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Original article

Burden among caregivers of patients with mood disorders: a cross sectional study in a tertiary hospital

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Summary

Mood disorders impose a significant burden on a personal, medical and socioeconomic level of the caregivers. It is observed in our country that in almost all sort of patient with psychiatric illness including mood disorders depend on the care of their family members. The objectives of this study were to determine the level of burden of caregivers of patients with mood disorders attended in a tertiary care hospital and to identify the possible association of duration, type of mood disorders, and the socio demographic variables on the burden of caregivers. This was a cross sectional study, sample size were 95 and SCID-I applied on the subjects and they diagnosed mood disorders and caregiver's burden was assessed by using the Zarit Burden Interview (ZBI). It was found the positive relationship with the disease duration and caregiver burden level (p=0.000). The duration of providing care also significant (p=0.000) with the higher level of burden. Among the subjects 44.2% diagnosed Major Depressive Disorder, 43.1% Bipolar Mood Disorder (Manic), 7.4% Bipolar Mood Disorder (Depressive) and 5.3% diagnosed Dysthymic Disorder. The caregiver from nuclear family (74.7%) felt higher degree burden than caregivers from joint family (24.3%). The family type and burden level bound significant relationship (p=0.013). Regarding the burden level 54.8% caregiver possessed severe burden, 24.2% moderate to severe burden, 18.9% mild to moderate burden and 2.1% possessed little or no burden. To provide a total care to the patients with mood disorders it is necessary to mitigate the caregiver's burden. For this reason clinicians need to review periodically the status of caregiver's burden.

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Introduction

Caring for someone with psychiatric morbidity is associated with a high level of stress. The term caregiver burden refers to the emotional, social, and financial stresses that caring for a relative or friend with mental illness imposes on the caregiver.[1] In majority cases family members are now seen as a principal source of support and an important partner in the rehabilitation of the mentally ill in developing cultures with recent estimates indicating that between 1/3 and 2/3 of persons with mental illness currently reside with family members.[2] Studies in the western culture have shown a moderate level of caregivers' psychopathology and burden with correlates being clinical characteristic like patients' symptoms and socio-demographic variables and caregivers' socio-demographic factors and coping abilities.[3] Some studies from sub saharan Africa had suggested high level of burden associated with socio-demographic variables of the caregiver and higher symptoms level in the patient.[4,5]

A study from Bangladesh reported that the families with schizophrenic patients were most distressed and socially isolated and they had difficulties in the area of household functioning, financial and community problems.[6]

In Bangladesh the prevalence of mood disorders are about 5%. (4.6% are major depressive disorder and 0.4% are bipolar mood disorders).[7] In contrast to schizophrenia, bipolar disorder has a variable course characterized by recurrent episodes of depression and/or mania. And the Major depressive disorders also have variable courses. Therefore, the experiences and consequences of burden for caregivers of patients with mood disorders may differ from those of the caregivers of patients with schizophrenia.

To date, few studies have examined the care giving strains and the associated health and mental health risks among the family and friends of patients with mood disorders. One study revealed that 93% of caregivers of bipolar patients reported a moderate or higher level of care giving strain, when the patient was admitted to an inpatient unit or outpatient clinic, and 70% continued to report moderate or higher burden 15 months later.[8] Other studies have found that caregiver burden is associated with long-term financial difficulties among caregivers, along with marital strain, restrictions in social and leisure activities, and problems with health and mental health.[9,10]

It is necessary to improve quality of life of family caregivers of mood disorders, by early detection of signs and degree of care-giver burden and factors affecting it positively and it is important to identify the nature and extent of burden among the caregivers of mood disorders. So the researchers felt interest to identify the burden level of the caregivers and to explore the socio demographic risk factors and types of mood disorders of the patient which might be associated with the burden level. The general objective of this study was, to determine the level of burden of caregivers of patients with mood disorders attended in a tertiary care hospital. The specific objectives were to identify the possible association of duration and type of mood disorders, on the burden of caregivers and to find out relationship between socio-demographic variables of the subjects and the degree of the burden of caregivers.

