standard deviation, frequency and percentage, and they were used to compare comorbidities with demographic variables by chi-square test ($p<0.05$ was considered statistically significant).

Results: Of the 98 patients, 72.4% had one comorbid condition or more. Major depressive disorder (38.8%) and hypertension (22.4%) were the most prevalent psychiatric and medical comorbidities, respectively. Psychiatric comorbidities were significantly more common in females, whereas substance use disorders were significantly more frequent in males. Age older than 40 years and duration of the disease longer were significantly related to having more medical comorbidities ($p<0.05$).

Conclusion: Anxiety disorders are commonly comorbid with other psychiatric and general medical conditions. Early diagnosis and coordinated multidisciplinary approach are needed to enhance treatment response, improve prognosis and minimize overall burden of disease.

Keywords: Anxiety disorders, Comorbidity, Depression, Hypertension, Retrospective study, integrated care.

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Introduction

Anxiety disorders constitute one of the most common psychiatric problems globally and involve excessive fear, worry, and behavioral avoidance that is developmentally inappropriate [1]. Anxiety disorders are defined primarily in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), produced by the American Psychiatric Association. These disorders include Generalized Anxiety Disorder (GAD), panic disorder, Social Anxiety Disorder (SAD), specific phobias, separation anxiety and others [2]. The persistence, intensity, and associated functional impairment with these responses separate these conditions from typical stress reactions. Anxiety disorders are highly prevalent, with epidemiological data showing that they impact a significant percentage of the worldwide populace [3]. Hundreds of millions of people globally are estimated to be suffering from anxiety disorders, ranked among the top causes of Years Lived with Disability (YLDs) by the World Health Organization. The lifetime prevalence in community-based studies varies between 10% and 30%, more commonly found in women and younger adults [4,5]. Despite the high prevalence, anxiety disorders are often underdiagnosed and undertreated, especially in low- and middle-income countries with rare mental health resources.

In addition to psychological suffering, anxiety disorders greatly reduce quality of life. Patients are frequently reported to have impaired social function, problems at work, interpersonal difficulties and poor school performance [6]. Regarding healthcare utilization, patients with AD

have increased use of health care services that include a higher probability of ambulatory visits and emergency room consultations as well as more requests for diagnostic tests [7]. This increased burden in healthcare is related to symptoms such as palpitations, gastrointestinal disturbances and headache symptoms that can lead to multiple physician encounters. Anxiety disorders, therefore, are not only a mental health issue, they are also a major public health and economic burden [8].

Comorbidity in Anxiety Disorders: Comorbidity is the presence of two or more diseases in a single individual at the same time or one after the other. Comorbidities are the rule, rather than the exception in anxiety disorders [9]. Psychiatric comorbidities that frequently coexist may comprise Major Depressive Disorder (MDD), substance use disorders, bipolar disorder, and other anxiety-spectrum conditions [10]. The association with psychiatric comorbidity, which makes the diagnosis problematic, determines the therapeutic approach and progression.

Anxiety disorders commonly co-occur with medical illnesses which include hypertension, diabetes mellitus, thyroid dysfunction, cardiovascular disease, asthma and chronic pain syndromes [11]. The association between anxiety and chronic medical illness is bidirectional. On one hand, chronic anxiety could exert an influence on the body by means of physiological alterations involving HPA axis dysfunction, autonomic nervous system hyperactivity, systemic immunological alterations or unhealthy lifestyles like smoking or physical inactivity, leading to medical illness. Alternatively, medical comorbidities may exacerbate or cause anxiety via the psychological stressors of having chronic disease, disability and neurobiological processes.

Early detection of associated diseases is important from a clinical point of view. However, those patients with comorbidity are more likely to suffer from severe symptoms, impaired response to treatment, extended illness duration and increased probability of relapse. An all-encompassing view allows the emergence of an integrated treatment that enhances psychiatric as well as general medical health.

