



Psychopathology, Disability & Family Burden of Patients with Schizophrenia and Bipolar Affective Disorders -A Comparison

Niranjan Prasad¹, PB Sajeew Kumar², Akash Balu³, AM Kunhikoyamu,⁴ PN Suresh Kumar⁵, Narayanankutty⁶

Abstract:

Schizophrenia and Bipolar Affective disorder (BPAD) are major psychiatric illnesses. Schizophrenia affects approximately 1% of population and most commonly have its onset in early adult life. The illness leaves the patients with varying degree of cognitive, affective and psychosocial impairment. It leads to disability in social, occupational and familial domains. The long-term studies have reported that 60% of schizophrenic patients become chronic. As the illness affects the young people, it has a major impact upon the productivity of the patient. BPAD has a lifetime prevalence of 0.4-1.6%. Studies have found that the level of dysfunction in Bipolar Affective Disorder is comparable to that in schizophrenia. We conducted a cross sectional study at a tertiary in-patient psychiatric center. Aim and objectives were: 1. To assess and compare the psychopathology and disability of patients with schizophrenia and bipolar affective disorder. 2. To assess the caregiver burden of the two groups of patients and to correlate with psychopathology and disability. Thirty one schizophrenia patients and 30 BPAD patients and their care-givers participated. There was no significant difference in the mean duration of illness and treatment between the two groups. The caregiver of schizophrenia patients were mainly mother and brothers whereas in bipolar group the main caregiver was spouse. The schizophrenia patients had significantly higher disability in overall behavior and in the individual items. The subjective burden score was higher in families of schizophrenia patients but objective score were slightly higher for families of bipolar patients. The burden in the items of disruption of family routines, family leisure and interaction is higher in the positive subtype of Schizophrenia.

Key words: Schizophrenia, Bipolar Affective Disorder, Disability, Burden

Introduction:

Schizophrenia and Bipolar Affective disorder are major psychiatric illnesses. Both the illnesses manifest with varied psychopathology. Studies have demonstrated the chronicity of these disorders, the variability of their outcomes and the different disabilities produced by them on the patients. Studies have also shown that both these illnesses produce significant emotional distress and economic burden on the family members who care for them.

Schizophrenia affects approximately 1% of population and most commonly have its onset in early adult life.¹ The illness leaves the patients with varying degree of cognitive, affective and psychosocial impairment. It leads to disability in social,

occupational and familial domains. The long-term studies have reported that 60% of schizophrenic patients become chronic. As the illness affects the young people, it has a major impact on the productivity of the patient.

The illness is characterized by positive symptoms like delusions, hallucinations, formal thought disorder, bizarre behavior etc. and negative symptoms such as alogia, avolition, anhedonia, affective flattening, etc. Depending on the predominance of either of these groups of symptoms, schizophrenia is subdivided into positive or negative subtype.²

The Bipolar Affective Disorder was classically described as psychotic mood disorder with both manic and major depressive episodes. This disorder also

affects the young adults. It has a lifetime prevalence of 0.4-1.6%. The illness is typically described as episodic, but varying degrees of residual symptoms during the inter-episodic period is reported.^{3,4} During the episodes, the illness causes much disability in social, occupational, marital and interpersonal domains. Studies have found that the level of dysfunction in Bipolar Affective Disorder is comparable to that in schizophrenia.⁵

Deinstitutionalization in the 1950s saw the transfer of the chronic mental patients from hospitals to the community. The burden of care of the patients was also transferred to the community. In India, as the joint family setup of early part of the 20th century paved way for nuclear families, the number of family members caring for the patients decreased and subsequently their burden increased.

Patients under community care showed better prognosis.⁶ Previously, families were studied to assess expressed emotions and other etiological aspects. Now, families are studied to assess the burden caused by the illnesses.

According to Platt, the term 'burden' refers to the presence of problems, difficulties or adverse events which affect the lives of the psychiatric patients' significant others e.g. members of the household and/or family. The family burden of schizophrenic patients has been the subject of study for many authors. But the burden studies of affective disorder patients are few. The comparison between the two is even scarce.

The present study is aimed at comparison of the psychopathology, disability and family burden of patients with schizophrenia and bipolar affective disorder. Knowledge about the factors affecting burden will help us to find out the families who are prone to suffer increased amount of burden so that they can be assessed for ill effects of burden

and professional help can be provided to cope with the burden.

Materials and Methods:

The study was conducted at the Department of Psychiatry at a tertiary care hospital. Patients were recruited from the in-patient department of the Medical College, Psychiatry Unit and the Family Ward of the Government Mental Health Centre.

