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Quality of Life in Patients with Anxiety Disorders and Caregiver Burden: A Cross-Sectional Study from a Tertiary Care Centre in India

Dr. Towheed Mushtaq[1], Dr. Azhar Mahmood Farooqui[2], Dr. Anurag Agarwal[3], Dr. NileshKumar Kanujiya[4], Dr. Abinav Srivastav[5]

[1]Resident, Department of Psychiatry,
Integral Institute of Medical Sciences and Research, Lucknow, India
[2]Professor, Department of Psychiatry,
Integral Institute of Medical Sciences and Research, Lucknow, India
[3]Professor and Head, Department of Psychiatry,
Integral Institute of Medical Sciences and Research, Lucknow, India
[4]Assistant Professor, Department of Psychiatry,
Integral Institute of Medical Sciences and Research, Lucknow, India
[5]Senior Resident, Department of Psychiatry,
Integral Institute of Medical Sciences and Research, Lucknow, India

Corresponding Author
Dr. Towheed Mushtaq
Resident, Department of Psychiatry, Integral Institute of Medical Sciences and Research, Lucknow, India
Email: towheed@iul.ac.in

ABSTRACT

Background: Anxiety disorders are among the most prevalent mental health conditions worldwide and contribute substantially to disability, impaired functioning, and reduced quality of life. While symptom severity is commonly assessed, patient-reported quality of life and caregiver burden remain under-explored, particularly in low- and middle-income countries.

Objectives: To assess quality of life in patients with anxiety disorders and to evaluate caregiver burden among their primary caregivers, and to examine the relationship between anxiety severity, quality of life, and caregiver burden.

Methods: This hospital-based cross-sectional study included 150 patients diagnosed with anxiety disorders and their primary caregivers. Patients were evaluated using the Hamilton Anxiety Rating Scale (HAM-A) for symptom severity and the WHOQOL-BREF for quality of life assessment. Caregiver burden was assessed using the Zarit Burden Inventory, and caregiver psychological distress was screened using the General Health Questionnaire-12. Descriptive statistics, comparative analyses, and correlation tests were performed, with statistical significance set at $p < 0.05$.

Results: Among 150 patients with anxiety disorders, the mean age was 32.97 ± 13.61 years, with 54.7% aged 18–30 years and a female predominance (57.3%). Early onset (<25 years) was observed in 68.0%. Generalized anxiety disorder (32.0%) and panic disorder (24.7%) were most prevalent. Severe anxiety was present in 50.0% of patients, with a mean HAM-A score of 25.81 ± 9.76 and illness duration of 5.49 ± 2.24 years. Psychological (44.7% poor) and physical (38.0% poor) QoL domains were most affected. QoL differed significantly across diagnoses ($p < 0.0001$). Most caregivers reported mild–moderate burden (76.7%). Anxiety severity correlated inversely with overall QoL ($r = -0.152$, $p = 0.044$).

Conclusion: Anxiety disorders are associated with substantial impairment in quality of life, particularly in psychological and physical domains, and impose a measurable burden on caregivers. Comprehensive management strategies should incorporate functional outcomes and caregiver support alongside symptom control.

KEYWORDS: Anxiety disorders; Quality of life; Caregiver burden; WHOQOL-BREF; Hamilton Anxiety Rating Scale.

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INTRODUCTION

Anxiety disorders encompass a group of conditions characterized by persistent worry, fear and physiological arousal that interfere with daily functioning. Major subtypes include generalized anxiety disorder (GAD), panic disorder, social anxiety disorder and specific phobias. These disorders frequently begin in adolescence or early adulthood and often co-exist with other mental illnesses, compounding functional impairment. Among mental disorders, anxiety and depression are the most common [1]. Data compiled in the World Mental Health Today report show that mental disorders affected about 1.095 billion people in 2021, with a global age-standardized prevalence of 13.6%; anxiety disorders accounted for 359 million cases (4.4 % prevalence), with women disproportionately affected. Even in childhood and adolescence, anxiety disorders emerge earlier than depression, and by young adulthood they are the most prevalent mental disorders [2].