Rationale of the Study: While the co-morbidity in anxiety disorders has been well described by many international studies, few retrospective data have been generated on local and regional hospital levels. Demographic differences, access to care, and sociocultural factors can affect comorbidities. A hospital-based retrospective study is useful for understanding clinical patterns and disease burden. The present study will therefore provide a profile of comorbidity patterns and rates of psychiatric and medical comorbidities in individuals diagnosed with an anxiety disorder over a 6-month period, informing policy and evidence-based integrated clinical care planning.

Objective

- To determine the frequency and clinical profile of comorbidities among patients with anxiety disorder.
- To determine the age and sex distribution of comorbidity among patients.

Materials and Methods

Study Design: The rationale of this study is to investigate the pattern and prevalence of comorbidity condition among patients diagnosed with anxiety disorders in a catchment area-based multicenter approach. By using the retrospective method, they were able to methodologically review and analyze medical records without interference with the patient.

Study Setting: The present study was carried out at the Department of Psychiatry (Outpatient Department and Inpatient Department), in a tertiary health care teaching Hospital. Case records of patients visiting Psychiatry O.P.D/I.P.D between August 2025 and January 2026 were studied. The hospital is a major urban academic teaching center that has a widely heterogeneous urban and semi-urban population, in which all sociodemographic backgrounds are similarly represented.

Study Population: The study sample included 98 patients diagnosed with anxiety disorders in the six months. The diagnosis was verified using the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria of the American Psychiatric Association. Adult men and women patients were enrolled.

Inclusion Criteria

Patients were found eligible if they fulfilled the criterion:

- Age 18 years or older.
- Diagnosed with anxiety disorder based on the DSM-5 criteria.
- Availability of complete and accessible medical information, including clinical observation and work-up documentation.

Exclusion Criteria: Patients were ineligible if there was any missing or incomplete medical record, severe cognitive impairment that affected diagnostic clarity, or a primary diagnosis of a psychotic disorder.

Data Collection: The medical data were collected through the hospitals' patient files according to a structured format. Recorded variables included demographic data (age and gender), type of anxiety disorder, duration of illness, presence of psychiatric

comorbidities, the existence of medical comorbidities and medication history. Comorbidities were determined through recorded clinical diagnoses by treating physicians and corroborated by any available relevant laboratory or diagnostic tests.

Classification of Comorbidities: Comorbidities were dichotomized into major groups for analytical clarity. 48 comorbidities were psychiatric (depressive and anxiety spectrum disorders). Medical comorbidities were sub-divided into cardiovascular (hypertension), endocrine (diabetes mellitus, thyroid disease), respiratory (asthma), and neurological (migraine) and substance abuse disorders.

Statistical Analysis: Data were coded on a Microsoft Excel sheet and analyzed with the help of the SPSS program. The mean, standard deviation, frequencies and percentages were computed. Associations of demographic variables and comorbitidies were analyzed by chi-square test. Statistical significance was set at $p < 0.05$.

Ethical Considerations: The Institutional Ethics Committee approved the study before collecting the data. Patient anonymity has been preserved by deleting identifying information. The later is a retrospective record-based cross-sectional study, and therefore, no patient contact was involved.

Results

Demographic Characteristics: A total of 98 patients registered for anxiety disorders in the study. The average age of the study subjects was 36.4 ± 12.7 years, varying from 18 to 65 years. Age distribution revealed most prevalent age group was 31-40 years – 38.8% followed by 41–50 years-25.5%, then in the group of ages between 18 and 30 (20.4%) and finally those older than fifty (15.3%). There were more women than men, with 60.2% (n=59) of being female and 39.8% (n=39) male.

Table 1: Age Distribution of Study Participants

Age Group (years)	Number of Patients	Percentage (%)
18–30	20	20.4
31–40	38	38.8
41–50	25	25.5
>50	15	15.3
Total	98	100

Table 2: Gender Distribution of Study Participants

Gender	Number of Patients	Percentage (%)
Male	39	39.8
Female	59	60.2
Total	98	100

Distribution of Anxiety Disorders: Among the study sample, GAD was most prevalent, seen in 42 patients (42.9%). Panic disorder were found in 23 patients (23.5%), social anxiety disorder 18 patients (18.4%) and other forms of anxiety disorders such as specific or mixed anxiety disorders-15 patients (15.3%).

