

Family Burden among Caregivers of Male and Female Bipolar Affective Disorder Patient: A Comparative Study

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Abstract

Background: Bipolar affective disorder is a chronic illness that causes a considerable degree of burden on the caregivers. Few studies from India have measured the family burden of bipolar affective disorder and its comparison across gender.

Aims: The aim of the study is to assess and compare the level of family burden among the caregivers of male and female Bipolar affective disorder patients.

Methodology: About 60 caregivers of patients diagnosed with bipolar disorder, aged 20 years or more, of either gender, living with the patient for at least two years were assessed by the Family Burden Interview Schedule (FBIS). Descriptive statistics, chi-square test, and t-test are used to analyze the data.

Results: There was a statistically significant difference ($p < 0.05$) between two groups in domains of family burden like 'Disruption of routine family leisure' and no statistically significant difference could be observed in other domains.

Conclusions: The higher level of family burden was experienced by the caregiver of female BPAD patients. Family-based and individual intervention is highly suggested in caregivers of BPAD patients, especially in female BPAD patients.

Keywords: Family burden, Caregiver burden, Bipolar affective disorder.

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I. Introduction

Mental disorders have a profound effect on the health and well-being not only of individuals but also of their families.(1)(2) With the advent of deinstitutionalization in 1955 due to the introduction of antipsychotics chlorpromazine, most mentally ill patients are now being cared for at the community level by their families. Globally, it is recognized that caregivers play an important role.(3) In India, more than 90% of patients with chronic mental illness live with their families. The caregiver plays multiple roles in the care of persons with mental illness, including taking day-to-day care, supervising medications, monitoring the mental state, identifying the early signs of illness, relapse, and deterioration, taking the patient to the hospital, and looking after the financial needs. The caregiver also has to bear with the behavioural disturbances in the patient. They have to curtail their social and leisure activities, and sometimes have to take leave from their jobs. The caregiver also supervises treatment and provides emotional support to the patient. Thus, the caregiver experiences considerable stress and burden.

According to the World Federation of Mental Health, 2010, the caregiving burden involves physical, psychological, social, financial problems, experienced by families in caring for their family members with mental illness.(3)

Bipolar disorder is a recurrent and long-term mental illness. A large cross-sectional survey of 11 countries found the overall lifetime prevalence of bipolar spectrum disorders was 2.4%, with a prevalence of 0.6% for bipolar type I and 0.4% for bipolar type II.(17)(16) The current prevalence in India of bipolar disorder is 6.9% as compared to other psychiatric illnesses. It virtually always results in impaired interpersonal, social,

and occupational functioning.(4)

Ogilvie et al. (2005) reported that, although there was a lack of relevant literature on caregiver burden in bipolar disorder, available data suggest that caregiver burden is high.(5) In the 2007 study by Perlick et al., found 89% of family caregivers of patients with a bipolar disorder experienced burden in relation to patient problem behavior, role dysfunction, or disruption of household routine.(6)(7) Perlick (2001) reports that high caregiver burden predicts subsequent adverse clinical outcomes among patients with bipolar disorder.(8)

Caring for a family member with bipolar affective disorder places an enormous burden on family caregivers and has been shown to have a significant effect on the quality of life and the family's well-being. Therefore, family burden, need to be examined to develop strategies to aid in caregiving. The present study findings can help understand the problems and difficulties influencing caregivers and develop strategies to help in solving these problems.

II. Methodology

The study was a cross-sectional hospital-based comparative study among the caregivers of male and female Bipolar affective disorder patients. A total number of 60 caregivers of the Bipolar affective disorder patient in accordance to the DCR ICD- 10 criteria were selected. Among the total sample, 30 were the caregivers of male Bipolar affective disorder patients and 30 were of female selected from outpatient and inpatient unit, department of MHI, COE, SCBMCH, Cuttack. The samples were selected by using the purposive sampling method over the period of 12 months from November 2020 to October 2021.