Aims and Objectives

- 1) To assess and compare the psychopathology and disability of patients with schizophrenia and bipolar affective disorder.
- 2) To assess the caregiver burden of the two groups of patients and to correlate with psychopathology and disability.

Inclusion criteria:

Patients of either sex of age group above 15 years meeting the following criteria were included

- Criteria for Schizophrenia or Bipolar affective disorder according to Diagnostic Criteria for Research - International Classification of Diseases-10th revision.
- Illness duration of at least 2 years.
- Staying with a relative currently and at least for one year prior to the assessment with the same relative.

Exclusion Criteria:

- Patients with severe physical or chronic medical illness or mental retardation or dementing illness.
- Patients with history of alcohol or other substances abuse prior to the onset of current illness.
- Patients without a caregiver.

Inclusion Criteria for Caregiver:

- Any family member who has completed 18 years of age
- Living with the patient for more than one year.

- The family where the patient is staying should not have another member suffering from chronic psychiatric or other chronic medical illnesses.

Study Group

The study group consisted of sixty-one patients, with 31 diagnosed as schizophrenia and 30 as bipolar affective disorder; intake data of each patient was recorded on a specially designed proforma. This consisted of details about age, sex, religion, educational level and other socio-demographic variables. The details of psychiatric illness like duration of illness duration of treatment, nature of drugs, side effects, if any and the number of previous hospitalizations were included in the proforma. After intake, the following tools were administered.

The diagnosis of schizophrenia and bipolar affective disorder was made in accordance with the Diagnostic Criteria for Research of ICD-10.

The Comprehensive Psychopathological Rating Scale (CPRS)⁷

This comprehensive scale was designed to assess the severity of psychopathology. It consists of a total of sixty-seven items of which forty are reported and the rest are observed psychopathology. Each point is operationally defined to increase the inter-rater reliability. The scale has been found to have good inter-rater reliability and test retest reliability.⁷ The scale has been used for assessing the psychopathology of schizophrenia and bipolar affective disorder. The CPRS scale is used in India for many studies.

Disability Assessment Schedule (DAS)⁸

The Disability Assessment schedule was designed especially for the assessment of the patients' behavior and social functioning in his particular social and cultural context. Here, disability means dysfunctional social behavior and disturbance in the performance of social roles, resulting from mental disorder. The schedule consists of four sections and has a total of 97 items.⁸ The DAS has been adapted to the Indian setting and has been used in this study. The DAS

has been used by various researchers and found to have good reliability.^{9,10} The instrument was used in many Indian studies.^{11,12}

Family Burden Interview Schedule¹²

This scale has been developed keeping in mind the socio-economic and cultural conditions in India. This is a semi-structured interview schedule comprising twenty four items grouped under six areas, viz. financial burden, disruption of family routine activities, and disruption of family leisure, disruption of family interaction, effect of physical health of others and effect on mental health of others. The inter-rater reliability of all items was reported to be more than 0.78 by the authors of the schedule. Validity of the schedule assessed by correlating objective burden ratings with subjective burden was found to be significant (0.72).

Positive and Negative Syndrome Scale: (PANSS)¹³

The positive and negative Syndrome Scale was developed and standardized for typological and dimensional assessment of schizophrenic phenomena. This thirty item 7-point rating instrument was conceived as carefully defined and operationalised method that evaluates positive, negative and other symptom dimensions on the basis of a formal semi-structured clinical interview and other informational sources. The scale consists of three subscales, with seven items under Positive subscale, seven under Negative and sixteen items under General Psychopathology. The scale has good reliability and validity. The positive and negative subscales are used in this study to differentiate between positive and negative schizophrenia. This is done using typological assessment.¹⁴ Here after getting the positive and negative scores, composite score is calculated as the difference. Patients with positive composite score are classified as positive subtype and those with negative composite score as negative subtype.

Analysis of Data:

The statistical tests used for analysis of the data were Chi-square test, student 't' test and Spearman's rank correlation.

Results:

Sixty one patients and their care-givers participated in the study (31 Schizophrenia and 30 BPAD)

Table I: Age Distribution

Age in yrs	Schizophrenia n= 31		Bipolar Affective Disorder n = 30	
	No	%	No	%
< 20	0	0	1	3.33
20 - 29	7	22.5	5	16.67
30 – 39	13	41.9	12	40
40 - 49	8	25.8	9	30
50 – 59	2	6.45	3	10
60 & >	1	3.22	0	0

$X^2 = 2.62$ df = 5 p> 0.05 (Not significant)

Majority of the patients were of age group 30-40 years(**Table I**). The mean age of the patients and the caregiver of the two groups are comparable. Similarly there was no statistical difference in the mean education of the patient and the caregiver between the two groups. Males form the predominant gender of the sample (80.6% of schizophrenia patients and 63.33% of bipolar disorder patients).

