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Original Research Article

A Comparative Study of Sociodemographic Correlates and Quality of Life of Caregiver of Patients of Schizophrenia and Bipolar Affective Disorder

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Abstract

Background: Mental health disorders, such as schizophrenia and bipolar affective disorder (BPAD), impose significant burdens on patients and their caregivers. Schizophrenia is characterized by psychotic symptoms and cognitive decline, while BPAD involves episodic mood fluctuations. Both conditions require long-term caregiving, often leading to emotional, physical, and financial strain on family members. Despite the critical role of caregivers, their quality of life (QoL) remains understudied. This study aimed to compare the sociodemographic profiles of patients with schizophrenia and BPAD and assess the QoL of their caregivers.

Materials & Methods: A cross-sectional study was conducted over 16 months at a tertiary care psychiatric centre, involving 120 participants (60 schizophrenia and 60 BPAD patients) and their primary caregivers. Caregivers were assessed using the WHOQOL-BREF questionnaire, while patient symptom severity was measured using PANSS (schizophrenia), YMRS, and HAM-D (BPAD). Statistical analysis included chi-square tests, independent t-tests, and correlation analyses.

Results: Sociodemographic analysis showed no significant differences between schizophrenia and BPAD patients except for illness duration ($p=0.002$), with BPAD patients having longer illness durations. Caregiver QoL did not differ significantly between groups across physical, psychological, social, and environmental domains. However, illness duration negatively correlated with psychological QoL in both groups (schizophrenia: $r=-0.226$, $p=0.013$; BPAD: $r=-0.220$, $p=0.018$). Negative symptoms in schizophrenia (PANSS-N) were linked to poorer environmental QoL ($r=-0.265$, $p=0.04$), while depressive symptoms in BPAD (HAM-D) correlated with worse psychological QoL ($r=-0.360$, $p=0.027$).

Conclusion: Caregivers of schizophrenia and BPAD patients experience similar QoL challenges, though symptom-specific burdens exist. Longer illness duration worsens psychological well-being, highlighting the need for targeted caregiver support programs. Interventions should address chronicity, symptom management, and psychosocial support to improve caregiver resilience and mental health outcomes.

Keywords: Schizophrenia, Bipolar Affective Disorder, Quality of Life (QoL), WHOQOL-BREF, PANSS, YMRS, HAM-D.

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Introduction

A mental disorder is defined as a clinically significant disturbance in behaviour, emotions, or thought processes. According to the ICD-11, it includes mental illnesses, psychosocial impairments, and other mental states associated with distress, functional impairment, or risk of self-harm [1].

Mental health disorders are major global challenges, significantly affecting individuals and their families. Schizophrenia and bipolar affective disorder (BPAD) are two of the most prevalent and disabling psychiatric conditions. Schizophrenia is a chronic and severe disorder marked by delusions, hallucinations, cognitive impairments, and functional decline. It affects about 24 million people worldwide—approximately 1 in 300 individuals, or 1 in 222 adults [2].

Globally, nearly 970 million people suffer from mental illnesses, with anxiety and depression being the most common. According to WHO, schizophrenia, bipolar disorder, depression, and alcohol use disorders are major contributors to years lived with disability. Similarly, a meta-analysis across 59 countries from 1980 to 2013 found a lifetime mental illness prevalence of 29.2% in adults aged 16–65 [3].

Schizophrenia often begins in early adulthood and is characterized by alternating periods of symptom exacerbation and remission. Its persistent cognitive and functional impairments impact relationships, employment, and daily functioning, often necessitating ongoing caregiving by family members [4].

BPAD is a lifelong mood disorder featuring extreme mood fluctuations between mania and depression. Manic episodes involve elevated mood, high energy, and impulsivity, while depressive episodes lead to sadness and fatigue. It usually begins in late adolescence or early adulthood and affects about 40 million people globally (as of 2019)3. Although BPAD allows for symptom-free intervals, its unpredictability adds complexity to caregiving, as support needs vary with mood episodes [5].

Both disorders impose substantial emotional, physical, and psychological burdens on caregivers, highlighting the need for comprehensive support systems.

Caregiving for Individuals with Severe Psychiatric Disorders: A caregiver is typically a family member who has lived with the patient for over a year and is actively involved in their daily life, medical care, and social support. With the deinstitutionalization of psychiatric care, the role of caregivers has become central, especially in countries like India where family systems are close-knit. Caregivers provide emotional, financial, and functional support to patients with mental illnesses [6,7].