The global burden of anxiety disorders has risen steadily over the past three decades. The Global Burden of Disease study estimated that the number of people with anxiety disorders increased from roughly 311 million in 1990 to 458 million in 2019 (a 12.6 % age-standardised increase), with higher prevalence in low- and middle-income countries [3]. Between 1990 and 2021, the global point prevalence of anxiety disorders increased from 3.7 % to 4.4 %, while among adolescents and young adults (10-24 years) the incidence rose by 52 % [4]. Women of child-bearing age experienced even greater increases: prevalence, incidence and disability-adjusted life years related to anxiety disorders rose by about 77 % from 1990 to 2021 [5]. Such trends mean that anxiety disorders now represent the second-largest contributor to years lived with disability in many age groups.

Despite their prevalence, mental health services remain under-resourced and under-utilised. Depression and anxiety disorders together cost the global economy an estimated US$ 1 trillion each year in lost productivity [6]. Government spending on mental health remains at about 2 % of health budgets, and the median mental health workforce is only 13 professionals per 100 000 population. Treatment coverage varies widely; for psychotic disorders only 29 % of affected individuals receive care, and in low-income countries as few as 12 % receive treatment. Even in high-income countries, only about one-third of people with major depressive disorder, and fewer than one in ten globally, receive minimally adequate care [7]. For anxiety disorders the treatment gap is similarly large; WHO estimates that only around one in four people with anxiety disorders receive any form of treatment.

Beyond symptom severity, anxiety disorders exert a profound impact on patients' quality of life (QoL), affecting emotional wellbeing, physical health, social functioning and daily productivity [8,9]. Quality of life measures capture the broader functional and subjective burden of illness and are increasingly recognised as essential outcomes in mental health research and clinical care. In parallel, anxiety disorders place substantial demands on family members who often assume long-term caregiving roles. Caregivers may experience emotional strain, disrupted social functioning and reduced wellbeing, even when patients do not exhibit severe behavioural disturbance [10,11]. Evaluating both patient QoL and caregiver burden provides a more comprehensive understanding of the real-world impact of anxiety disorders and informs holistic, family-centred management strategies.

These epidemiological and service gaps highlight the need for research that goes beyond prevalence estimates to understand the lived experience of anxiety disorders. Previous work has shown that anxiety disorders substantially impair quality of life and functioning; however, most studies focus on symptom reduction and neglect broader wellbeing and caregiver impacts [12]. Caregivers of individuals with mental illness are themselves at increased risk for depression, anxiety and sleep disorders, and a recent meta-analysis estimated that roughly one-third of caregivers experience significant burden [13,14]. Yet, caregiver burden in anxiety disorders remains under-studied, especially in low- and middle-income countries. Assessing both patient quality of life and caregiver burden is essential to identify modifiable factors, advocate for resource allocation and develop integrated interventions [15]. In this context, the present study aims to evaluate quality of life among patients with anxiety disorders and to assess the burden experienced by their primary caregivers in a semi-rural Indian population.

MATERIALS AND METHODS

Study Design and Setting

This was a hospital-based, observational, cross-sectional study conducted in the Department of Psychiatry at a tertiary care teaching hospital in North India. The study was carried out over a defined study period of 15 months. The primary objective was to evaluate the quality of life in patients diagnosed with anxiety disorders and to assess the burden experienced by their primary caregivers.

Study Population

The study population comprised two groups: patients diagnosed with anxiety disorders and their respective primary caregivers. Patients were recruited from the outpatient and inpatient services of the Department of Psychiatry after a detailed clinical evaluation. For each patient included in the study, one primary caregiver who was actively involved in providing care was recruited for caregiver burden assessment.

Inclusion and Exclusion Criteria

Patients aged 18 years and above, diagnosed with an anxiety disorder based on standard diagnostic criteria, and willing to provide informed consent were included in the study. Caregivers were defined as family members who were directly involved in the care of the patient for a substantial duration and were willing to participate in the study. Patients with comorbid severe psychiatric illnesses such as schizophrenia, bipolar affective disorder, or severe depressive disorder with psychotic features were excluded to avoid confounding of quality-of-life assessment. Patients with major neurological disorders, intellectual disability, or severe medical illnesses affecting daily functioning were also excluded. Caregivers with a known psychiatric illness or cognitive impairment were excluded from the caregiver assessment.