Prevalence of Comorbidities: Total 72.4% of patients (n=71) had at least one comorbidity. The rate of psychiatric comorbidities also exceeded that of medical comorbidities. Major depression was the most common psychiatric comorbidity (38.8%), followed by substance use disorder (12.2%), obsessive-compulsive disorder (8.2%) and bipolar disorder (5.1%).

Regarding medical comorbidities, the higher prevalence was observed for hypertension (22.4%), followed by diabetes mellitus (15.3%), thyroid disorder (10.2%), cardiovascular diseases (8.2%), migraine (6.1%) and asthma (5.1%).

Table 3: Prevalence of Psychiatric and Medical Comorbidities

Comorbidity Type	Specific Condition	Number of Patients	Percentage (%)
Psychiatric	Depression	38	38.8
	Substance use disorder	12	12.2
	OCD	8	8.2
	Bipolar disorder	5	5.1
Medical	Hypertension	22	22.4
	Diabetes mellitus	15	15.3
	Thyroid disorders	10	10.2
	Cardiovascular disease	8	8.2
	Migraine	6	6.1
	Asthma	5	5.1

Association Analysis: The chi-square analysis demonstrated that gender associations were significant with patterns of comorbidity. Females presented with more psychiatric comorbidities, especially depression (p=0.03), and males with a somewhat greater prevalence of substance-related disorders (p=0.04). Age stratification revealed that co-morbidities such as diabetes and hypertension were more common among patients older than 40 years (p<0.01). The length of time with anxiety disorder also corresponded to a positive association with comorbidities; patients who had the illness longer than 5 years were significantly more likely to have both psychiatric and medical comorbidities as compared to those having a duration <5 years (p=0.02).

The results of this study demonstrate that comorbidities are common in anxiety disorders, and therefore the importance of accurate screening and integrated treatment strategies should be recognized both in psychiatric and general medical practice.

Discussion

This retrospective study of 98 cases with anxiety disorders showed a high rate of comorbid psychiatric and medical disorders. The comorbidity burden was such that 72.4% of patients had at least one comorbid condition. Major depressive disorder was also the most common psychiatric comorbidity (38.8%) and among other conditions, including substance use disorder (12.2%), obsessive-compulsive disorder (8.2%), and bipolar disorder (5.1%). There was a higher prevalence of hypertension (22.4%), diabetes mellitus (15.3%) and thyroid disorders (10.2%) among the medical comorbidities, and lower rates of cardiovascular disease, migraine and asthma. The demographic characteristics of patients included predominantly females (60.2%) and in the age group 31–40 years (38.8%). Females had more psychiatric comorbidity (especially depression), and males had more substance use disorders. Hypertension and diabetes (as medical comorbidities) were more frequent in patients who were 40 years or older. Moreover, a longer duration of anxiety disorder was associated with greater comorbidity burden, hinting at cumulative effects physiologically and behaviorally over the lifetime.

Comparison with Previous Studies: This results are consistent with the national and international literature. Depression has been described as the most common comorbid psychiatric disorder in patients with anxiety disorders in studies conducted in India and other countries prevalence of 30-45%, which again is similar to the finding (38.8%). The same goes for substance-abuse disorders, which are often present in male patients because of cultural reasons and habits. Physical comorbidities, in particular hypertension and diabetes, are well described among anxiety disorder patients. According to the World Health Organization, other health problems often accompany mental illness and can negatively impact an individual's health status resulting in higher rates of morbidity and utilization of healthcare. The results support this international trend; over a fifth of patients had hypertension as well as diabetes mellitus and in a high prevalence. Compared with previous studies in regionals from which the hospital-based data were derived (which have found that comorbidity patterns are similar to urban and semi-urban populations), this analysis suggests the necessity of including a careful comorbidity diagnosis during a clinical practice.