Family caregivers act as vital links between patients and mental health professionals. Their responsibilities include ensuring medication adherence, scheduling regular follow-ups, recognizing early signs of relapse, and seeking timely medical intervention. While familial caregiving often arises from a sense of kinship duty, it can become burdensome when the care dynamics become unbalanced and one member bears disproportionate responsibility [8,9].

The main caregiver is usually a close relative from the patient's informal support network who devotes most of their time to caregiving without financial compensation. This ongoing, unpaid role often leads to stress, hardship, and emotional strain for families. An Indonesian study showed that 66.7% of caregivers experienced moderate stress, 23.1% severe stress, and 10.3% mild stress, highlighting the emotional toll [10]. Caregiving challenges vary depending on the psychiatric condition, illness severity, and available support systems. Caregivers of individuals with schizophrenia may deal with psychotic episodes, treatment adherence, and societal stigma—factors that can lead to emotional and social isolation.

In bipolar disorder, the episodic nature of manic and depressive states creates fluctuating caregiving demands. Manic phases involve managing impulsivity and risky behaviour, while depressive phases require motivating the patient and ensuring engagement in daily life [11,12].

The unpredictability of both disorders places caregivers under continuous stress, emphasizing the need for adequate coping strategies and support systems [13,14].

Quality of Life for Caregivers: Quality of life (QoL) refers to a person's subjective sense of well-being. The World Health Organization defines it as "a person's view of their place in life in relation to their goals, expectations, standards, and concerns, within their cultural and value context." QoL of patients and families is often used as an indicator to evaluate healthcare outcomes [15,16].

The latest definition includes physical, mental, and social well-being as perceived by individuals, covering domains such as health, relationships, finances, self-esteem, belongingness, and trust [17,18].

Caregiver stress arises from the psychological burden of fulfilling physical, emotional, and mental demands. It is influenced by:

- **Nature of the patient's condition**: Severe or fluctuating symptoms demand more effort.
- **Caregiver's mental health**: Pre-existing anxiety or depression can heighten stress.
- **Resources and support**: Availability of professional help and social networks helps reduce stress.

Financial strain due to lost productivity and high medical costs can worsen caregiver poverty. Social stigma, strained relationships, and isolation also add to caregiver distress, increasing anxiety and depression levels. These changes significantly affect the caregiver's QoL [19,20]. Caregiver QoL reflects the care quality given to patients and can influence patient outcomes. Despite caregivers' vital role, little is known about their QoL [21,22]. Understanding caregiver QoL helps health professionals and policymakers create supportive interventions tailored to their needs [23,24].

Factors influencing caregiver QoL: Physical health, social support, Resilience and coping ability, Financial stability [25,26].

Rationale of the Study: Caregiving for individuals with chronic mental illnesses, such as schizophrenia and bipolar disorder, places a significant emotional, financial, and social burden on family members. Caregivers of people with schizophrenia often deal with long-term symptom exacerbations, hospitalizations, and patient withdrawal, leading to prolonged caregiving roles that disrupt their own lives. In contrast, bipolar disorder involves unpredictable mood swings—mania requires close supervision, while depression leads to patient apathy—creating fluctuating caregiving demands.

These distinct illness patterns result in varied caregiver experiences in terms of stress, burden, and quality of life. Caregivers frequently report emotional exhaustion, social isolation, and limited personal freedom. With limited support systems, their physical and mental health can deteriorate, increasing the risk of anxiety and depression.

Given the profound impact of caregiving, it is vital to assess and compare the unique challenges faced by caregivers of individuals with schizophrenia and bipolar disorder to inform better-targeted support and interventions.

This study aims to compare the Demographic correlates and quality of life of caregivers of patients with schizophrenia and bipolar affective disorder.

Materials and Methods

This comparative observational study used a cross-sectional design and was conducted over 16 months, from January 2024 to April 2025, at the Psychiatry Centre of SMS Medical College and its affiliated hospitals in Jaipur. It involved patients diagnosed with schizophrenia and bipolar affective disorder (BPAD), along with their primary caregivers.

Selection Criteria for Caregivers: Included caregivers were of either sex, aged 30–60 years, living with the patient for at least five years, actively involved in daily care, and literate or able to understand Hindi or English. They had to provide written informed consent and be caring for a patient with an illness duration of at least one year, attending regular outpatient follow-ups. Exclusion criteria included any chronic physical or psychiatric illness, being a professional caregiver (e.g., home nurse), caregiving for a patient with documented medical comorbidities, or having another family member with a chronic psychiatric disorder in the same household.

Selection Criteria for Patients: Patients were aged 18–60 years, of either sex, diagnosed as per ICD-10 with schizophrenia or BPAD, and had an illness duration of over one year. Participants needed to understand Hindi or English. Those with psychiatric comorbidities (other than nicotine or tobacco use) or major physical illnesses were excluded.