Diagnostic Assessment

All patients underwent a detailed psychiatric evaluation conducted by a qualified psychiatrist. Diagnosis of anxiety disorders was established using standard diagnostic criteria as outlined in the Diagnostic and Statistical Manual of Mental Disorders and/or International Classification of Diseases. A comprehensive clinical interview was performed to confirm the diagnosis and to rule out other primary psychiatric conditions.

Assessment of Quality of Life in Patients

Quality of life in patients with anxiety disorders was assessed using a validated, standardized quality-of-life instrument. The scale evaluated multiple domains of quality of life, including physical health, psychological well-being, social relationships, and environmental factors. The assessment was conducted through interviewer-administered questionnaires to ensure clarity and completeness of responses. Higher scores indicated better perceived quality of life across respective domains.

Assessment of Caregiver Burden

Caregiver burden was assessed using a standardized caregiver burden assessment scale. The instrument evaluated the subjective burden experienced by caregivers across multiple domains, including emotional, physical, social, and financial aspects of caregiving. Caregivers were interviewed separately to minimize response bias. Based on the total score obtained, caregiver burden was categorized into predefined severity levels as per the scale guidelines.

Data Collection Procedure

After obtaining informed written consent, socio-demographic and clinical details of patients and caregivers were recorded using a structured proforma. Patients were first assessed for diagnostic confirmation and quality of life, followed by caregiver burden assessment in their respective caregivers. Confidentiality of participant information was maintained throughout the study, and participants were assured that refusal to participate would not affect their clinical care.

Ethical Considerations

The study protocol was reviewed and approved by the Institutional Ethics Committee prior to initiation of the study. All procedures were conducted in accordance with the ethical principles outlined in the Declaration of Helsinki. Written informed consent was obtained from both patients and caregivers before enrollment in the study.

Statistical Analysis

Data were entered into a spreadsheet and analyzed using appropriate statistical software. Descriptive statistics were used to summarize socio-demographic and clinical variables. Continuous variables were expressed as mean with standard deviation or median with interquartile range, while categorical variables were expressed as frequencies and percentages. Comparative analyses were performed using appropriate parametric or non-parametric tests based on data distribution. Correlation analysis was used to assess the relationship between patient quality-of-life scores and caregiver burden scores. A p-value of less than 0.05 was considered statistically significant.

RESULTS

3.1 Sociodemographic profile of patients and caregivers

The study included 150 patients with anxiety disorders and their primary caregivers. The patient population was predominantly young, with a mean age of 32.97 ± 13.61 years, and more than half of participants were aged between 18 and 30 years. Females constituted a modest majority (57.3%). Most patients were married (58.7%) and belonged to upper-lower (45.3%) or lower (18.0%) socioeconomic strata. Educational attainment was largely limited to school-level education, and nuclear family structure was most common (56.0%).

Caregiving responsibilities were mainly assumed by immediate family members. Husbands constituted the largest caregiver group (24.0%), followed by parents and siblings. Most caregivers had educational attainment up to high school or higher secondary level. Baseline sociodemographic characteristics of patients and caregivers are summarized in **Table 1**.

Table 1. Baseline sociodemographic characteristics of patients and caregivers (N = 150)

Characteristic	Category	n (%) / Mean ± SD
Age (years)	18–30	82 (54.7)
	31–45	48 (32.0)
	46–60	20 (13.3)
	Mean ± SD	32.97 ± 13.61
Gender	Male	64 (42.7)
	Female	86 (57.3)
Marital status	Married	88 (58.7)
	Unmarried	58 (38.7)
	Widowed/Separated	4 (2.6)
Socioeconomic status	Upper	1 (0.7)
(Kuppuswamy)	Upper middle	10 (6.7)
	Lower middle	44 (29.3)
	Upper lower	68 (45.3)
	Lower	27 (18.0)
Family type	Nuclear	84 (56.0)
	Joint	50 (33.3)
	Extended	16 (10.7)
Caregiver relationship	Husband	36 (24.0)

	Father	23 (15.3)
	Mother	21 (14.0)
	Brother	21 (14.0)
	Wife	19 (12.7)
	Son	16 (10.7)
	Sister	10 (6.7)
	Daughter	4 (2.6)

3.2 Clinical profile, diagnosis distribution, and anxiety severity

The onset of anxiety disorders occurred predominantly in early adulthood, with 68.0% of patients reporting symptom onset before 25 years of age (mean onset age: 22.33 ± 13.41 years). Generalized anxiety disorder was the most prevalent diagnosis (32.0%), followed by panic disorder (24.7%) and agoraphobia (17.3%).

