

Caregiver Burden and Quality of Life in Patients with Schizophrenia and Bipolar Affective Disorder: A Comparative Study

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Abstract

Background: Patients with schizophrenia (SCZ) and bipolar affective disorder (BPAD) often suffer from a poor quality of life (QoL) due to factors such as persistent symptoms, lack of social support, and medication non-adherence, which in turn reduces their work productivity and often leads to a physical, emotional, and social burden on caregivers.

Aim: To assess and compare the relationship between subjective caregiver burden and the severity of symptoms, medication adherence, and QoL in patients diagnosed with SCZ and BPAD.

Materials and methods: Fifty SCZ and seventy-three BPAD patients and their respective caregivers participated in the study. Caregivers reported their care burden using the Zarit Burden Interview-22 item (ZBI-22), and patients reported their QoL and medication adherence using the WHO-Quality of life 26 item (WHOQOL-BREF 26) item and the Medication Adherence Rating Scale 10 item (MARS-10).

Results: The QoL across all domains and caregiver burden scores were comparable between the two groups. However, medication adherence was higher among individuals with BPAD than among those with SCZ, but the difference was not statistically significant ($p = 0.51$). The mean severity scores indicated moderate illness. Both the PANSS and YMRS demonstrated negative correlations with medication adherence, while quality-of-life domains ($p < 0.001$) and subjective caregiver burden ($p < 0.001$) were inversely related.

Conclusion: Patients with SCZ and BPAD have poor QoL. The severity of illness in SCZ and BPAD mania was associated with poor medication adherence. These findings suggest that illness severity and adherence to medication are key predictors of caregiver burden.

INTRODUCTION

SCHIZOPHRENIA affects 24 million people globally, while BPAD impacts around 40 million individuals worldwide.^[1,2] According to the National Mental Health Survey (NMHS) of India, the estimated prevalence of SCZ and BPAD was 0.49% and 0.8%, respectively. The treatment gap for SCZ was 75.5%, and for BPAD, it was 70.4%.^[3] Individuals with SCZ and BPAD had a life expectancy of 10 to 20 years lower than that of the general population.^[4]

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Numerous studies have demonstrated that individuals with SCZ and BPAD often suffer from poor quality of life due to factors like medication non-adherence, persistent symptoms and lack of social support, which in turn reduces their work productivity. Elimination of symptoms is no longer the only goal of treatment; social function and adaptation of people with these disorders are also essential issues.^[5] Psychiatric patients' needs psychological as well as physical assistance or supervision in their daily life activities, and this often leads to a physical, emotional and social burden on caregivers.^[6]

The primary caregiver, usually a close relative, is responsible for the daily care of the patient, ensuring they attend treatment sessions, staying with them during hospitalizations, and providing financial support throughout the course of the illness. Some studies have shown that caregivers of patients with psychiatric illness experience a greater burden than those caring for patients with other medical conditions. Caregivers of patients with SCZ and BPAD play an important role in the management of the disorder by providing physical as well as psychological assistance and by ensuring the patient's medication adherence.^[7]

Non-adherence to psychotropic medication can result in increased psychiatric hospitalization, increased caregiver burden and decreases quality of life of both patients and their caregivers.^[8] Assessing the quality of life and caregiver burden in these patients provides an opportunity to identify factors associated with the burden of care. Comparing these aspects offers insights into the distinct challenges and needs of each patient population group, helping healthcare providers in developing treatment strategies in a personalized way, which can ultimately lead to improved treatment outcomes and patient recovery.^[7]

There is a deficit of studies among population in the developing countries like India involving comparison of quality of life and caregiver burden in patients diagnosed with SCZ and BPAD.^[9] The present study was planned to assess and compare the relationship between subjective caregiver burden and the severity of symptoms, medication adherence and QoL in patients with SCZ and BPAD.

MATERIALS AND METHODS

Study Design and Setting

This cross-sectional and comparative study was conducted in the Department of Psychiatry, a tertiary care hospital of south-west Rajasthan, between September 2024 and May 2025. The approval from the Institutional Ethics Committee (GU/HREC/EC/2024/2615) was obtained.