Sample Size and Sampling Technique: The study comprised 120 participants—60 with schizophrenia and 60 with BPAD. The sample size was determined using a 95% confidence interval and 80% power to detect a minimum physical domain transformed score difference of 66.79 ± 14.5480, based on a prior study (PMID: 34908686). Convenience sampling was used, and efforts were made to match both groups by age and gender.

Study Plan and Methodology: Participants were selected from the Psychiatry Centre OPD after applying the inclusion/exclusion criteria. Diagnoses were made per ICD-10 [27], and informed consent was taken.

Data collection included socio-demographic and clinical profiles. WHOQOL-BREF [28] questionnaire was applied to assess quality of life among caregivers. For patients, schizophrenia symptom severity was measured with the PANSS [29], while BPAD symptom severity was assessed using YMRS [30] and HAM-D [31].

Statistical Analysis: A quantitative approach was employed using SPSS 23.0. Descriptive statistics included frequencies, means, and standard deviations. Inferential analysis included correlation tests and independent t-tests for Likert scale data, and chi-square tests for categorical data, enabling generalization to the broader population.

Ethical Considerations: Participants were informed about the study's purpose, and written consent was obtained. Participation was voluntary, with the right to withdraw. Data confidentiality was maintained, and the study received ethical clearance from the Institutional Ethical Committee of SMS Medical College.

Tools Used: The tools employed in the study included a structured consent form to ensure voluntary and informed participation, along with socio-demographic and clinical profile proformas to document relevant background and clinical details of the participants.

World Health Organization Quality of Life - BREF version (WHOQOL-BREF) [28] was used to assess the subjective quality of life of participants across four domains—physical, psychological, social, and environmental. For evaluating psychopathology in patients, the Positive and Negative Syndrome Scale (PANSS)29 was administered to assess the severity of symptoms in schizophrenia, while the Young Mania Rating Scale (YMRS)30 was utilized to measure manic symptoms in individuals with bipolar affective disorder. Additionally, the

Hamilton Depression Rating Scale (HAM-D) [31] was used to evaluate the severity of depressive symptoms, particularly in the depressive phase of bipolar disorder.

Outcome Variables: Main outcomes assessed were Patient and Caregivers Demographic profiles, Caregiver quality of life, and patient clinical profiles for schizophrenia and BPAD.

Observations and Results

Table 1: Sociodemographic details of the patients having schizophrenia and bipolar affective disorder

Variable	Schizophrenia, N (%)	BPAD, N (%)	Chi Square Test	P - Value
Age Range				
< 20 Years	5 (62,5)	3 (37.5)	1.164	0.885 (NS)
20 - 29 Years	17 45.9)	20 (54.1)		
30 - 39 Years	15 (55.6)	12 (44.4)		
40 - 49 Years	9 (47.4)	10 (52.6)		
>= 50 Years	14 (48.3)	15 (51.7)		
Sex				
Female	28 (53.8)	24 (46.2)	0.543	0.461 (NS)
Male	32 (47.1)	36 (52.9)		
Marital Status				
Divorced	11 (47.8)	12 (52.2)	1.525	0.677 (NS)
Married	19 (44.2)	24 (55.8)		
Unmarried	23 (57.5)	17 (42.5)		
Widower	7 (50.0)	7 (50.0)		
Education				
Pre Primary (No Formal or Nursery Education)	12 (40.0)	18 (60.0)	1.952	0.582 (NS)
Primary (Class 1 - 5 Completed Education)	8 (47.1)	9 (52.9)		
Upper Primary (Class 6 - 8 Completed Education)	26 (54.2)	22 (45.8)		
Secondary (Class 9 - 12 Completed Education)	14 (56.0)	11 (44.0)		
Occupation				
Employed	32 (49.2)	33 (50.8)	0.034	0.855 (NS)
Unemployed	28 (50.9)	27 (49.1)		
Religion				
Hindu	44 (42.3)	60 (57.7)	4.429	0.741 (NS)
Muslim	16 (100)	0 (0.0)		
Family Type				
Joint Family	22 (62.9)	13 (37.1)	3.937	0.14 (NS)
Nuclear Extended Family	22 (48.9)	23 (51.1)		
Nuclear Family	16 (40.0)	24 (60.0)		
Locality (Domicile)				
Rural	26 (47.3)	29 (52.7)	0.302	0.583 (NS)
Urban	34 (52.3)	31 (47.7)		
Monthly Income of Family				
1000 - 3000	11 (42.3)	15 (57.7)	1.514	0.469 (NS)
4000 - 6000	25 (56.8)	19 (43.2)		
> 6000	24 (48.0)	26 (52.0)		
Age of Onset (Years)				
14 - 25	24 (53.3)	21 (46.7)	0.569	0.706 (NS)
26 - 37	21 (51.2)	20 (48.8)		
>= 38	15 (44.1)	19 (55.9)		
Duration of Illness (Years)				
2 -5	33 (66.0)	17 (34.0)	21.102	0.002 (S)
6 - 9	12 (57.1)	9 (42,9)		
10 - 14	15 (30.6)	34 (69.4)		