Table II: Marital Status of Patients

Marital Status	Schizophrenia		Bipolar Affective Disorder	
	No.	%	No.	%
Unmarried	14	45.2	7	23.33
Married	10	32.3	19	63.33
Separated/ Widowed	7	22.5	4	13.34
Total	31	100	30	100

$X^2 = 5.93$ df = 2 p = 0.05 (significant).

66.33% of bipolar patients were married compared to 32.3% of schizophrenia

patients and this is statistically significant(**Table II**).

Majority of the patients were Hindus (64.5% schizophrenics and 60% bipolar patients). 64.5% of the schizophrenia patients and 53.33% of the bipolar patients were unemployed. The rest were meaningfully employed. Nuclear family type predominated in the sample (64.5% in the schizophrenia sample and 56.67% in the bipolar sample).

Table III: Family History

Family History	Schizophrenia		Bipolar Affective Disorder	
	No.	%	No	%
Present	6	19.4	15	50
Absent	25	80.6	15	50
Total	31	100	30	100

$X^2 = 6.342$ df = 1 p>0.05 (Not significant).

The presence of family history was significantly high in bipolar patients compared to schizophrenia patients (**Table III**). There is no significant difference in the mean duration of illness and treatment between the two groups. The mean duration of the current episode or exacerbation was more in schizophrenia compared to bipolar disorder, but the difference is not statistically significant.

Table IV: Relation of Caregiver

Relation	Schizophrenia	Bipolar Affective Disorder	Total
Mother	7	3	10
Father	3	3	6
Spouse	5	10	15
Sister	1	2	3
Brother	9	4	13
Son	1	2	3
Daughter	2	3	5
Others	3	3	6

The caregiver of schizophrenia patients were mainly mother and brothers whereas in bipolar group the main caregiver was spouse(**Table IV**). As the number in many cells is less, these were clubbed into parents, spouse, siblings and others and

analysed. The result was not significant with $\chi^2 = 3.937$, $df = 3$ and $p < 0.05$.

Bipolar disorder patients were on neuroleptics and mood stabilizers while schizophrenia patients were on neuroleptics (Table V).

Table V: Nature of drug

Nature of drug	Schizophrenia		Bipolar Affective Disorder	
	No.	%	No.	%
Neuroleptics	27	87.1	5	16.7
Neuroleptics +Mood stabilizer	4	12.9	25	83.3
Total	31	100	30	100

$\chi^2 = 30.32$, $df = 1$, $p < 0.001$ (significant).

More bipolar patients reported adverse effects of drugs but the difference is not

statistically significant. The individual side effects are shown in the table below (Table VI).

Table VI: Individual side effects

Side effects	No.	%
Tremor	20	51.28
Sedation	7	17.95
Slurred speech	6	15.38
Dystonia	3	7.69
Rigidity	2	5.13
Constipation	1	2.56
Total	39	100

Poor compliance to treatment was reported in 74.19% of schizophrenia patients compared to 56.67% of bipolar patients, but it is not statistically significant. The mean hospitalization of the two groups also did not show any statistical significance.

Table VII: DAS-1: Overall Behaviour DAS	Schizophrenia	Bipolar Affective Disorder	't'	P value	df
	Mean+/-S.D	Mean+/-S.D			
Self care	2.16+/-1.59	1.23+/-1.63	2.246	0.028*	59
Under activity	3.58+/-0.96	3.20+/-1.19	1.381	0.173	59
Slowness	1.97+/-1.08	1.20+/-1.47	2.329	0.023*	59
Social Withdrawal	3.10+/-1.070	1.00+/-1.51	5.089	0.000*	59
Overall behaviour	2.7016+/-0.8622	1.6583+/-1.1643	3.986	0.000*	59