Sample Size

This was a time bound study in which a total of 123 patients from the outpatient and inpatient departments along with their caregivers, were recruited using a non-probability consecutive sampling technique after meeting the inclusion and exclusion criteria. Fifty SCZ and seventy-three BPAD patients were diagnosed based on ICD-11 diagnostic criteria by a consultant psychiatrist. Their respective care-

Table 1: Inclusion and exclusion criteria for patients and caregivers

<i>Patients with SCZ and BPAD</i>	
<i>Inclusion criteria</i>	<i>Exclusion criteria</i>
Patients aged between 18-65 years of both genders	Patients with comorbid psychiatric and substance use disorders
Patients diagnosed with schizophrenia or BPAD as per the ICD-11 diagnostic criteria.	Patients with chronic or critical medical and surgical illnesses.
Duration of illness more than one year	Patients diagnosed with schizoaffective disorder.
Patients on oral medication(s) only	
Written informed consent for study participation.	

Table 2: Caregivers of SCZ and BPAD patients

<i>Inclusion criteria</i>	<i>Exclusion criteria</i>
Primary caregiver who is living with and engaged in the care of the patients continuously for the last one year.	History of present and past psychiatric and substance use disorders.
Caregiver between the 18-65 years of age	
Caregiver who gives written informed consent for study participation.	

Table 3: Sociodemographic profile of the patients with schizophrenia and bipolar disorder

Variable	Category	Patient group n (%) / Median (IQR)		Test (p-value)
		Schizophrenia	Bipolar disorder	
Gender	Male	28 (56%)	53 (72.6%)	$\chi^2 = 3.36$ (0.05)
	Female	22 (44%)	20 (27.4%)	
*Age		37.04±13.01	38.70±12.69	U= 1665.50 (0.41)
	18-35	29 (58%)	30 (41.1%)	
	36-55	15 (30%)	35 (47.0%)	
	>55	6(12%)	8 (11.0%)	
Educational status	Primary	14 (28%)	16 (13.7%)	$\chi^2 = 2.81$ (0.72)
	Secondary	10 (20%)	10 (21.9%)	
	Higher Secondary	10 (20%)	10 (13.7%)	
	Graduate	14 (28%)	2 (30.1%)	
	Post graduate	2 (4%)	5 (6.8%)	
	illiterate	0	30 (41)	
Occupational category	Skilled	26 (52%)	8 (11%)	$\chi^2 = 2.93$ (0.56)
	Semi-skilled	19 (38%)	10 (13.75)	
	Unskilled	5 (10%)	55 (75.4%)	
Marital Status	Married	26 (52%)	15 (20.5%)	$\chi^2 = 5.35$ (0.14)
	Unmarried	19 (38%)	52 (71.2%)	
	Divorced	4 (8%)	4 (5.5%)	
	Widowed	1 (2%)	2 (2.7%)	
Family type	Joint	27 (54%)	43 (58.9%)	$\chi^2 = 0.29$ (0.59)
	Nuclear	23 (46%)	30 (41.1%)	
Residence	Urban	30 (60%)	23 (31.5%)	$\chi^2 = 9.82$ (0.002)
	Rural	20 (40%)	50 (68.5%)	
Duration of illness (years)		6.92±6.08	5.78±5.80	$\chi^2 = 3.42$ (0.63)
	1-5	27 (54%)	47 (64.4%)	
	6-10	15 (30%)	15 (20.5%)	
	>10	8 (16%)	11 (17.0%)	
Treatment Duration (years)		5.90±4.56	5.30±5.41	$\chi^2 = 2.01$ (0.70)
	1-5	29 (58%)	49 (67.1%)	
	6-10	15 (30%)	16 (21.9%)	
	>10	6 (12%)	8 (11.0%)	