The study was approved by the Ethics Committee (Approval number: 417, dated 14.10.2020) of the institute and all the participants were recruited after obtaining written informed consent. **Inclusion and exclusion criteria of male & female Bipolar affective disorder patients:**

Patient diagnosed Bipolar affective disorder according to DCR of ICD-10, age range between 18 to 60 years, at least educated up to primary level were considered for the study. Chronic BPAD patient of duration of illness at list 2 years or above were included.

Any history of significant physical or neurological conditions, psychiatric co-morbidity, Mental retardation, Epilepsy, or Substance abuse, and those who failed to give the consent were excluded from the study.

Caregivers of BPAD patients:

A caregiver is anyone who cares, unpaid, for a friend or family member who due to illness, disability, a mental health problem, or an addiction cannot cope without their support. (9) According to Mental Healthcare Act, 2017, Caregiver is "A person who resides with a person with mental illness and is responsible for providing care to that person. A care-giver includes a relative, friend, family member, or any other person who provides care for free or with remuneration.(10)(11) In the current study term "caregiver" is an informal unpaid caregiver caring for a person with Bipolar affective disorder, who can be a family member such as; parents, spouse, sibling, children.

Inclusion and exclusion criteria of caregivers:

In the current study the caregivers included who has been with the patient continuously for the last 2 years, age between 20-60 years, and at list educated up to primary level.

Caregivers having history of epilepsy, organic brain disorder, major physical illness, psychiatric illness including substance dependence, personality disorders or mental retardation, more than one psychiatric ill patient is present in the family were excluded from the study.

Tools used:

A semi structured socio-demographic and clinical data sheet is used to capture the socio demographic and clinical characteristics of the patients and caregivers.

Family Burden Interview Schedule (Shaila, Pai & Kapoor, R.L., 1981):

Family Burden Interview Schedule Pai and Kapur 1981(12) will be used to assess burden across Six domains. This is a semi-structured interview schedule comprising of 24 items grouped under 6 areas- 1) Financial burden, 2) Disruption of routine family activities, 3) Disruption of family leisure, 4) Disruption of family interaction, 5) Effect on physical health of others, 6) Effect on mental health of others. All the items of this scale are rated on a 3 points scale (viz, severe burden, Moderate burden, and No burden).

Procedure

Informed consent was taken from patients coming to inpatient and outpatient units by considering the inclusion and exclusion criteria. The tools were administered on the study sample. Further information was collected based on Socio-demographic and clinical datasheets. Subsequently, the patient's caregivers those who

were willing to participate in the study, the socio-demographic and clinical data sheet administered on them, the family burden was assessed by using Family burden interview schedule (Shaila, Pai & Kapoor, R.L., 1981). The statistical analysis was done by Statistical Package for Social Science (SPSS) version 22. Frequencies and percentages were used for comparing categorical data and descriptive statistics were done to describe the continuous variable. Comparison of family burden between the two groups was carried out using the chi-square test and independent t-test. Descriptive statistic was used to get the mean score and percentile of the socio-demographic variables.

III. Result

Table -1 Comparison of Socio-demographic profile among male and female bipolar affective disorder patients.

Variables		Bipolar affective disorder Male patients (N=30)	Bipolar affective disorder Female patients (N=30)	Total	df	X ² / f	p
Religion	Hindu	29(96.7%)	30(100%)	59(98.3%)	1	1.017 <i>f</i>	1.000
	Islam	1(3.3%)	0(0%)	1(1.7%)			
Education	Primary	10(33.3%)	10(33.3%)	20(33.3%)	3	3.133 <i>f</i>	.384
	Upper Primary	2(6.7%)	3(10%)	5(8.3%)			
	Matriculation	10(33.3%)	14(46.7%)	24(40%)			
	Above	8(26.7%)	3(10%)	11(18.3%)			
Marital Status	Married	16(53.3%)	21(70%)	37(61.7%)	3	4.823 <i>f</i>	.103
	Unmarried	14(46.7%)	7(23.3%)	21(35%)			
	Separated	0(0%)	1(3.3%)	1(1.7%)			
	Widow	0(0%)	1(3.3%)	1(1.7%)			
Occupation	Employed	21(70%)	3(10%)	24(40%)	1	22.500	.000
	Unemployed	9(30%)	27(90%)	36(60%)			
Types of family	Nuclear	13(43.3%)	21(70%)	34(56.7%)	1	4.344	.037
	Joint	17(56.7%)	9(30%)	26(43.3%)			