*= p value is significant

Table VIII: DAS-2: Social Role Performance

DAS-2	Schizophrenia	Bipolar Affective Disorder	't'	P value	df
	Mean+/-SD	Mean+/-SD			
2.1.Household activities	4.13+/-1.15	3.83+/-1.15	1.006	0.318	59
2.2.Marital role Affective	7.29+/-2.64	5.27+/-3.18	2.708	0.009*	59
2.3.Marital role sexual	7.23+/-2.70	5.23+/-3.36	2.556	0.013*	59
2.4.Parental role	3.58+/-1.71	3.13+/-1.85	0.981	0.331	59
2.5.Heterosexual role	3.10+/-1.33	2.13+/-1.20	2.978	0.004*	59
2.6.Social contact friction	2.81+/-1.33	2.57+/-1.57	0.645	0.521	59
2.7.Occupational role work performance	4.68+/-0.75	4.03+/-1.50	2.137	0.037*	59
2.8.Occupational role interest in getting job	3.77+/-0.92	3.43+/-1.63	1.008	0.317	59
2.9.Interest & information	3.45+/-1.23	2.57+/-1.63	2.393	0.020*	59
2.10.Behaviour in emergencies	3.48+/-1.03	3.00+/-1.34	1.586	0.118	59
Dysfunction in social roles	3.6065+/-0.5468	3.0203+/-0.7654	3.450	0.001*	59

*=p value is significant

Table IX: Modifying factors

DAS-2	Schizophrenia	Bipolar Affective Disorder	't'	P value	df
	Mean+/-SD	Mean+/-SD			
4.1.Assets	0.26+/-0.58	0.43+/-0.86	0.940	0.351	59
4.2.Liabilities	0.02968+/-0.30	0.13+/-0.43	0.383	0.703	59
4.3.Home atmosphere adverse effects	2.97+/-1.52	3.00+/-1.05	0.096	0.924	59
4.4.Social support	0.55+/-0.72	0.67+/-0.84	0.588	0.558	59

Table X: Family Burden

Family burden	Schizophrenia	Bipolar Affective Disorder	't'	P value	df
	Mean+/-SD	Mean+/-SD			
Financial Burden	7.52+/-2.22	8.50+/-2.97	1.469	0.147	59
Disruption of family routine activities	6.13+/-2.38	6.73+/-2.65	0.938	0.352	59
Disruption of family leisure	5.13+/-2.17	5.47+/-1.43	0.714	0.478	59
Disruption of family interaction	4.26+/-2.39	4.70+/-2.00	0.781	0.438	59
Effect on physical health of others	0.29+/-0.46	0.50+/-0.68	1.410	0.164	59
Effect on mental health of others	1.03+/-0.75	1.13+/-0.57	0.590	0.558	59
Subjective burden	1.84+/-0.37	1.73+/-0.45	0.996	0.323	59
Objective burden	24.35+/-7.31	27.03+/-6.44	1.517	0.135	59

Table XI: DAS-1 Overall behavior

DAS	Positive Schizophrenia	Negative schizophrenia	't'	df	P value
	Mean+/-SD	Mean+/-SD			
Self care	2.04+/-1.72	2.5+/-1.2	0.692	29	0.495
Underactivity	3.43+/-1.04	4.00+/-0.53	1.464	29	0.154
Slowness	1.78+/-1.04	2.5+/-1.07	1.666	29	0.106
Social withdrawal	2.83+/-1.80	3.88+/-1.13	1.537	29	0.135
Overall behaviour	2.5217+/-0.8357	3.2188+/-0.7611	2.075	29	0.047*

*= P value is significant

The schizophrenia patients had significantly higher disability in overall behavior and in the individual items viz., self care, slowness and social withdrawal (Table VII).

Compared to bipolar patients, schizophrenia patients had significantly higher disability in social role performance (Table VIII). In the individual items, there is significant disability in marital role affective & sexual, heterosexual role and occupational

role, both work performance & interest in getting job. There is no significant difference in the modifying factors between the two groups (Table IX).

The subjective burden score was higher in families of schizophrenia patients but objective score were slightly higher for families of bipolar patients. There is not statistically significant difference in the family burden between the two groups (Table X). The socio-demographic data did not show any significant difference

Table XII: DAS-2 Social Role Performance

DAS	Positive Schizophrenia	Negative Schizophrenia	't'	df	P value
	No.(%) [n=23]	No.(%) [n=8]			
Household activities	4.09+/-1.24	4.25+/-0.89	0.341	29	0.735
Marital role affective	6.70+/-2.84	9.00+/-0.00	2.273	29	0.031*
Marital role sexual	6.61+/-2.9	9.00+/-0.00	2.304	29	0.029*
Parental role	3.30+/-1.87	4.38+/-0.74	1.563	29	0.129
Heterosexual role	2.87+/-1.39	3.75+/-0.89	1.665	29	0.107
Social contact friction	3.04+/-1.26	2.13+/-1.36	1.742	29	0.160
Occupational role work performance	4.57+/-0.84	5.00+/-0.00	1.442	29	0.160
Occupational role-interest in getting job	3.7+/-0.97	4.00+/-0.76	0.801	29	0.430
Interest& information	3.26+/-1.32	4.00+/-0.76	1.489	29	0.147
Behaviour in emergencies	3.26+/-1.10	4.13+/-0.35	2.169	29	0.038*
Dysfunction in social roles	3.48+/-0.55	3.96+/-0.38	2.236	29	0.033*