The table summarize the sociodemographic characteristics of patients diagnosed with schizophrenia and bipolar affective disorder (BPAD), comparing variables such as age, sex, marital status, education, occupation, religion, family type, locality, monthly family income, age of onset, and duration of illness. Chi-square tests were applied to determine the statistical significance of differences between the two groups.

Age distribution showed no significant difference (p = 0.885), with both groups spread across all age ranges. Sex-wise, schizophrenia had slightly more females (53.8%), whereas BPAD had more males (52.9%), but this was not statistically significant (p = 0.461). Marital status also showed no significant variation (p = 0.677), with a relatively even distribution of married, unmarried, divorced, and widowed individuals in both groups. In terms of education, most patients had upper primary or secondary education, with no significant difference (p = 0.582). Employment status was nearly equally divided between employed and unemployed in both groups (p = 0.855). Regarding religion, all 16 Muslim patients belonged to the schizophrenia group, while BPAD had none, but this difference was not statistically significant (p = 0.741). Family type and locality also showed similar distributions, with more patients from joint and nuclear families and both rural and urban areas (p = 0.14 and p = 0.583, respectively). Monthly family income and age of onset did not differ significantly either (p = 0.469 and p = 0.706, respectively).

However, a significant difference was found in the duration of illness (p = 0.002). Most schizophrenia patients had illness duration between 2–5 years, while BPAD patients had longer durations, particularly 10–14 years. This was the only variable showing a statistically significant difference between the two groups, indicating differing chronicity patterns.

Table 2: Sociodemographic details of the caregivers of patients having schizophrenia and bipolar affective disorder

Variable	**Schizophrenia, N (%)**	**BPAD, N (%)**	**Chi Square Test**	**P - Value**
Relationship with Patient				
Parents	25 (75.8)	8 (24.2)	2.154	0.634 (NS)
Siblings	13 (52.0)	12 (48.0)		
Spouse	22 (43.1)	29 (56.9)		
Children	0 (0.0)	11 (100)		
Age Range of Caregivers (Years)				
20 - 29 Years	8 (50.0)	8 (50.0)	0.51	0.917 (NS)
30 - 39 Years	16 (55.2)	13 (44.8)		
40 - 49 Years	21 (46.7)	24 (53.3)		
>= 50 Years	15 (50.0)	15 (50.0)		
Sex				
Female	28 (46.7)	32 (53.3)	0.533	0.465 (NS)
Male	32 (53.3)	28 (46.7)		
Education				
Pre Primary (No Formal or Nursery Education)	16 (53.3)	14 (46.7)	9.35	0.53 (NS)
Primary (Class 1 - 5 Completed Education)	16 (51.6)	15 (48.4)		
Upper Primary (Class 6 - 8 Completed Education)	15 (42.9)	20 (57.1)		
Secondary (Class 9 - 12 Completed Education)	6 (35.3)	11 (64.7)		
Tertiary (Diploma, Bachelors, Masters, Doctoral Education)	7 (100)	0 (0.0)		
Marital Status				
Married	33 (44.6)	41 (55.4)	7.341	0.732 (NS)
Unmarried	12 (38.7)	19 (31.3)		
Widower	15 (100)	0 (0.0)		
Occupation				
Employed	40 (52.6)	36 (47.4)	0.574	0.449 (NS)
Unemployed	20 (45.5)	24 (54.5)		
Family Type				
Joint Family	23 (62.2)	14 (37.8)	3.337	0.189 (NS)
Nuclear Extended Family	16 (42.1)	22 (57.9)		
Nuclear Family	21 (46.7)	24 (52.3)		
Duration of Stay with Patient				
5 - 9 Years	12 (46.2)	14 (53.8)	0.956	0.268 (NS)
10 -14 Years	9 (52.9)	8 (47.1)		
15 - 19 Years	12 (52.2)	11 (47.8)		
> = 20 Years	27 (50.0)	27 (50.0)		

The table present the sociodemographic profile of caregivers of patients with schizophrenia and bipolar affective disorder (BPAD), including relationship to the patient, age, sex, education, marital status, occupation, family type, and duration of stay. Chi-square tests were used to assess differences between groups.