Material and Methods

This was a cross sectional, analytical and descriptive study. Cases were taken from outpatient and inpatient department of Psychiatry, of Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh. Duration of study was one year (from July 2010 to June 2011). Samples were included in the study purposively. 100 consecutive patients who fulfilled the selection criteria were interviewed during the study period. Among them 5 was dropped out due to inadequate data. Before commencing the study, the data collection instruments were pre-tested on 10 % (n=10) of planned study population to test the applicability of the methodology including the research instruments. Some modifications in the questions were made out and were finalized.

Both male and female patients diagnosed with mood disorders at least for 6 months, in the age group 18-60 years only were included. The person who is providing care (financial support, physical and emotional support) to the patient at least for last 6 months were considered as caregivers. Patient and the caregiver with any severe physical illness from that he/she is unable to communicate with the researcher/interviewer were excluded.

Questionnaire to identify the socio demographic characteristics were used to identify the socio demographic status of sample. SCID (The Structured Clinical Interview for DSM-IV Axis-I disorders Clinician Version) was used to confirm the diagnosis of mood disorders. SCID is a structured interview for making the major DSM-IV Axis-I diagnosis.[11] In this study researcher used the Clinician version of SCID. Diagnostic and Statistical Manual of Mental Disorder (DSM-IV) criteria was used to diagnosis mood disorders on the basis of SCID-CV.

The Zarit's Burden Interview has been specially designed to reflect the stresses experienced by caregivers of patients with chronic illness, especially neuropsychiatric morbidities.[12] It has widely used scale for the caregivers of patient with neuropsychiatric diseases. In 2010 it has been used in Nigeria in a study titled 'Psychopathology and subjective burden amongst primary caregivers of people with mental illness in South-Western Nigeria'.[13] Researcher contacted with Steven H Zarit, PhD Professor and Head Department of Human Development and Family Studies ,USA, the author of the ZBI and his agent Mapi research trust for the kind permission to use this scale for academic purpose and the author has given written permission for such purpose and translate this scale and then the researcher done forward translation in Bengali, Backward translation in English and reviewed by the guide and other two senior qualified psychiatrists for applying to the pre-testing.

The researcher was duly careful about the ethical issues related to this study and received ethical approval from Institutional review board of Bangabandhu Sheikh Mujib Medical University.

Data were collected according to the methods of the study and analyzed by SPSS version 17. The data was tabulated to identify the possible association of duration of type of mood disorders on the burden of caregivers. Pearson's Chi square test was used to find out the significance. Regarding the chi square test p value < 0.05 taken as significant. Logistic regression also applied to find out any association between grouped variables and caregiver's burden. Result was presented as text, tables, and figures.

Results

The study identified socio demographic characteristics of the person with mood disorders and their caregivers including age, sex, habitat, family type, occupation and monthly family income.

Table – 1.1: Socio-demographic characteristics of the patients

Variables	**Burden level of their caregivers**								**Total**	
	Little or No		**Mild to moderate**		**Moderate to severe**		**Severe**			
	n	%	n	%	n	%	n	%	n	%
Age (years)										
18-27	2	2.1	5	5.3	12	12.6	21	22.1	40	42.1
28-37	0	.0	5	5.3	3	3.2	19	20.0	27	28.4
38-47	0	.0	6	6.3	3	3.2	4	4.2	13	13.7
48-57	0	.0	1	1.1	4	4.2	6	6.3	11	11.6
58-60	0	.0	1	1.1	1	1.1	2	2.1	4	4.2
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Sex										
Male	1	1.1	11	11.6	12	12.6	27	28.4	51	53.7
Female	1	1.1	7	7.4	11	11.6	25	26.3	44	46.3
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0