(df= degree of freedom, ^f = Fisher's Exact Test)

Table-1 shows the socio-demographic details of male and female bipolar affective disorder patients. Out of 60 patients taken in to study 30s were male and 30s were female.

Table -2 Comparison of Socio-demographic profile among caregivers of male and female bipolar affective disorder patients.

Variables		Male patient's caregiver (N=30)	Female patient's caregiver (N=30)	Total	df	X ² / f	p
Age range of the caregivers in years	20-30	5(16.7%)	5(16.7%)	10(16.7%)	3	2.924	.404
	31-40	10(33.3%)	8(26.7%)	18(30%)			
	41-50	3(10%)	8(26.7%)	11(18.3%)			
	51-60	12(40%)	9(30%)	21(35%)			

Education	Primary	9(30%)	11(36.7%)	20(33.3%)	3	1.240 <i>f</i>	.800
	Upper Primary	4(13.3%)	3(10%)	7(11.7%)			
	Matriculation	8(26.7%)	10(33.3%)	18(30%)			
	Above	9(30%)	6(20%)	15(25%)			
Types of family	Nuclear	13(43.3%)	21(70%)	34(56.7%)	1	4.344	.037
	Joint	17(56.7%)	9(30%)	26(43.3%)			
Domicile	Rural	24(80%)	24(80%)	48(80%)	1	.000	1.000

	Urban	6(20%)	6(20%)	12(20%)			
Occupation	Employed	22(73.3%)	21(70%)	43(71.7%)	1	.082	.774
	Unemployed	8(26.7%)	9(30%)	17(28.3%)			
Marital status	Married	24(80%)	19(63.3%)	43(71.7%)	2	2.033 <i>f</i>	.404
	Unmarried	4(13.3%)	7(23.3%)	11(18.3%)			
	Widow	2(6.7%)	4(13.3%)	6(10%)			
Relationship with the patient	Father	9(30%)	2(6.7%)	11(18.3%)	7	39.823 <i>f</i>	.000
	Mother	1(3.3%)	9(30%)	10(16.7%)			
	Brother	10(33.3%)	2(6.7%)	12(20%)			
	Sister	0(0%)	6(20%)	6(10%)			
	Wife	5(16.7%)	0(0%)	5(8.3%)			
	Husband	0(0%)	8(26.7%)	8(13.3%)			
	Son	5(16.7%)	1(3.3%)	6(10%)			
	Daughter	0(0%)	2(6.7%)	2(3.3%)			
Socio economic status	LSES	22(73.3%)	29(96.7%)	51(85%)	2	6.305 <i>f</i>	.030
	MSES	4(13.3%)	1(3.3%)	5(8.3%)			
Socio economic status	USES	4(13.3%)	0(0%)	4(6.7%)			

(df= degree of freedom, ^f = Fisher's Exact Test)

Table-2 shows that out of 60 caregivers taken in to study the 30s are the caregiver of male patients and the 30s are the caregiver of female patients with Bipolar affective disorder.

Table -3: Descriptive statistics for Pt. Age

Variable	Sex	Sample N =30 Mean ±SD	t	df	p
Age	Male	37.37 ±11.909	.543	58	.589
	Female	35.77 ±10.897			

Table-3 shows the descriptive statistics for patients' age. It presents that the Mean ± SD of the age of male patients was 37.37±11.909 whereas for females it was 35.77±10.897.