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Number of hospitalization	One	17 (34%)	35 (48%)
	Two	23 (46%)	28 (38.4%)
	Three or more than three	10 (20%)	10 (13.7%)
Substance abuse	No	41 (82%)	50 (68.5%)
	Alcoholic	1 (2%)	4 (5.5%)
	Smoking	4 (8%)	17 (23.5%)
	Cannabis	4 (8%)	1 (1.4%)
	Opium	0 (0%)	1 (1.4%)
Severity score	PANSS	69.00 (28.94)	
	YMRS		25.94 (12.81)
	Ham-D		18.24 (13.57)

Table 4: Sociodemographic characteristics of the caregivers of patients with schizophrenia and bipolar disorder

Variable	Category	Caregiver's group N (%) / Median (IQR)		Test (p-value)
		Schizophrenia	Bipolar disorder	$\chi^2 = 0.11$ (0.73)
Gender	Male	39 (78%)	55 (75.3%)	
	Female	11 (22%)	18 (24.7%)	
*Age		45.64 ± 13.0	44.63 ± 19.62	U = 1733.5 (0.63)
	18-35	18 (36%)	21 (28.7%)	
	36-55	15 (32%)	37 (50.7%)	
	>55	16 (32%)	15 (20.5%)	
Educational status	Primary	9 (18%)	17 (23.3%)	$\chi^2 = 5.80$ (0.32)
	Secondary	3 (6%)	12 (16.4%)	
	Higher Secondary	11 (22%)	14 (19.2%)	
	Graduate	13 (26%)	19 (26%)	
	Post graduate	5 (10%)	3 (4.1%)	
	Illiterate	9 (18%)	8 (11%)	
Occupational category	Skilled	17 (34%)	21 (28.8%)	$\chi^2 = 15.97$ (0.003)
	Semi-skilled	15 (30%)	29 (39.7%)	
	Unskilled	18 (36%)	23 (31.6%)	
Marital Status	Married	39 (78%)	64 (87.7%)	$\chi^2 = 5.01$ (0.17)
	Unmarried	8 (16%)	9 (12.3%)	
	Divorced	1 (2%)	0 (0%)	
	Widowed	2 (4%)	0 (0%)	

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Family type	Joint	27 (54%)	38 (52.1%)	$\chi^2 = 0.04$ (0.83)
	Nuclear	23 (46%)	35 (37.9%)	
Residence	Urban	30 (60%)	24 (32.9%)	$\chi^2 = 8.86$ (0.003)
	Rural	20 (40%)	49 (67.1%)	
Duration of caring (years)				U = 1392 (0.020)
	1-5			
	6-10			
	>10			

Table 5: Correlation between caregiver burden and quality of life in patients with schizophrenia and bipolar disorder

Caregiver burden	WHO quality of life domains			
	Physical	Psychological	Social	Environmental
Caregiver burden in relatives of Schizophrenia	$r = -0.59$ $p < 0.001$	$r = -0.56$ $p < 0.001$	$r = -0.63$ $p < 0.001$	$r = -0.58$ $p < 0.001$
Caregiver burden in bipolar disorder	$r = -0.35$ $p = 0.002$	$r = -0.43$ $p < 0.001$	$r = -0.51$ $p < 0.001$	$r = -0.55$ $p < 0.001$

Table 6: Comparing Spearmann correlation analysis between severity of illness and medication adherence across both patient groups.

	Severity of illness		
	Schizophrenia	Bipolar disorder	
Medication adherence	PANSS	YMRS	Ham-D
	$\rho = -0.35$ $p = 0.01$	$r = -0.37$ $p = 0.006$	$\rho = -0.22$ $p = 0.32$

Table 7: Correlation between caregiver burden and medication adherence in patients with schizophrenia and bipolar disorder

Caregiver burden	Medication Adherence	
	Schizophrenia	Bipolar disorder
	$\rho = -0.465$ $p = 0.001$	$\rho = -0.229$ $p = 0.051$

givers were also included in the study to assess subjective caregiver burden.