*= P value is significant

Table XIII: DAS-4 Modifying factors

DAS	Positive Schizophrenia	Negative Schizophrenia	't'	df	P value
	Mean+/-SD: n=23	Mean+/-SD: n=8			
Assets	0.30+/-0.63	0.13+/-0.35	0.754	29	0.457
Marital role affective	0.087+/-0.29	0.13+/-0.35	0.304	29	0.764
Marital role sexual	2.74+/-1.54	3.63+/-1.30	1.449	29	0.158
Parental role	0.52+/-0.73	0.63+/-0.74	0.343	29	0.734

Table XIV: Family burden in positive & negative Schizophrenia

DAS	Positive Schizophrenia	Negative Schizophrenia	't'	df	P value
	Mean+/-SD: n=23	Mean+/-SD: n=8			
Financial burden	7.35+/-2.27	4.25+/-0.89	0.341	29	0.735
Disruption of family routine activities	6.22+/-2.50	9.00+/-0.00	2.273	29	0.031*
Disruption of family leisure	5.26+/-2.03	9.00+/-0.00	2.304	29	0.029*
Disruption of family interaction	4.30+/-2.57	4.38+/-0.74	1.563	29	0.129
Effect on physical health of others	0.26+/-0.45	3.75+/-0.89	1.665	29	0.107
Effect on mental health of others	1.04+/-0.82	1.00+/-0.53	0.139	29	0.891
Subjective burden	1.04+/-0.82	2.13+/-1.36	1.742	29	0.160
Objective burden	1.87+/-0.34	5.00+/-0.00	1.442	29	0.160

Table XV: Correlations

	Overall Behaviour DAS-1		Social role performance DAS-2	
	R	P	R	P
Schizophrenia				
Subjective burden	0.251	0.173	0.108	0.563
Objective burden	0.297	0.105	0.390	0.030*
Bipolar disorder				
Subjective burden	0.251	0.173	0.108	0.563
Objective burden	0.297	0.105	0.390	0.030*

between positive and negative schizophrenia. Age distribution shows that majority of the patients are of age group 30-40 yrs.

There is no significant different difference in mean age, education or illness variables of positive and negative schizophrenia. There is no statistically significant difference in the psychopathology score between the two groups as indicated by comparing the CPRS scores of patients with positive schizophrenia and those with negative schizophrenia.

There is significant disability in negative than in positive schizophrenia in the overall behavior (**Table XI**).

There is significant disability in negative schizophrenia in social role performance (**Table XII**). The individual items viz., marital role both affective and sexual, behavior in emergencies and dysfunction in social roles, the negative group had significant disability. There is no significant difference in the modifying factors between the two groups (**Table XIII**).

The family burden did not show any statistical significance. The burden in the items of disruption of family routines and family leisure is higher in the positive subtype (**Table XIV**).

There is a significant correlation between objective burden and social role performance in schizophrenia group (**Table XV**).

Discussion:

There have been few studies that compared the psychopathology, disability

and family burden of patients with schizophrenia and affective disorder. In the present study, thirty- one schizophrenia patients and thirty bipolar affective disorder patients were compared. An attempt was made to compare the positive and negative subtypes of schizophrenia also. There were twenty –three positive and eight negative schizophrenia patients.

As noted by Chakarbatr et al,⁵ significantly higher number of bipolar patients were found to be married (63.33%) compared to schizophrenia patients (32.3%).p value = 0.05 (Table-II). In the negative schizophrenia group, there were no married persons. All were either unmarried (62.5%) or separated (37.5%) compared to positive subtype. In his study, Mohan et al reported that 60% of negative schizophrenia patients remained as single compared to 33.3% of positive schizophrenia patients.¹⁵

The presence of family history was significantly higher in bipolar disorder patients (50%) compared to schizophrenia patients (19.4%). 36.67% of bipolar patients had a family history of affective disorder and 3.33% had a family history of alcohol & drug use (**Table III**). According to Dan Blazer, most epidemiological studies have shown consistently higher number of patients of mood disorder with family history. Family history of alcoholism has also been repeatedly demonstrated to be more common among mood disorder patients.¹⁶

The caregivers of schizophrenia patients were mainly mother and brothers whereas

in bipolar group the main caregiver was spouse. The difference was not statistically significant. (Table IV). The observation that the key relatives of affective disorder patients were mainly spouses was noted in the study by Chakrabarti et al⁵ also. The excess of spouses in bipolar disorder group can be explained by the higher number of married persons among bipolar patients.