Table – 4 Descriptive statistics for caregivers Age

Variable	Caregiver	Sample N =30 Mean ±SD	Df	t	p
Age	Male patient's caregivers	43.60±12.599	58	.248	.805
	Female patient's caregivers	42.83±11.296			

Table-4 shows the descriptive statistics for caregivers' age. It stated that the Mean ± SD of the age of male patient's caregivers was 43.60± 12.599 whereas for the female patient's caregivers it was 42.83± 11.296.

Table – 5 Comparison of family Burden among caregivers of male and female bipolar affective disorder patients.

FB Domains	Caregiver Groups		t	df	p
	Male patient's caregivers(N=30) Mean ±SD	Female patient's caregivers(N=30) Mean ±SD			
Financial Burden	5.40±2.896	6.03±1.650	-1.041	58	.302
Disruption of routine family activities	6.80±2.384	7.27±1.461	-.914	58	.364
Disruption of routine family leisure	4.90±1.971	6.10±1.213	-2.839	58	.006*

Disruption of routine family interaction	4.47±2.776	5.33±2.468	-1.278	58	.206
Effect on physical health of others	2.23±1.104	2.50±1.075	-.948	58	.347
Effect on mental health of others	2.60±.968	2.40±1.070	.759	58	.451

*p <0.05 (Statistical significance at 0.05 Level). Figure: 1

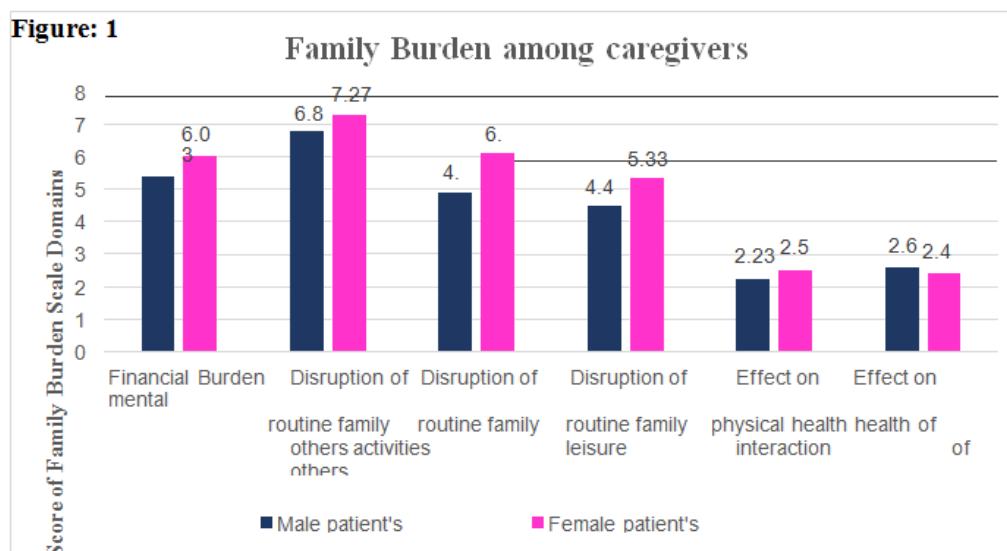


Table-5 is presented in figure-1 graphically, that the comparison of family burden among caregivers of male and female bipolar affective disorder patients. It shows that there was a statistically significant difference ($p < 0.05$) between two groups in domains of family burden like 'Disruption of routine family leisure'. However, no significant difference could be observed in other domains like, 'Financial Burden', 'Disruption of routine family activities', 'Disruption of routine family interaction', 'Effect on the physical health of others, and 'Effect on the mental health of others of the family burden interview schedule.