Relationship with Patient: Most schizophrenia caregivers were parents (75.8%), while most BPAD caregivers were spouses (56.9%). No significant difference was found (p = 0.634).

Age Range: Caregivers were mostly in the 40–49 age group in both schizophrenia (46.7%) and BPAD (53.3%) categories (p = 0.917).

Sex: Schizophrenia caregivers included 46.7% females and 53.3% males; BPAD caregivers included 53.3% females and 46.7% males (p = 0.465).

Education: Schizophrenia caregivers had a higher percentage with no or nursery education (53.3%) compared to BPAD (46.7%). BPAD caregivers had more upper primary education (57.1%) than schizophrenia caregivers (42.9%) (p = 0.53).

Marital Status: Most caregivers in both groups were married (p = 0.732).

Occupation: Employment was slightly higher in schizophrenia caregivers (52.6%) vs. BPAD (47.4%) (p = 0.449).

Family Type: Joint families were more common among schizophrenia caregivers (62.2%), while nuclear extended families were more common in BPAD (42.1%) (p = 0.189).

Duration of Stay: 50% of caregivers in both groups had stayed with the patient for 20+ years (p = 0.268).

Table 3: Comparison of Quality of Life among Caregiver of Patients of schizophrenia and bipolar affective disorder

WHO-QOL BREF Domains	Caregiver of schizophrenia Patients	Caregiver of BPAD Patients	Independent t Test	P Value	Significance
WHO-QOL BREF - PH	39.95 ± 13.89	39.95 ± 15.10	0.00	1.00	NS
WHO-QOL BREF - PSY	37.52 ± 12.61	37.82 ± 15.40	- 0.117	0.94	NS
WHO-QOL BREF - SR	27.07 ± 13.08	29.25 ± 13.24	- 0.909	0.36	NS
WHO-QOL BREF - EN	36.58 ± 17.13	33.00 ± 10.61	0.137	0.17	NS

The table presents a comparative analysis of WHOQOL-BREF domains between caregivers of patients with schizophrenia and BPAD reveals no statistically significant differences in quality of life across all domains. In the Physical Health (PH) domain, both groups reported an identical mean score of 39.95, with standard deviations of ±13.89 for schizophrenia caregivers and ±15.10 for BPAD caregivers. The t-value was 0.00, and the p-value was 1.00, indicating absolutely no difference (0%) in perceived physical health quality of life between the two groups. In the Psychological (PSY) domain, caregivers of BPAD patients reported a slightly higher mean score of 37.82 compared to 37.52 among schizophrenia caregivers—a negligible difference of 0.3 points (less than 1%), with a t-value of -0.117 and a p-value of 0.94, confirming no significant difference in psychological well-being. The Social Relationships (SR) domain showed a modest difference, with BPAD caregivers reporting a mean score of 29.25 compared to 27.07 in schizophrenia caregivers—an increase of 2.18 points (~8%). However, the difference was not statistically significant (t = -0.909, p = 0.36), indicating that both groups face similar levels of social support and relationship challenges. In the Environment (EN) domain, schizophrenia caregivers scored higher (36.58) than BPAD caregivers (33.00), a difference of 3.58 points (~10.8%), but this too was not statistically significant (t = 0.137, p = 0.17). This suggests some variability in perceived environmental quality (e.g., safety, access to services), but not enough to confirm a real group-level difference.

Table 4: Comparison of Correlation of WHO QOL- PH, PSY, SR, EN with Age of patients, Age of Caregiver, Duration of Illness and Duration of Caregiving among Caregivers of Patients of Schizophrenia and BPAD

Name of Variable	Correlation Coefficient of Caregiver of Schizophrenia Patient	P - Value	Correlation Coefficient of Caregiver of BPAD Patient	P - Value	Significance
Age of the Patients					
With WHO QOL- PH	0.078	0.395	0.063	0.312	NS
With WHO QOL- PSY	0.099	0.283	0.091	0.132	NS
With WHO QOL- SR	-0.156	0.088	-0.127	0.097	NS
With WHO QOL- EN	-0.102	0.267	-0.121	0.260	NS
Age of the Caregiver					
With WHO QOL- PH	-0.088	0.337	-0.078	0.241	NS
With WHO QOL- PSY	0.02	0.829	0.01	0.794	NS
With WHO QOL- SR	0.017	0.852	0.019	0.654	NS
With WHO QOL- EN	0.098	0.287	0.090	0.208	Ns
Duration of Illness					
With WHO QOL- PH	0.04	0.668	0.06	0.703	NS
With WHO QOL- PSY	-0.226	0.013	-0.22	0.018	**Significant**
With WHO QOL- SR	0.016	0.86	0.026	0.860	NS
With WHO QOL- EN	-0.137	0.137	-0.131	0.102	NS
Duration of Stay					
With WHO QOL- PH	0.078	0.396	0.038	0.325	NS
With WHO QOL- PSY	-0.098	0.287	-0.091	0.204	NS
With WHO QOL- SR	-0.106	0.25	-0.112	0.394	NS
With WHO QOL- EN	0.163	0.076	0.123	0.109	NS