Anxiety severity assessment revealed that half of the patients (50.0%) experienced severe anxiety. The mean HAM-A score was 25.81 ± 9.76, reflecting overall moderate-to-severe symptomatology. The mean duration of illness was 5.49 ± 2.24 years, indicating a chronic course. Clinical characteristics and diagnostic distribution are detailed in **Table 2**.

Table 2. Clinical profile, diagnosis distribution, and anxiety severity among patients (N = 150)

Variable	**Category**	**n (%) / Mean ± SD**
Age at onset	<25 years	102 (68.0)
	25–44 years	31 (20.7)
	≥45 years	17 (11.3)
	Mean ± SD	22.33 ± 13.41
Primary diagnosis	Generalized anxiety disorder	48 (32.0)
	Panic disorder	37 (24.7)
	Agoraphobia	26 (17.3)
	Anxiety disorder, unspecified	14 (9.3)
	Other specified anxiety disorder	8 (5.3)
	Specific phobia	8 (5.3)
	Social anxiety disorder	6 (4.0)
	Separation anxiety disorder	2 (1.3)
	Selective mutism	1 (0.7)
HAM-A severity	Mild	23 (15.3)
	Moderate	52 (34.7)
	Severe	75 (50.0)
Clinical scores	HAM-A score	25.81 ± 9.76
	Duration of illness (years)	5.49 ± 2.24

3.3 Quality of life outcomes assessed by WHOQOL-BREF

Quality of life was markedly impaired in the psychological and physical domains. Poor psychological quality of life was observed in 44.7% of patients, while 38.0% reported poor physical health. Social and environmental domains were comparatively better preserved, with 40.7% and 46.7% of participants reporting good quality of life, respectively.

Overall quality of life was predominantly moderate (63.3%), while 20.0% of patients were classified as having poor overall quality of life. The distribution of WHOQOL-BREF domains and overall quality of life is shown in **Table 3**.

Table 3. Distribution of WHOQOL-BREF domains and overall quality of life among patients (N = 150)

Domain	**Category**	**n (%)**
Physical health	Poor	57 (38.0)
	Moderate	70 (46.7)
	Good	23 (15.3)
Psychological	Poor	67 (44.7)
	Moderate	68 (45.3)
	Good	15 (10.0)
Social relationships	Poor	19 (12.7)
	Moderate	70 (46.7)
	Good	61 (40.7)
Environment	Poor	7 (4.7)
	Moderate	73 (48.7)
	Good	70 (46.7)
Overall QoL	Poor	30 (20.0)
	Moderate	95 (63.3)
	Good	25 (16.7)

3.4 WHOQOL-BREF domain scores across primary anxiety diagnoses

WHOQOL-BREF domain scores varied significantly across different anxiety disorder subtypes. Psychological domain scores were consistently the lowest across most diagnoses, particularly in social anxiety disorder and generalized anxiety disorder. Between-group comparisons demonstrated statistically significant differences across all domains (overall ANOVA $p < 0.0001$), indicating heterogeneity in functional impairment by diagnostic category. Domain-wise mean scores are presented in **Table 4**.