Inclusion and exclusion criteria for patients and caregivers

The study participants who provided written informed consent and met the inclusion and exclusion criteria mentioned above were given a semi-structured proforma to collect sociodemo-

graphic information from both the patients and their caregivers. Clinical severity was assessed with the Positive and Negative Syndrome Scale (PANSS) for schizophrenia^[10] and with either the Young Mania Rating Scale (YMRS)^[11] or the Hamilton Depression Rating Scale (HAM-D)^[12] for bipolar affective disorder, depending on the phase of illness. Hindi version of WHO-Quality of life 26 item (WHOQOL-BREF 26) was used for assessing the QoL in patients with SCZ and

BPAD^[13] Caregiver burden was assessed using the Zarit burden interview-22 item (ZBI-22) item scale (Hindi version)^[14-16] while medication adherence was measured with the Medication adherence rating scale 10 item (MARS-10).

As a validated Hindi version of the MARS was not available, the original 10-item instrument was translated into Hindi after obtaining prior permission from the original author. The translation process involved forward translation by a professional translator, followed by an expert review by a psychiatrist to ensure semantic accuracy and conceptual equivalence. A pilot study was subsequently conducted among 24 patients to evaluate the clarity, comprehensibility, and acceptability of the translated version. Internal consistency and reliability of the Hindi MARS was assessed using Cronbach's alpha, which demonstrated acceptable reliability ($\alpha = 0.708$)

Data analysis

Data were checked for completeness and analyzed using statistical package for social sciences (SPSS) statistics version 16. Descriptive statistics were computed as frequencies and percentages for categorical variables and as means with standard deviations for continuous variables. Group differences were assessed using the Independent Student's *t*-test for normally distributed data, while the Chi-square test and Mann-Whitney U test were applied for categorical and non-normally distributed variables, respectively. Pearson's correlation examined associations between caregiver burden and QoL domains, whereas Spearman's correlation assessed relationships between medication adherence, illness severity, and caregiver burden.

RESULTS

Table 1 shows mean age 37.04 ± 13.01 and 38.70 ± 12.69 for schizophrenia and bipolar disorder respectively. Statistically significant difference was seen in gender ($p = 0.05$) and domicile ($p = 0.002$). For duration of illness and treatment duration majority of the bipolar disorder patients shows a higher proportion; when considering the number of hospitalization, the highest proportion of schizophrenia patients (46%) had been hospitalized twice. Table 2 observed that

caregivers of Schizophrenia exhibited a significantly longer median duration of caregiving at a significant *p* value of 0.02. Whereas the physical domain scores were comparable between schizophrenia (56.72 ± 18.40) and BPD patients (56.51 ± 15.02) Likewise, psychological, social, and environmental QoL domains did not differ significantly between the two groups ($p = 0.88, 0.84$, and 0.63 , respectively). Caregivers of schizophrenia and BPAD patients reported a mean burden score of 44.06 ± 19.20 and 41.14 ± 18.36 respectively at non-significant level ($t = 0.85$, $p = 0.39$). Comparison of medication adherence between both patient groups. The schizophrenia group had a mean rank of 59.47, compared to 63.73 for the BPD group at $p = 0.51$, indicating no significant difference between the groups. Table 3 shows that subjective caregiver burden was significantly negatively correlated with all domains of QoL in caregivers of SCZ and BPD. Table 4 displays a negative correlation between YMRS scores and medication adherence suggesting that higher manic severity was associated with poorer adherence. In contrast, the correlation between Ham-D scores and medication adherence was not significant. Finally, the association between medication adherence and caregiver burden in Table 5 was assessed using spearman correlation In the schizophrenia group, a moderate negative correlation was observed ($p = -0.47$, $p = 0.001$), whereas in the BPD group the correlation was weak ($p = -0.22$, $p = 0.05$).