Disability:

Disability measurement using Disability Assessment Schedule showed that schizophrenia patients had significant disability in section 1, the overall behavior (0.000) and section 2, the Social Role Performance (0.001). (Tables VII & VIII) The items in section 4, the modifying factors did not show significant statistical difference between the two groups (Table IX).

Rahman & Indran (1977) in a study using Disability Assessment Schedule on 80 schizophrenia and 48 mood disorder patients found that there were no significant differences in the prevalence and severity of disabilities between the two disorders. Chakrabarti et al⁵ has reported that dysfunction rated on Dysfunction Analysis Questionnaire was more in schizophrenia compared to bipolar affective disorder patients. Marneos et al¹⁷ studied 10 affective, 101 schizoaffective and 148 schizophrenic disorders and found that the disability in social life, communication and cognitive functions were more in schizophrenia patients than affective disorder patients. Schizoaffective disorder occupied an intermediate position.

The comparison of disability between schizophrenia subtypes shows that the disability in DAS section 1, overall behavior and section 2, Social Role Performance were significantly higher in negative schizophrenia patients. (Tables XII & XIII). Similar findings were reported by Mohan et al¹⁵ and Andreasen et al² who found that patients with negative schizophrenia had more disability

than positive type on social, intellectual and cognitive domains.

Family Burden:

Previously authors like Chakrabarti et al⁵ reported that relatives of schizophrenia patients had more burden than those of bipolar patients. But in our study, results show that families of patients with bipolar disorder as well as schizophrenia experience considerable burden. (Table IX). Though disability scores were more in schizophrenia, the burden of care was found to be similar between the two groups. Chakrabarti et al also found it to be similar between the two groups. Chakrabarti et al found that disruption of family routines was the area in which burden was experienced most. In this study, it was financial burden which was experienced most. The financial burden was an outcome of patients' inability to work and also the expenses of treatment. The families from rural background (98% of families are from rural background) incur expenses in bringing the patients to the health care center which are mostly located in urban areas. Mandelbrote & Folkard¹⁸, Martyns-Yellowe¹⁹ and Giel et al²⁰ have reported more burden in rural families. Many relatives have reported that the illness has drained their savings. Some were forced to take loans. Financial burden was emphasized in the studies by Mandelbrote & Folkard, Hoenig & Hamilton, Martyns-Yellowe, Giel et al and Ohaeri.^{19,21,22}

Disruption of family interaction was another significant aspect of burden. In this study most families are nuclear. Thus when a family member suffers from illness it affects the interaction of the family members themselves and with neighbours. In our country, the stigma attached to mental disorders also play a huge role in determining the amounts and patterns of family interactions. It will have effects on family leisure and family routines also. Giel et al²⁰ in the WHO multicentre study reported burden in interpersonal spheres in

families of patients with psychosis, apart from financial burden. He also commented that socio-cultural factors contributed to the pattern of burden in India.

In this study, it was found that both the groups reported financial burden, followed by disruption in family routines, disruption in family leisure and disruption in family interaction. The burden in the area of mental and emotional health was considerably less and that in the area of physical health of family member was almost negligible. Similar pattern was found in the study by Chakraborti et al. Gautam & Nijhawan²³ had reported higher burden in the areas of family routine, family interaction and health of family members in the families of schizophrenia patients. Ohaeri²² after studying 75 schizophrenia and 20 affective disorder patients concluded that disturbed behaviour was a greater determinant of severity of burden than psychiatric diagnosis.

There were no significant differences in the family burden between positive and negative subtypes of schizophrenia. On analyzing the individual items it was found that positive schizophrenia group had slightly more disruption in family routines, family leisure and family interaction.¹⁵

Correlations

An attempt was made to explore the relationship between the psychopathology, disability and family burden. It was found that there is no correlation between psychopathology and family burden in schizophrenia or bipolar disorder. Similarly, in the positive and negative subtypes of schizophrenia also there was no significant correlation between psychopathology and family burden. Mohan et al¹⁵ reported positive correlation between psychopathology and objective burden in positive schizophrenia and negative schizophrenia. The development of tolerance by relatives towards symptoms may explain the lack of correlation between psychopathology and

burden. No significant correlation was obtained between psychopathology and disability scores in any patient groups.