IV. Discussion

A total of 60 caregivers of BPAD patients were considered for the study, out of which 30 were of male patients and 30 were of female patients. The mean \pm SD of the age of male patient's caregivers was 43.60 ± 12.599 whereas for the caregiver of female patients it was 42.83 ± 11.296 . The majority 98.3% of caregivers were belonging to the Hindu religion and the rest of 1.7% were Islam religion. Similar study findings were reported by Pakkiyalakshmi et al., (2015), the majority 96.2% of caregivers were belonging to the Hindu religion and the rest of 1.9% each were belonging to Christian and Islam religions respectively.(13) Contradictory to present study findings Ghosh et al., (2020) reported that the majority 54.3% caregivers were belonged to the Islam religion and the rest 37.1% were Hindu religion.(3) In the present study, only 1.7% of caregivers were belonging to the Islam religion. This can be explained on the basis of Islam Population in Odisha which is 2.17%, according to the 2011 census survey.(14)

The majority of the caregivers 33.3% were studied up to the primary level. However, 30% of them studied up to matriculation but 25% completed their education above matriculation and 11.7% studied upto the upper primary level. Similar study findings were reported by Ghosh et al., (2020), the majority 28.6% studied up to primary school, 25.7% up to above matriculation, 22.9% Illiterate, 14.3% up to matriculation, and the rest 8.6% up to the upper primary.(3) Contradictory to present study findings Gania et al., (2019) reported that the majority 48% were having no formal education, 27% studied up to secondary school, 20% up to above matriculation, and the rest 5% up to the primary.(15) Another study by Pakkiyalakshmi et al., (2015) reported that the majority 38.5% were Illiterate, 25% studied up to matriculation, 23.1% studied up to upper primary school, 9.6% up to primary, and the rest 3.8% above matriculation.(13) This can be explained on the basis of that due to the effective literacy rate in Odisha works out to 72.9% (Rural 70.2%; Urban 85.7%), according to 2011 census survey.(16)

It also revealed that the maximum caregivers (71.7%) were employed but only 28.3% were unemployed. For their livelihood majority of the caregivers were engaged in Private and government Jobs and farmers, daily wage workers. similar study findings were reported by Ghosh et al., (2020) that 22.9% of

caregivers were farmers, 20% were servicemen, 20% were unemployed, 14.3% were retired and the rest of 8.6%, 8.6%, 2.9%, 2.9% were daily laborer, housewife, businessman, and student respectively.(17) Another study by Pakkiyalakshmi et al., (2015) reported that the majority 44.2% were unskilled workers, 40.4% were clerical, shop owner, farmers, 9.6% unemployed, 5.8% were semi-skilled workers.(13) The majority 71.7% of caregivers were married whereas only 10% were widows. However, 18.3% of them were unmarried. Similar study findings were reported by Ghosh et al., (2020) that the majority 80% of caregivers were married, 11.4% were single, 8.6% were widows.(18) Another study by Gania et al., (2019) found that majority 93% of caregivers were married, 7% were unmarried.(15)

In the present study it was also revealed that the majority 20% of caregivers were the brother of the patients and the lowest 3.3% were daughter of the patients. The 2nd majority 18.37% of the caregivers were father of the patients whereas the mother relationship of caregivers with the patients were 16.7%. The rest 13.3%, 10%, 10% and 8.3% were husband, sister, son and wife of the patients respectively.

Also, it showed that most of the caregivers (85%) were belonging to the low socio-economic status whereas the rest 8.3% and 6.7% were belonging to the middle socio-economic status and upper socio-economic status respectively. similar study findings were reported by Gania et al., (2019) that majority 60% of caregivers were belonging to low socio-economic status, 40% were belonging to middle socio-economic status.(15)

In this present study, the comparison of family burden of caregivers of persons with the BPAD was done. In the financial burden domain of family burden, the male patient's caregiver scored low than the females. The Mean \pm SD of male patients' caregivers was (5.40 \pm 2.896) and for female patients' caregivers, it was (6.03 \pm 1.650) on the financial burden of family burden. There is no significant difference was found in this domain between the two groups ($t=-1.041$, $p=.302$). Contradictory to present study findings Swaroopachary et al., (2019) reported that severe burden is more commonly experienced by female caregivers. Severe burden in female caregivers due to the fact that the majority of the caregivers are the spouses of the patients and therefore in a family where the patient is male the financial parameter of the family functioning is significantly impaired. The high amount of burden among unemployed and those with low-income levels.(19) In this study male patient's caregivers scored low in the financial domain. This finding may be explained on the basis of that, among the caregivers of the male patients 80% were male. 30% were fathers, 33.3% were brothers and 16.7% were sons, and 73.3% of the caregivers of male patients were employed, also 56% belonged to joint families.