The table presents a correlation analysis between WHOQOL-BREF domain scores (Physical Health – PH, Psychological – PSY, Social Relationships – SR, and Environment – EN) and four variables: age of the patient, age of the caregiver, duration of illness, and duration of caregiving among caregivers of patients with schizophrenia and BPAD.

No statistically significant correlations were found between the age of the patient and any of the WHOQOL-BREF domains in either group. The correlation coefficients were weak, and all p-values exceeded 0.05, indicating no meaningful relationship.

Similarly, the age of the caregiver did not show any significant correlation with the quality of life scores in any domain for both schizophrenia and BPAD caregivers. All correlation values were near zero, with high p-values, suggesting no effect of caregiver age on perceived quality of life.

A significant negative correlation was observed between the duration of illness and the psychological (PSY) domain of WHOQOL-BREF in both groups (schizophrenia: $r = -0.226$, $p = 0.013$; BPAD: $r = -0.220$, $p = 0.018$). This indicates that as the illness duration increases, caregivers' psychological well-being decreases, irrespective of diagnosis. For all other domains—PH, SR, and EN—no significant correlation was found with the duration of illness.

Finally, duration of caregiving did not show a significant correlation with any domain of the WHOQOL-BREF in either caregiver group. Though some correlations were mildly positive or negative, none reached statistical significance ($p > 0.05$).

Table 5: Correlation of WHO QOL- (PH, PSY, SR, EN) with PANSS (Total Score), PANSS-P, PANSS-N and PANSS-G

Name of Variable	Correlation Coefficient	P - Value	Significance
PANSS Total Score			
With WHO QOL- PH	-0.183	0.6	NS
With WHO QOL- PSY	-0.093	0.48	NS
With WHO QOL- SR	-0.091	0.487	NS
With WHO QOL- EN	-0.228	0.079	NS
PANSS - P			
With WHO QOL- PH	-0.028	0.832	NS
With WHO QOL- PSY	0.037	0.778	NS
With WHO QOL- SR	0.011	0.934	NS
With WHO QOL- EN	0.092	0.484	NS
PANSS - N			
With WHO QOL- PH	-0.043	0.746	NS
With WHO QOL- PSY	0.153	0.243	NS
With WHO QOL- SR	-0.217	0.096	NS
With WHO QOL- EN	-0.265	0.04	**Significant**
PANSS - G			
With WHO QOL- PH	-0.049	0.71	NS
With WHO QOL- PSY	0.064	0.626	NS
With WHO QOL- SR	-0.324	0.012	**Significant**
With WHO QOL- EN	-0.069	0.598	NS

This table presents the correlation between WHOQOL-BREF domains (Physical Health – PH, Psychological – PSY, Social Relationships – SR, and Environment – EN) and PANSS scores (Total, Positive – PANSS-P, Negative – PANSS-N, and General Psychopathology – PANSS-G) in patients with schizophrenia.

Most correlations between PANSS scores and WHOQOL-BREF domains were non-significant (NS), indicating minimal or no association between severity of schizophrenia symptoms and caregivers' perceived quality of life in most areas.

- PANSS Total Score showed a weak negative correlation with all four WHOQOL domains (PH, PSY, SR, EN), but none were statistically significant ($p > 0.05$). The strongest was with the Environment domain ($r = -0.228$, $p = 0.079$), approaching significance, suggesting a possible trend where higher symptom severity may impact perceived environmental quality.
- PANSS-P (Positive Symptoms) showed no significant correlation with any domain, with all r values close to zero, indicating that positive symptoms (e.g., delusions, hallucinations) do not significantly impact caregiver QOL.
- PANSS-N (Negative Symptoms) had a significant negative correlation with the Environment domain of WHOQOL-BREF ($r = -0.265$, $p = 0.04$), suggesting that more severe negative symptoms are associated with poorer perceived environmental quality of life for caregivers. Other correlations were non-significant.
- PANSS-G (General Psychopathology) revealed a significant negative correlation with the Social Relationships domain ($r = -0.324$, $p = 0.012$), indicating that general symptom burden is associated with reduced social quality of life among caregivers. Other domain correlations were non-significant.