In schizophrenia and bipolar groups, there was a significant correlation between objective burden and disability in social role performance ($r=0.390$ & 0.397 ; $p < 0.05$). The subjective burden also correlated significantly with disability in social role performance in bipolar disorder ($r = 0.388$; $p < 0.05$)

In negative schizophrenia, significant correlation was found between objective burden and disability in social role performance ($r = 0.089$; $p < 0.05$). The subjective burden was found to have significant correlation with disability in overall behavior in the positive subtype of schizophrenia ($r = 0.509$; $p < 0.05$).

Thus, greater the disability greater is the burden experienced. Similar findings are reported by Chakraborti et al⁵

Limitations of the study

- 1) The present study was a cross sectional study. A prospective design with at least one follow up would have been better.
- 2) The sample size was small. Another is that during the study only 3 affective disorder patients were of depressive phase. The rest were in manic phase. Thus, the generalization of the result is to be done cautiously.
- 3) Another factor affecting the burden of the family members is the appraisal they have about the illness. In this study, this was not considered.
- 4) The interviewer was not blind to the diagnoses.

Conclusion:

There have been few studies comparing the family burden, disability and psychopathology of schizophrenia and affective disorders. We found that more schizophrenia patients were unmarried than bipolar patients. The two groups have similar profiles on other sociodemographic data. There was no significant difference

between the two groups on psychopathology or family burden. Significant disability was found in the overall behavior and social role performance in schizophrenia than bipolar patients. Financial burden came out to be the main concern of the families of both the groups. Significant correlation was found between disability and objective burden. Negative schizophrenia patients showed more disability in overall behavior and social role performance.

Future Directions

There is the need to develop rehabilitation services not only to schizophrenia patients but also for bipolar patients. The component of rehabilitation has to be tailored to suit each patient based on his / her disability. The delivery of mental health services should include the rehabilitation programme. Family interventions are needed to increase the coping ability of the caregivers of these patients. The formation of self-help groups will help the patients as well as their family members in coping with the problems.

References:

1. Kuszniir A, Cooke RG, Young LT. The correlates of community functioning in patients with bipolar disorder. *J Affect Disord* 2000; 61(1-2):81-5; [http://dx.doi.org/10.1016/S0165-0327\(99\)00193-7](http://dx.doi.org/10.1016/S0165-0327(99)00193-7)
2. Andreasen NC, Flaum M, Swayze VW 2nd, Tyrrell G, Arndt S. Positive and negative symptoms in schizophrenia: a critical reappraisal. *Arch Gen Psychiatry*. 1990; 47(7):615-21; <http://dx.doi.org/10.1001/archpsyc.1990.01810190015002>
3. Harrow M, Goldberg JF, Grossman LS, Meltzer HY. Outcome in manic disorders: a naturalistic follow-up study. *Arch Gen Psychiatry* 1990; 47(7):665-71; <http://dx.doi.org/10.1001/archpsyc.1990.01810190065009>
4. Pradhan SC, Sinha VK, Singh TB. Psychosocial dysfunctions in patients after recovery from mania and depression. *Int J Rehabil Res* 1999; 22(4):303-9; <http://dx.doi.org/10.1097/00004356-199912000-00007>
5. Chakrabarti S, Raj L, Kulhara P, Avasthi A, Verma SK. Comparison of the extent and pattern of family burden in affective disorders and schizophrenia. *Indian J Psychiatry* 1995; 37(3):105-12.
6. Tiihonen J, Wahlbeck K, Lönnqvist J, Klaukka T, Ioannidis JP, Volavka J, et al. Effectiveness of antipsychotic treatments in a nationwide cohort of patients in community care after first hospitalisation due to schizophrenia and schizoaffective disorder: observational follow-up study. *BMJ* 2006; 333(7561): 224.
7. Jacobsson L, von Knorring L, Mattsson B, Perris C, Edenius B, Kettner B, et al. The comprehensive psychopathological rating scale—CPRS—in patients with schizophrenic syndromes. Inter-rater reliability and in relation to Mårtens' S-scale. *Acta Psychiatr Scand* 1978; 57(S271): 39-44; <http://dx.doi.org/10.1111/j.1600-0447.1978.tb02360.x>
8. World Health Organization. WHO psychiatric disability assessment schedule (WHO/DAS). Geneva: WHO; 1988.
9. de Jong A, Giel R, Slooff CJ, Wiersma D. Social disability and outcome in schizophrenic patients. *Br J Psychiatry* 1985; 147(6):631-6; <http://dx.doi.org/10.1192/bjp.147.6.631>
10. Magliano L, Fadden G, Madianos M, de Almeida JM, Held T, Guarneri M, et al. Burden on the families of patients with schizophrenia: results of the BIOMED I study. *Soc Psychiatry Psychiatr Epidemiol* 1998; 33(9):405-12; <http://dx.doi.org/10.1007/s001270050073>
11. Thara R, Srinivasan L. Management of social disabilities in schizophrenia. *Indian J Psychiatry* 1998; 40(4):331-37.
12. Pai S, Kapur RL. The burden on the family of a psychiatric patient: development of an interview schedule. *Br J Psychiatry* 1981; 138(4):332-5; <http://dx.doi.org/10.1192/bjp.138.4.332>
13. Provencher HL, Mueser KT. Positive and negative symptom behaviors and caregiver burden in the relatives of persons with schizophrenia. *Schizophr Res* 1997; 26(1):71-80; [http://dx.doi.org/10.1016/S0920-9964\(97\)00043-1](http://dx.doi.org/10.1016/S0920-9964(97)00043-1)