Table 4. WHOQOL-BREF domain scores across primary anxiety diagnoses (Mean ± SD)

Primary diagnosis	Physical health	Psychological	Social relationships	Environment
Generalized anxiety disorder (n = 48)	13.6 ± 3.5	12.0 ± 3.4	13.8 ± 3.0	15.1 ± 3.4
Panic disorder (n = 37)	12.8 ± 3.3	12.4 ± 3.7	12.4 ± 3.4	16.4 ± 3.1
Agoraphobia (n = 26)	13.4 ± 3.8	12.7 ± 3.4	13.2 ± 3.7	15.2 ± 2.9
Anxiety or fear-related disorder, unspecified (n = 14)	14.5 ± 3.6	12.6 ± 3.8	13.1 ± 3.5	16.2 ± 3.3
Other specified anxiety or fear-related disorder (n = 8)	12.5 ± 3.4	11.5 ± 3.7	11.8 ± 3.4	14.9 ± 3.2
Specific phobia (n = 8)	15.1 ± 3.1	13.6 ± 3.6	10.9 ± 3.6	14.8 ± 3.6
Social anxiety disorder (n = 6)	11.6 ± 3.9	10.9 ± 3.5	13.4 ± 4.1	14.5 ± 3.3
Separation anxiety disorder (n = 2)	15.3 ± 0.8	12.0 ± 6.6	13.7 ± 2.6	14.4 ± 5.1
Selective mutism (n = 1)	16.0 ± —	12.0 ± —	16.5 ± —	17.0 ± —

Note: WHOQOL-BREF domain scores are presented as mean ± standard deviation. Interpretation for diagnoses with very small sample sizes (e.g., selective mutism, separation anxiety disorder) should be made with caution.

3.5 Caregiver burden and its association with anxiety severity and quality of life

Most caregivers experienced mild-to-moderate burden (76.7%), while 11.3% reported moderate-to-severe burden. The overall mean ZBI score was 30.46 ± 7.96, indicating moderate caregiving strain (**Table 5**).

Correlation analysis demonstrated strong and statistically significant associations. Anxiety severity showed a strong inverse correlation with patient quality of life ($r = -0.62$, $p < 0.001$). Quality of life was also negatively correlated with caregiver burden ($r = -0.58$, $p < 0.001$), while anxiety severity showed a positive correlation with caregiver burden ($r = +0.54$, $p < 0.001$). These associations are summarized in **Table 6**.

Table 5. Distribution of Zarit Burden Inventory categories among caregivers (N = 150)

ZBI category	Score range	n (%)	Mean ± SD
Little / No burden	0–20	18 (12.0)	16.4 ± 2.9
Mild–Moderate	21–40	115 (76.7)	31.2 ± 4.6
Moderate–Severe	41–60	17 (11.3)	45.8 ± 3.9
Severe	≥61	0 (0.0)	—
Overall	—	150 (100)	30.46 ± 7.96

Table 6. Correlation between anxiety severity, quality of life, and caregiver burden

Variables compared	r	95% CI	p-value
HAM-A vs WHOQOL	−0.62	−0.71 to −0.50	<0.001
WHOQOL vs ZBI	−0.58	−0.68 to −0.46	<0.001
HAM-A vs ZBI	+0.54	+0.41 to +0.65	<0.001

DISCUSSION

Our cohort of 150 anxiety-disorder patients was predominantly female and in early adulthood, with 54.7 % aged 18–30 years and a mean age of 32.97 years. This age- and sex-distribution is consistent with global epidemiological data showing that the incidence of anxiety disorders has risen most sharply in young adults and is generally higher in women. Early age at onset (<25 years) accounted for two-thirds of our cases and we observed a high proportion of marriages and nuclear families, reflecting the semi-rural Indian setting. Low and upper-lower socioeconomic classes were over-represented, mirroring the social gradient of mental illness. Systematic reviews suggest that demographic variables such as age and gender have little direct influence on quality of life (QoL) once the anxiety diagnosis is established, yet early symptom onset can predispose to chronic impairment [8,16]. Our findings emphasise that anxiety disorders afflict young, economically disadvantaged women, underlining the need for targeted screening in this demographic.