Table 6: Correlation of WHO QOL- (PH, PSY, SR, EN) with HAMD (Total Score) and YMRS (Total Score)

Name of Variable	Correlation Coefficient	P - Value	Significance
HAMD Total Score			
With WHO QOL- PH	0.086	0.512	NS
With WHO QOL- PSY	-0.360	0.027	**Significant**
With WHO QOL- SR	0.079	0.547	NS
With WHO QOL- EN	-0.15	0.252	NS
YMRS Total Score			
With WHO QOL- PH	-0.154	0.24	NS
With WHO QOL- PSY	0.061	0.643	NS
With WHO QOL- SR	-0.051	0.698	NS
With WHO QOL- EN	-0.042	0.748	NS

This table shows the correlation between WHOQOL-BREF domains—Physical Health (PH), Psychological (PSY), Social Relationships (SR), and Environment (EN)—and HAMD (Hamilton Depression Rating Scale) Total Score and YMRS (Young Mania Rating Scale) Total Score in caregivers of patients with bipolar affective disorder (BPAD).

Correlation with HAMD Total Score: Psychological domain (PSY) showed a significant negative correlation ($r = -0.360$, $p = 0.027$). This indicates that higher depression severity in patients is associated with lower psychological quality of life in caregivers.

The remaining domains (PH, SR, EN) had non-significant correlations with HAMD scores ($p > 0.05$), suggesting no substantial association between patients' depressive symptom severity and caregivers' physical health, social relationships, or environment-related QOL.

Correlation with YMRS Total Score:

All four WHOQOL domains—PH, PSY, SR, and EN—had non-significant correlations with YMRS scores ($p > 0.05$), implying that the severity of manic symptoms in patients did not significantly impact caregivers' perceived quality of life in any domain.

Table 7: Correlation of average of Z Score of YMRS (Total Score) and HAMD (Total Score) WHO QOL-(PH, PSY, SR, EN) in patients with Mixed Symptoms

Name of Variable	Correlation Coefficient	P - Value	Significance
With WHO QOL- PH	0.306	0.616	NS
With WHO QOL- PSY	-0.635	0.249	NS
With WHO QOL- SR	-0.052	0.934	NS
With WHO QOL- EN	0.542	0.345	NS

This table presents the relationship between combined mood symptom severity (average Z-score of YMRS and HAMD) and the quality of life (WHOQOL-BREF) domains—Physical Health (PH), Psychological (PSY), Social Relationships (SR), and Environmental (EN)—in patients exhibiting mixed symptoms.

- WHOQOL-PH (Physical Health): A weak positive correlation ($r = 0.306$, $p = 0.616$) was found, indicating a non-significant association between combined symptom severity and caregivers' perceived physical health.
- WHOQOL-PSY (Psychological Domain): A moderate negative correlation ($r = -0.635$, $p = 0.249$) was observed, suggesting that increased mood symptom severity might be associated with poorer psychological well-being among caregivers. However, this result was not statistically significant.
- WHOQOL-SR (Social Relationships): The correlation was negligible ($r = -0.052$, $p = 0.934$), indicating no meaningful relationship between symptom severity and perceived social support or relationship satisfaction.
- WHOQOL-EN (Environment): A moderate positive correlation ($r = 0.542$, $p = 0.345$) was seen, implying some association between higher symptom severity and better environmental perception, though not statistically significant.

Discussion

The sociodemographic analysis (Table 1) revealed no significant differences between patients with schizophrenia and BPAD in terms of age, sex, marital status, education, occupation, religion, family type, locality, or monthly income. However, illness duration differed significantly ($p = 0.002$), with schizophrenia patients showing a shorter illness duration (2–5 years) compared to BPAD patients (10–14 years). This suggests a more chronic disease course in BPAD, possibly due to its episodic nature. These findings align with those of Reinares et al. (2008) [32], who reported longer cumulative duration and episodic functional impairment in BPAD, making illness management more prolonged. Among caregivers (Table 2), although most demographic variables were similar across groups, relationship patterns differed: parents were more likely to care for schizophrenia patients, whereas spouses often cared for BPAD patients. This pattern mirrors the age of onset differences noted by Perlick et al. (2007) [33], where early-onset schizophrenia typically led to parental caregiving, while later-onset BPAD resulted in spousal involvement.

The WHOQOL-BREF analysis (Table 5) showed no statistically significant differences in quality of life across all domains—physical health, psychological, social, and environmental—between caregivers of schizophrenia and BPAD patients. This supports the findings of Chadda et al. (2007) [34], who found that caregiving burden was equally high across different severe mental illnesses, suggesting that diagnosis alone does not determine caregiver well-being. Both caregiver groups experience similar challenges, indicating a universal strain posed by the caregiving role in SMIs.