14. Fadden G, Bebbington P, Kuipers L. The burden of care: the impact of functional psychiatric illness on the patient's family. *Br J Psychiatry* 1987;150(3):285-92; <http://dx.doi.org/10.1192/bjp.150.3.285>
15. Rahman MB, Indran SK. Disability in schizophrenia and mood disorders in a developing country. *Soc Psychiatry Psychiatr Epidemiol* 1997; 32(7):387-90; <http://dx.doi.org/10.1007/BF00788178>
16. Woods SW. The economic burden of bipolar disease. *J Clin Psychiatry* 2000; 61 Supp 13:38-41.
17. Marneros A, Deister A, Rohde A. Psychopathological and social status of patients with affective, schizophrenic and schizoaffective disorders after long-term course. *Acta Psychiatr Scand* 1990;82(5): 352-8; <http://dx.doi.org/10.1111/j.1600-0447.1990.tb01400.x>
18. Grad J, Sainsbury P. The effects that patients have on their families in a community care and a control psychiatric service—A two year follow-up. *Br J Psychiatry* 1968; 114(508): 265-78; <http://dx.doi.org/10.1192/bjp.114.508.265>
19. Martyns-Yellowe IS. The burden of schizophrenia on the family. A study from Nigeria. *Br J Psychiatry* 1992; 161(6):779-82.
20. Giel R, de Arango MV, Hafeiz Babikir A, Bonifacio M, Climent CE, Harding TW, et al. The burden of mental illness on the family. *Acta Psychiatr Scand* 1983;68(3):186-201.
21. Hoenig J, Hamilton MW. The schizophrenic patient in the community and his effect on the household. *Int J Soc Psychiatry* 1966; 12(3):165-76; <http://dx.doi.org/10.1177/002076406601200301>
22. Ohaeri JU. Caregiver burden and psychotic patients' perception of social support in a Nigerian setting. *Soc Psychiatry Psychiatr Epidemiol* 2001;36(2):86-93; <http://dx.doi.org/10.1007/s001270050294>
23. Gautam S, Nijhawan M. Burden on families of schizophrenic and chronic lung disease patients. *Indian J Psychiatry* 1984;26(2):156-59.

Conflict of interests: Nil

Date of submission: 19-12-2015

Source of funding: Nil

Date of acceptance: 21-04-2016

Authors details:

1. Professor and HOD, Department of Psychiatry, Kannur Medical College, Anjarakandy, Kannur- 670611, Kerala
2. **Corresponding author:** Assistant Professor, Department of Psychiatry, Kannur Medical College, Anjarakandy, Kerala- 670611, India; E-mail: snehithansaji@gmail.com
3. Resident, Department of Psychiatry, Kannur Medical College, Anjarakandy Kerala- 670611
4. Former Professor and HOD, Department of Psychiatry, Calicut Medical College, Kozhikode, Kerala
5. Professor and HOD, Department of Psychiatry, KMCT Medical College, Mukkam, Kozhikode
6. Former Professor and HOD, Department of Psychiatry, Kannur Medical College, Anjarakandy, Kannur- 670611, Kerala