In this present study, on disruption of routine family activities domain of family burden, the Mean \pm SD of male patient's caregivers was (6.80 \pm 2.384) and that of the female patient's caregiver group was (7.27 \pm 1.461). No significant difference was found in this domain between the two groups ($t=-.914$, $p=.364$). Sood et al., (2011) reported that both the groups, viz., male and female patient's caregivers of bipolar affective disorder reported having burden and more than 90% of them perceived severe burden. At the time of admission and follow-up, the scores in specific areas of family burden highlight the fact that initially at the time of acute illness and subsequent hospitalization, the disruption of family routine and other activities is the major worry for the family. However, later on, as the patient recovers, the finances become a major concern as the money for treatment for the episode comes out of the family's resources; this is compounded by the loss of employment opportunities for both the patient and the caregiver.(20)

In this present study, The Mean \pm SD of male patient's caregivers was (4.90 \pm 1.971) and for female patient's caregivers, it was (6.10 \pm 1.213) on disruption of routine family leisure of family burden. A significant difference was found in this domain between the two groups ($t=-2.839$, $p=.006$). In this study male patient's caregiver scored lower in disruption of routine family leisure of family burden. This finding may be explained on the basis of that because family leisure is not a priority area for most male family members in Indian because of the family-centric nature of the Indian psyche where family duty is considered far above individual needs. As in our present study among male patients' caregivers 30% were fathers, 33.3% were brothers and 16.7% were sons, compared to spouses, fathers and siblings reported significantly higher involvement in caregiving to male patients. Our study findings correspond to the findings of another study conducted by Jayakrishnaveni et al., (2018).(21)

The Mean \pm SD of male patient's caregivers was (4.47 \pm 2.776) and that of the female patient's caregiver group was (5.33 \pm 2.468) on disruption of routine family interaction where there was no significant difference on this domain between the two groups ($t=-1.278$, $p=.206$). On the effect on physical health of others domain, the Mean \pm SD of male patient's caregivers was (2.23 \pm 1.104) and that of the female patient's caregiver group was (2.50 \pm 1.075). Also, no significant difference was found in this domain between the two groups ($t=-.948$, $p=.347$). Jayakrishnaveni et al., (2018) reported finding that the adverse impact on family interaction amongst the caregivers of subjects with BPAD possibly due to stigma for psychiatric illness.(21)

The Mean \pm SD of male patients' caregivers was (2.60 \pm .968) and that of the female patient's caregiver group was (2.40 \pm 1.070) on domain effect on the mental health of others. However, there was no significant difference between the two groups in this domain ($t=.759$, $p=.451$). In contrast to the present study Roychaudhuri et al., (1995) and Okafor et al., (2021) reported finding that caregivers of male patients had a

higher level of a subjective burden compared to caregivers of female patients.(22)(23)

Additionally, Okafor et al., (2021) Caregiver's/patient's characteristics which were significantly associated with the high level of burden. These include caregiver who had no spouse, caregivers with low monthly income, bipolar patients with severe illness, repeated number of suicide attempts, and bipolar patients with no tertiary education.(23).

V. Conclusion:

Higher level of family burden was experienced by the caregiver of female BPAD patients. There was a statistically significant difference ($p < 0.05$) between two groups in domains of family burden like 'Disruption of routine family leisure' and no difference could be observed in other domains.

LIMITATIONS OF STUDY:

- Limited sample size.
- Cross-sectional nature of the study.
- A purposive sampling method was used.
- Data was collected from a tertiary care hospital of Odisha, which may not reflect the data of the general population.

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