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Anxiety Disorders in Major Depressive Disorder Patients in a Tertiary Care Hospital in Bangladesh

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Abstract

Anxiety disorders frequently co-occur with major depressive disorder (MDD), potentially complicating clinical presentation and treatment outcomes. Anxiety disorders can exacerbate symptoms and impact the overall quality of life, necessitating comprehensive diagnostic and therapeutic approaches. A cross-sectional study was conducted at the Department of Psychiatry, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, between January and June of 2021, to evaluate the prevalence, features, and severity of anxiety disorders in patients with major depressive disorder. A total of 77 patients with major depressive disorder attending the outpatient department (OPD) of the hospital were enrolled in this study through convenient purposive sampling technique. The severity of anxiety was assessed using the Hamilton Anxiety Rating Scale (HAM-A). Demographic and clinical data was recorded and analyzed. The HAM-A scale indicated that 29.9% of participants had mild anxiety (score ≤17), while 44.2% had mild to moderate anxiety levels (score 18-24). Those who experienced moderate to severe anxiety (score 25-30) comprised 20.8% and 5.2% experienced severe anxiety (score >30). In 46.8% of participants, the anxiety types were identified. Approximately 24.7% were diagnosed with generalized anxiety disorder, while obsessive-compulsive disorder was found in 7.8%, and panic disorder in 5.2% of the cases. Almost half of individuals with major depressive disorder (MDD) may also experience mild to moderate anxiety disorders. Generalized anxiety disorder is the most prevalent, potentially affecting about one-fourth of MDD cases.

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Introduction

A worldwide concern, major depressive disorder (MDD), was the focus of a recent study using a prospective, longitudinal method to understand this issue better. This study found that 72% of people with generalized anxiety disorder (GAD) also experienced co-morbid depression, and 48% of those with depression were similarly diagnosed with GAD.[1] Another report revealed a 46% occurrence of anxious depression among 1,450 outpatients with MDD.[2] The rise in global anxiety prevalence poses a significant risk to public well-being and quality of life.[3] Anxiety disorders can manifest in different ways; for instance, some cases are linked to specific environmental factors, leading to phobias.[4] For some individuals, anxiety can take the form of intense episodic distress, such as in panic disorder.[5] When the prefrontal cortex and amygdala perceive these experiences as threats, they can activate a fight-or-flight response. This reaction often leads to psychophysiological symptoms like dizziness, a rapid heartbeat, and sweating.[6] If not addressed, persistent anxiety may contribute to further health complications, including hypertension, cardiovascular problems, and even dementia.[7,8] Current treatment approaches for anxiety generally combine medication with psychotherapy.[9] Though

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pharmacological treatments can address the physiological responses linked to anxiety, psychological triggers and memories that contribute to anxiety require psychological interventions. Numerous studies indicate that psychotherapies, particularly cognitive behavioral therapy (CBT), offer long-term benefits for those with anxiety disorders.[5,10] Examining disease epidemiology is vital to grasp population trends, including whether anxiety is on the rise, the covariates linked to these changes, and the factors critical for the control and management of anxiety disorders. Worldwide, the significant differences in prevalence rates might reflect a varying distribution of risk factors for anxiety disorders. However, methodological differences, cultural influences, and changes in diagnostic criteria over time likely also contribute significantly to this variability. While epidemiological data exist for numerous countries, a recent global synthesis of this evidence related to anxiety disorders is lacking.[11,12] Variations in how anxiety is reported and documented across different regions can lead to potentially misleading insights regarding its true incidence and the factors that cause these disorders.[13]

Methods

This cross-sectional study that was conducted in the Department of Psychiatry, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, between January and June of 2021. A total of 77 patients with major depressive disorder were enrolled in this study. A convenient purposive sampling method was applied to our sample selection. Each was evaluated for the presence of an anxiety disorder as a psychiatric comorbidity, following ICD-10 guidelines, and anxiety severity was measured with the Hamilton Anxiety Rating Scale (HAM-A).[14] A semi-structured questionnaire covering participant identification, socio-demographic information, and medical histories (current, past, and family) was used for data collection. All relevant demographic and clinical data were documented. Data was collected, compiled, coded and analyzed using MS-Excel sheet. Categorical variables were expressed as frequency and percentage. Data was summarized and presented in tables. The study was approved by the Ethical Review Committee of Community Based Medical College, Bangladesh (CBMC,B), Mymensingh, Bangladesh.

Results

Our study demonstrated that among 77 patients, 54.5% were female, with the majority identifying as Muslim (89.6%). Age distribution revealed that 41.6% of participants belonged to the 31–45 years age group. Educational attainment varied, with 37.7% completing secondary school certificate (SSC) levels and 22.1% achieving graduation or higher. Most participants were married (84.4%), and nearly half (48.1%) were housewives. Urban residents constituted 51.9% of the sample, while 61.0% reported an illness duration of 0-3 months. Joint family structures were predominant (57.1%), with 35.1% having a history of major depressive disorder and 28.6% reporting a family history of psychiatric illness (Table-I). Anxiety severity was evaluated using the Hamilton Anxiety Rating Scale (HAM-A). Mild anxiety (score ≤17) was observed in 29.9% of participants, whereas 44.1% fell into the mild to moderate category (score 18-24). Moderate to severe anxiety (score 25-30) affected 20.8% of the participants, while 5.2% experienced severe anxiety (score >30) (Table-II). In terms of specific anxiety disorders, 24.7% of participants were diagnosed with generalized anxiety disorder, 7.8% with obsessive-compulsive disorder, and 5.2% with panic disorder (Table-III).