DISCUSSION

The present study demonstrated a significant negative ($p < 0.001$) correlation between caregiver burden and all domains of quality of life among patients of individuals with SCZ and BPAD. Consistent with previous studies reporting comparable QoL across SCZ and BPAD patients, particularly in the physical, social, and environmental domains, with only subtle variations in the psychological domain.^[9,10,16,17] However, contrasting findings have also been reported. Sharma *et al.* and Thara *et al.* reported that caregivers of SCZ patients experience greater social disruption and emotional strain than those caring for BPAD. Prasad VV *et al.*^[10,17] and Sequeira DV *et al.*^[9] reported better QoL among BPAD patients than relatives to SCZ, whereas Prabhakaran S *et al.*^[5]

observed higher QoL in SCZ patients, with social support exerting a significant positive influence. Chadda *et al.*^[17] reported consistent burden scores across caregivers of both conditions. Nevertheless, other studies have reported divergent results. For instance, Tanna K *et al.*^[7] and Kurnool *et al.*^[15] found that caregivers of SCZ patients experienced significantly higher burden, while Mohamed RS *et al.* reported greater burden among caregivers of BPAD patients. Indian studies consistently show that prolonged caregiving, stigma, unpredictable symptom patterns and limited support services contribute to marked psychosocial strain.

The author observed in present study that significant negative correlation between medication adherence and illness severity in SCZ. This finding aligns with Indian studies reporting that poor adherence is strongly linked with relapse, increased symptom burden, and poorer clinical outcomes among patients with SCZ. Varghese *et al.*^[18] and Kishore *et al.*^[19] similarly noted that non-adherence was associated with higher psychopathology scores and frequent exacerbations in Indian clinical populations. In BPAD, medication adherence showed a significant inverse correlation with manic severity on the YMRS, consistent with reports by Suraweera *et al.*^[20] and Grover *et al.*^[21], who found inadequate adherence to mood stabilizers to be associated with increased manic relapses and functional impairment. However, the correlation between adherence and BPAD depression severity was non-significant in the present study. Awareness regarding illness is good in depressive phase and its crucial for medication adherence. Overall, the study reinforces evidence from Indian literature emphasizing the importance of adherence in reducing illness severity, preventing relapse, and improving long-term outcomes in both SCZ and BPAD.

We found significant negative correlation between caregiver burden and medication adherence among relatives of patients with SCZ ($p = -0.465$, $p = 0.001$), indicating that higher caregiver burden is associated with poorer adherence. In BPAD, the correlation was not statistical significance ($p = 0.051$). Findings in SCZ are consistent with Indian literature. Thara *et al.*^[22] reported that high caregiver strain contributes to poor supervision of treatment,

leading to reduced adherence in chronic SCZ or vice-versa. Similarly, a study by Srinivasan *et al.*^[23] also found that caregiver stress and emotional exhaustion compromise the ability to monitor medication routines regularly. Gautam S *et al.*^[24] also observed that caregiver burnout and low family support were important predictors of non-adherence in Indian patients with psychotic disorders.

In BPAD, previous Indian studies have shown mixed results. Chakrabarti *et al.*^[25] noted that although caregiver involvement improves adherence, the fluctuating course of bipolar illness and periods of euthymia reduce caregiver vigilance, which may weaken the association between burden and adherence.

STRENGTHS AND LIMITATIONS

This study has several notable strengths. A key strength lies in the use of standardized and validated instruments. MARS-10 was translated and validated in this study. The current study has few limitations; A cross-sectional study design which doesn't find cause and effect relationship. the study was performed in hospital setting does not represent the community, sample size was modest, sampling techniques, economic burden was not assessed among the caregivers and comparison of severity of illness among the two groups was not made in accordance because symptoms were assessed by using different disease specific measures, variability in population size, scale scoring and interpretation criteria.

CONCLUSION

Overall quality of life did not differ significantly between patient groups, and caregiver burden was comparable across caregivers of SCZ and BPAD. Medication adherence and illness severity emerged as major predictors of caregiver burden. Although medication adherence was higher in BPAD than in SCZ. Significant moderate negative correlations were observed between medication adherence and PANSS as well as YMRS scores. Caregiver burden showed the strongest negative correlation with the social domain of quality of life and with the environmental domain in BPAD.

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