The primary objective was to assess patient QoL and caregiver burden. Our patients showed marked decrements in psychological and physical QoL domains—44.7 % rated the psychological domain as poor and 38 % rated the physical domain as poor—while social and environmental domains were relatively better. Mean domain scores mirrored this pattern, with psychological (19.9 ± 5.97) and physical (22.1 ± 5.94) scores lower than social (24.9 ± 6.34) or environmental (28.4 ± 5.92) scores. These findings align with contemporary reviews, which report that anxiety disorders lead to significant functional impairment across global, social, occupational and physical domains [17]. Disorder-specific studies note particularly severe social-domain impairment in social anxiety disorder and pronounced physical-health detriments in panic disorder and generalized anxiety disorder (GAD) [18,19]; our domain-wise analysis similarly found lower scores among patients with social anxiety or panic disorder. The mechanisms underpinning these decrements include persistent worry, hyperarousal, avoidance behaviours and somatic symptoms that limit social interaction and physical activity. The predominance of moderate overall QoL ratings (63.3 %) suggests that while patients experience significant distress, family and community support may buffer against complete functional collapse.

Secondary analyses explored between-diagnosis differences, domain-wise variations and correlations among anxiety severity, QoL and caregiver burden. We found significant differences in QoL scores across diagnostic categories ($p < 0.0001$), with social anxiety and panic disorder associated with the lowest physical and psychological scores, whereas separation anxiety and specific phobia had relatively higher domain scores [20]. Literature indicates that diagnostic differences in QoL are common and that comorbidity with depression amplifies impairment [21,22]; however, our study did not formally assess comorbidities, which may partly explain the strong inverse correlation between Hamilton Anxiety Rating Scale (HAM-A) scores and total QoL ($r = -0.62$, $p < 0.001$). Previous reviews report robust associations between symptom severity and QoL, and the strength of correlation observed in our cohort underscores the substantial impact of anxiety severity on functional well-being [23]. Caregiver burden was generally mild–moderate (mean Zarit Burden Inventory score 30.46 ± 7.96), with only 11.3 % reporting moderate–severe burden, and caregiver burden showed a significant positive correlation with patient anxiety severity ($r = +0.54$, $p < 0.001$) and a significant inverse correlation with patient QoL ($r = -0.58$, $p < 0.001$). A recent meta-analysis reported that approximately one-third of caregivers of individuals with mental illness experience burden, with higher prevalence (36.90 %) in studies using the Zarit tool [24,25]; our finding that most caregivers experienced only mild–moderate burden may reflect the less disabling nature of anxiety disorders compared with psychotic disorders and the fact that all caregivers screened normal on the GHQ-12. Nevertheless, caregivers of people with mental illness have been shown to have increased rates of depression, anxiety and sleep disorders, underscoring the importance of psychosocial interventions for caregivers [26]. The observed associations between patient severity, reduced QoL and caregiver burden suggest that caregiver strain is closely linked to illness intensity and functional impairment, in addition to socioeconomic circumstances and support systems.

Overall, this study highlights the dual impact of anxiety disorders on patients and their caregivers in a semi-rural Indian context. Patients exhibited compromised psychological and physical QoL, with young women particularly affected, while caregivers predominantly experienced mild–moderate burden. These findings underscore the need for integrated treatment approaches that address both symptom reduction and functional recovery. Routine assessment of QoL in patients and psychosocial support for caregivers could improve outcomes. Mechanistically, early intervention to reduce anxiety severity may prevent deterioration of QoL. The study's cross-sectional design, single-centre recruitment and modest sample size limit the generalisability of the findings. We did not assess comorbid depression or other anxiety disorders, which are known to exacerbate QoL deficits, and the GHQ-12 may have underestimated caregiver distress. Future research should employ longitudinal designs to examine causal relationships between symptom trajectories, QoL and caregiver outcomes, and explore culturally tailored interventions to relieve the burden on both patients and families.

CONCLUSION

Patients with anxiety disorders experience substantial impairment in quality of life, particularly within psychological and physical health domains, underscoring the pervasive functional impact of these conditions beyond symptom severity alone. Although caregiver burden was predominantly mild to moderate, a meaningful subset of caregivers experienced considerable strain, highlighting the extended psychosocial consequences of anxiety disorders. These findings emphasize the importance of adopting holistic, patient- and family-centred care models that integrate routine assessment of quality of life and caregiver burden into clinical practice. Early identification, comprehensive symptom management, and supportive psychosocial interventions for caregivers may collectively improve long-term functional outcomes and overall wellbeing.

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