Table-I: Sociodemographic characteristics of the patients (n=77)

Characteristics	Frequency	Percentage
Gender		
Female	42	54.5
Male	35	45.5
Religion		
Muslim	69	89.6
Hindu	7	9.1
Christian	1	1.3
Age group (in years)		
<30	16	20.8
31–45	32	41.6
46–60	26	33.8
>60	5	6.5
Education		
Illiterate	6	7.8
Primary	7	9.1
SSC	29	37.7
HSC	18	23.4
Graduate and above	17	22.1
Marital Status		
Married	65	84.4
Unmarried	5	6.5
Divorced	3	3.9
Widowed	4	5.2
Occupation		
Housewife	37	48.1
Unemployed	13	16.9
Farmer	17	22.1
Student	5	6.5
Retired	5	6.5
Area of residence		
Urban	40	51.9
Rural	37	48.1
Duration of illness		
0-3 months	47	61.0
3-6 months	14	18.2
6-12 months	11	14.3
>12 months	5	6.5
Family type		
Joint	44	57.1
Nuclear	29	37.7
Alone	4	5.2
History of MDD		
Positive	27	35.1
Negative	50	64.9
Family history of psychiatric illness		
Positive	22	28.6
Negative	55	71.4

Table-II: Anxiety severity as per HAM-A scale score (n=77)

Characteristics	Frequency	Percentage
≤17	23	29.9
18–24	34	44.1
25–30	16	20.8
>30	4	5.2

Table-III: Types of anxiety disorders (n=77)

Types	Frequency	Percentage
Panic disorder	4	5.2
Agoraphobia	3	3.9
Social Phobia	1	1.3
Obsessive-compulsive	6	7.8
Post-traumatic stress	3	3.9
Generalized anxiety	19	24.7
Undefined	41	53.2

Discussion

Our study found that among 77 patients, most of them were female (54.5%), while males accounted for 45.5%. This aligns with another study that reported females have a 1.5 times greater prevalence of major depressive disorder compared to males, as noted by Munoli *et al.,*[15] where 54% of the participants were female. Regarding age distribution, the largest proportion of the patients (41.6%) was in the 31–45 years age group. Additionally, 33.8%, 20.8%, and 8% of cases were in the 46–60, 31–45, and >60 years age groups, respectively. A similar age distribution was reported in a previous study.[16] In our analysis of educational status, we found that most patients had completed the SSC level, followed by 21% who had completed the HSC level. This is somewhat in line with a previous study that found 28% of individuals had 9-12 years of education.[17] In the present study, we observed that most of our patients were married. This finding is consistent with several previous studies, e.g., Zimmerman *et al.*[18] observed 44.5%

were married, while Thaipisuttikul *et al.*[19] found 53% were married, and Gili *et al.*[20] found 58.3% were married. Additionally, in our study, we found that most patients were from urban areas, a pattern also noted by Reddy & Chandrashekhar in their study.[21] In this study, we found positive family history of psychiatric illness: 35.1% of participants had a history of depressive illness, while 64.9% experienced a first episode of depression. Similarly, a previous study reported that 60% of participants had a first depressive episode.[15] In our current research, we observed that nearly half of the patients experienced mild to moderate anxiety, with 29.9% having mild anxiety, 20% having moderate to severe anxiety, and only 5.2% experiencing severe anxiety. These findings are similar to two previous studies, as reported that most of the patients had moderate anxiety, with only a small number exhibiting severe anxiety.[22,23] In our study, we identified the types of anxiety disorders in 46.8% of participants. Among them, 24.7% had generalized anxiety disorder, 7.8% had obsessive-compulsive disorder, and 5.2% had panic disorder. Howland *et al.* reported that the most prevalent psychiatric comorbidity among depressive patients was an anxiety disorder at 46%.[24] Meanwhile, King-Kallimanis *et al.* found that the prevalence of comorbid anxiety disorder in MDD patients was 60.6% within the 18-64 age group.[25] Regarding anxiety disorders, a previous study identified generalized anxiety disorder as one of the most prevalent forms,[26] which is consistent with the 24.7% prevalence observed in our study. Gunderson *et al.* reported frequent co-occurrence of dysthymic and major depressive disorders,[27] reflecting our findings of anxiety as a common comorbidity in depression. Additionally, Kessler *et al.* noted early onset and high lifetime prevalence rates for depressive and anxiety disorders,[28] which mirrors the predominance of younger patients (31–45 years) in our study. Finally, Shao *et al.* emphasized that factors such as socioeconomic status and comorbidities significantly influence the prevalence of major depressive disorder,[29] which supports our findings, too.

Conclusion

Nearly 50% of individuals with major depressive disorder (MDD) may also encounter mild to moderate anxiety disorders, with generalized anxiety disorder being the most prevalent. Approximately one-fourth of those with MDD might be affected by this condition. It is important to monitor anxiety symptoms in patients with MDD, as combined treatment approaches addressing both depression and anxiety can improve outcomes.

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