Habitat										
Rural	0	0.0	6	6.3	6	6.3	19	20.0	31	32.6
Urban	2	2.1	12	12.6	17	17.9	33	34.7	64	67.4
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Religion										
Islam	2	2.1	17	17.9	21	22.1	50	52.6	90	94.7
Hindus	0	0.0	1	1.1	2	2.1	2	2.1	5	5.3
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Education										
Illiterate	0	0.0	0	0.0	3	3.2	4	4.2	7	7.3
Primary	0	0.0	7	7.4	5	5.3	9	9.5	21	22.1
Secondary	1	1.1	2	2.1	6	6.3	17	17.9	26	27.3
Higher secondary	0	0.0	6	6.3	6	6.3	14	14.7	26	27.3
Graduate	1	1.1	1	1.1	3	3.2	6	6.3	11	11.6
Post graduate	0	0.0	2	2.1	0	0.0	2	2.1	4	4.2
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Occupation										
Service	0	0.0	5	5.3	3	3.2	11	11.6	19	20.0
Business	0	0.0	1	1.0	3	3.2	3	3.2	7	7.4
Student	2	2.1	4	4.2	10	10.5	15	15.8	31	32.6
Labor	0	0.0	0	0.0	0	0.0	1	1.1	1	1.1
Agriculture	0	0.0	1	1.1	1	1.1	2	2.1	4	4.2
Housewife	0	0.0	6	6.3	5	5.3	14	14.7	25	26.3
Retired	0	0.0	0	0.0	0	0.0	3	3.2	3	3.1
Unemployed	0	0.0	1	1.1	1	1.1	2	2.1	4	4.2
Other	0	0.0	0	0.0	0	0.0	1	1.1	1	1.1
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Principal earner of Family										
Yes	0	0.0	6	6.3	9	9.5	19	20.0	34	35.8
No	2	2.1	12	12.6	14	14.7	33	34.7	61	64.2
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Marital status										
Married	0	0.0	11	11.6	9	9.5	26	27.4	46	48.4
Unmarried	2	2.1	5	5.3	11	11.6	16	16.8	34	35.8
Divorced	0	0.0	1	1.1	2	2.1	9	9.5	12	12.6
Widow	0	0.0	1	1.1	1	1.1	1	1.1	3	3.1
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Family type										
Joint	0	0.0	5	5.3	8	8.4	17	17.9	30	31.6
Nuclear	2	2.1	13	13.7	15	15.7	35	36.8	65	68.4
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Monthly Family income (taka)										
< 10000	0	0.0	1	1.1	2	2.1	8	8.4	11	11.6
10001-20000	0	0.0	12	12.6	15	15.8	30	31.6	57	60.0
20001-30000	1	1.1	2	2.1	4	4.2	11	11.6	18	18.9
> 30000	1	1.1	3	3.2	2	2.1	3	3.2	9	9.5
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0

Table – 1.2: Socio-demographic characteristics of the caregivers

Variables	**Burden level**								**Total**	
	Little or No		**Mild to moderate**		**Moderate to severe**		**Severe**			
	n	%	n	%	n	%	n	%	n	%
Age (years)										
18-27	1	1.1	3	3.2	5	5.3	7	7.4	16	16.8
28-37	0	0.0	6	6.3	2	2.1	15	15.8	23	24.2
38-47	0	0.0	7	7.4	5	5.3	13	13.7	25	26.3
48-57	1	1.1	2	2.1	8	8.4	15	15.8	26	27.3
58-60	0	0.0	0	0.0	3	3.2	2	2.1	5	5.3
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Sex										
Male	2	2.1	8	8.4	9	9.5	24	25.2	43	45.2
Female	0	0.0	10	10.5	14	14.7	28	29.4	52	54.8
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Habitat										