A significant negative correlation between illness duration and psychological QOL (PSY domain) was observed in both groups (schizophrenia: r = -

0.226, p = 0.013; BPAD: r = -0.220, p = 0.018). This implies that the longer the illness persists, the more it impairs the psychological well-being of caregivers—likely due to chronic stress or burnout. These findings are supported by Kumar et al. (2015) [35], who demonstrated a decline in caregivers' psychological health with increasing illness chronicity, particularly when support systems were lacking.

For schizophrenia, higher negative symptoms (PANSS-N) were associated with poorer environmental QOL (r = -0.265, p = 0.04), and greater general psychopathology (PANSS-G) correlated with lower social relationship scores (r = -0.324, p = 0.012). These findings indicate that persistent deficits such as apathy or withdrawal in patients significantly affect caregivers' ability to maintain social engagement and environmental satisfaction. These observations are consistent with Awad and Voruganti (2008) [36], who noted that negative symptoms strongly predict caregiver distress. In BPAD, depressive symptoms (HAMD) were significantly linked to worse psychological QOL (r = -0.360, p = 0.027), whereas manic symptoms (YMRS) did not show significant associations. This finding aligns with Reinares et al. (2006) [37], who emphasized the greater caregiver burden associated with bipolar depression due to its prolonged and emotionally taxing nature.

In the mixed symptoms group (Table 13), no significant correlations were observed between average mood symptom Z scores (YMRS and HAMD) and caregiver QOL domains, likely due to the small sample size. However, trends suggested that co-occurring mood symptoms may adversely affect psychological well-being. This is in line with the study by Perlick et al. (2004) [38], which reported that caregivers of patients with fluctuating symptoms or mixed episodes faced unpredictability that increased emotional distress.

The data suggest that long-term caregivers, especially those exposed to chronic illness duration, need targeted psychological support, such as resilience training and counselling. Similar conclusions were drawn by Chakrabarti (2008) [39], who advocated for structured psychosocial interventions to prevent caregiver burnout. For symptom-specific strategies, caregivers of schizophrenia patients may benefit from programs addressing negative symptoms and general dysfunction, such as family psychoeducation and patient social skills training—approaches recommended by McFarlane et al. (2003) [40]. For BPAD, focused interventions on managing depressive symptoms could alleviate caregiver strain, consistent with findings by Miklowitz et al. (2007) [41]. The overall similarity in caregiver QOL between groups further supports the implementation of broad-based caregiver support systems, such as financial aid, respite services, and peer support networks, as recommended in WHO's 2021 mental health caregiver framework [42].

The study's cross-sectional design limits causal inference. Future longitudinal studies could better capture the trajectory of caregiver QOL. Additionally, small sample size in the mixed symptom subgroup may have obscured potential effects. Cultural influences, such as joint family support seen in Indian settings, could also mediate caregiving burden and should be considered in future multicentric studies. This need for contextualized research is also highlighted by Chadda and Deb (2013) [43], who emphasized how sociocultural dynamics affect caregiving in Indian families.

Conclusion

This study provides valuable insights into the sociodemographic profiles of patients with schizophrenia and bipolar affective disorder (BPAD), as well as the quality of life (QOL) of their caregivers. The findings reveal that while the two groups share many sociodemographic similarities, key differences exist in illness duration and symptom impact on caregivers. Notably, BPAD patients had a significantly longer duration of illness compared to schizophrenia patients, suggesting differing disease trajectories.

Caregivers of both schizophrenia and BPAD patients reported comparable levels of QOL across physical, psychological, social, and environmental domains, indicating that the burden of caregiving in severe mental illnesses is substantial regardless of diagnosis. However, specific clinical factors—such as illness duration and symptom severity—were found to significantly influence caregiver well-being. Prolonged illness duration was associated with poorer psychological QOL, while negative symptoms in schizophrenia and depressive symptoms in BPAD had distinct detrimental effects on caregivers.

These findings underscore the need for targeted interventions, including psychoeducation, caregiver support programs, and mental health policies that address the long-term needs of those caring for individuals with chronic mental illnesses. Future research should explore longitudinal trends and culturally sensitive strategies to further alleviate caregiver burden and improve overall mental health care outcomes.

By recognizing the unique challenges faced by caregivers and implementing evidence-based support systems, healthcare providers and policymakers can enhance both patient recovery and caregiver resilience, fostering a more sustainable caregiving ecosystem.

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