Table 4: Comparison of Present Study with Previous Studies on Comorbidities in Anxiety Disorders

Study (Author, Year)	Study Type	Sample Size	Key Findings
Present Study	Retrospective hospital-based	98	72.4% patients had ≥1 comorbidity; depression (38.8%) and hypertension (22.4%) most common; females had higher psychiatric comorbidities; age >40 associated with medical comorbidities.
[13] Daly et al., 2021	Randomized, double-blind clinical trial	774	Patients with treatment-resistant depression (TRD) and comorbid anxiety had higher baseline symptom severity; esketamine significantly reduced depressive symptoms in both groups; treatment response was comparable irrespective of anxiety comorbidity.
[14] Peeters et al., 2021	Clinical intervention study	62	Patients with chronic anxiety and comorbid personality disorder showed significant reduction in anxiety severity following schema therapy with exposure and response prevention; improvements observed in maladaptive schema domains and functional outcomes.
[15] Ghaderi et al., 2022	Comparative interventional study	45	Patients with generalized anxiety disorder (GAD) comorbid with depression demonstrated significant reduction in both anxiety and depressive symptoms following integrated CBT and transdiagnostic therapy; integrated CBT showed relatively greater improvement in depressive symptoms.

Pathophysiological Explanation: Many mechanisms could explain the high comorbidity load. Dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis in chronic anxiety can result in chronic cortisol release, and this may contribute to a series of negative health outcomes such as metabolic dysfunctions, hypertension and immune dysfunctions. The theory of inflammation also supports a relationship between anxiety and medical conditions, where increased pro-inflammatory cytokines may mediate cardiovascular and endocrine pathology. Autonomic disturbances, such as heightened sympathetic activity might aggravate not only psychiatric manifestations but also somatic disorders (e.g. hypertension and palpitations). Behavioral risk factors, such as smoking, low levels of physical activity and poor diet, and irregular sleep, accelerate the risk for comorbid conditions in the long term.

Clinical Implications: These results also suggest that the comorbid conditions of patients with ADs should be routinely screened. Psychiatric assessment should involve standardized screening for depression, substance use and other anxiety disorders whereas medical screening should focus on cardiovascular, endocrine, and neurological comorbidities.

A coordinated care effort among psychiatrists, primary care providers, endocrinologists and cardiologists may help to optimize the care of patients. Multidisciplinary care guarantees the mental health symptoms and associated physical conditions are adequately managed at the same time, enhancing the quality of life, while lowering healthcare costs.

Public Health Implications: From a public health perspective, early detection programs are necessary for anxiety disorders and any comorbid condition. Such early recognition and intervention is possible when mental health services are incorporated in primary care, which may be especially valuable in resource-limited settings. Such educational efforts to raise awareness of anxiety disorders and comorbidities could help to decrease stigma and improve service utilization rates. Screening programs among high-risk populations, such as women and elderly patients, may be beneficial in preventing many long-term complications and promoting public health.

Limitations: The limitation of the study's retrospective nature makes it difficult to establish a cause-and-effect relationship between anxiety disorders and comorbidities. Generalization to a larger population may be potentially limited by the small sample size (n=98) and single-center nature of the study. Furthermore, the use of medical records may have led to missing or incomplete data for some variables such as lifestyle factors and laboratory results. Prospective, multi-center, and large-sample studies are needed to confirm and elaborate this discovery.

Conclusion

The current retrospective case study emphasizes the fact that ADs are often associated with several psychiatric and medical comorbidities, with major depressive disorder and hypertension emerging as the most prevalent conditions. The results show that comorbidity is related to demographic variables, specifically age and gender, as well as to the length of time since illness onset, highlighting the reciprocal relationships between mental and physical health. Early recognition of these comorbidities is essential as intervention can prevent worsening of symptoms, optimize response to treatment, and improve quality of life. Systematic screening for both psychiatric and medical conditions should be implemented as part of routine clinical care, particularly in patients with chronic anxiety disorders or those who are at greater risk on the basis of age and sex. Such an approach should be coordinated, involving psychiatric medicine and other relevant disciplines. Psychiatrists, general practitioners and appropriate specialists need to work closely together to achieve this with respect to both mental health care and related physical conditions. These approaches can minimize healthcare utilization and enhance long-term patient outcomes.

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