Rural	1	1.1	5	5.3	6	6.3	18	18.9	30	31.5
Urban	1	1.1	13	13.7	17	17.9	34	35.8	65	68.5
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Religion										
Islam	2	2.1	17	17.9	21	22.1	50	52.6	90	94.7
Hindus	0	0.0	1	1.1	2	2.1	2	2.1	5	5.3
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Education										
Illiterate	0	0.0	0	0.0	1	1.1	2	2.1	3	3.2
Primary	0	0.0	2	2.1	7	7.4	14	14.7	23	24.2
Secondary	0	0.0	5	5.3	4	4.2	9	9.5	18	18.9
Higher secondary	0	0.0	6	6.3	4	4.2	9	9.5	19	20.0
Graduate	2	2.1	4	4.2	5	5.3	18	18.9	29	30.5
Post graduate	0	0.0	1	1.1	2	2.1	0	0.0	3	3.2
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Occupation										
Service	1	1.1	11	11.5	8	8.4	18	18.9	38	40.0
Business	0	0.0	0	0.0	2	2.1	6	6.3	8	8.4
Student	1	1.1	0	0.0	0	0.0	0	0.0	1	1.1
Agriculture	0	0.0	1	1.1	2	2.1	4	4.2	7	7.4
Housewife	0	0.0	6	6.3	11	11.5	24	25.2	41	43.1
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Principal earner of Family										
Yes	2	2.1	10	10.5	11	11.5	28	29.4	51	53.7
No	0	0.0	8	8.4	12	12.6	24	25.2	44	46.3
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Marital status										
Married	1	1.1	17	17.9	23	24.2	48	50.5	89	93.7
Unmarried	1	1.1	1	1.1	0	0.0	1	1.1	3	3.2
Divorced	0	.0	0		0	0.0	1	1.1	1	1.1
Widow	0	.0	0	.0	0	.0	2	100.0	2	2.1
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0
Monthly Family income (taka)										
< 10000	0	0.0	1	1.1	2	2.1	9	9.5	12	12.5
10001-20000	0	0.0	11	11.5	15	15.8	29	30.5	55	57.9
20001-30000	1	1.1	2	2.1	4	4.2	11	11.5	18	18.9
> 30000	1	1.1	4	4.2	2	2.1	3	3.1	10	10.5
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0

Table 2: Univariate analysis of the association between the variables and burden in the caregiver

Caregiver Variables	**Burden of care (ZBI 41 and above)**
	p value
Sex of caregivers	0.409
Relationship to patient	0.555
Habitat	0.547
Religion	0.717
Education	0.423
Occupation	0.047*
Marital status	0.204
Family Type	0.013*

* Significance

Table 3: Logistic regression analysis results of the variables associated with caregiver's burden

Variables	β	S.E.	Wald	df	Significance
Age of caregivers	0.324	0.317	1.045	1	0.307
Sex	0.961	1.065	.814	1	0.367
Relationship to patient	0.635	0.459	1.920	1	0.166
Habitat	-0.319	.837	.145	1	0.703
Religion	1.906	1.722	1.224	1	0.268
Family type	2.470	0.871	8.043	1	0.005*
Educational qualification	0.047	0.568	.007	1	0.934
Occupation	-0.035	0.324	.012	1	0.913
Marital status	-0.028	0.809	.001	1	0.973
Monthly family income	-0.099	0.455	3.191	1	0.074
Duration of care giving	1.621	0.542	8.945	1	0.003*

Table 4: Level of burden and duration of illness of the patients

Level of Burden	Duration of illness				p value
	Less than 5 years		More than 5 years		
	n	%	n	%	
Little or no	2	3.0	0		0.000
Mild to moderate	17	25.4	1	3.6	
Moderate to severe	23	34.3	0		
Severe	25	37.3	27	96.4	
Total	67	100.0	28	100.0	

Table-5: Level of burden and duration of care giving

Level of Burden	Duration of care giving				p value
	Less than 5 years		More than 5 years		
	n	%	n	%	
Little or no	2	2.9	0	0.0	0.000
Mild to moderate	17	24.3	1	4.0	
Moderate to severe	23	32.8	0	0.0	
Severe	28	40.0	24	96.0	
Total	70	100.0	25	100.0	

Figure 1: Types of mood disorders diagnosed among the patients

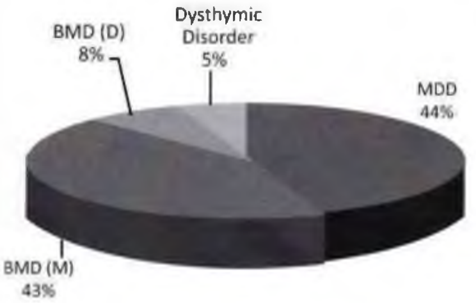

Figure 2: Level of burden of caregivers

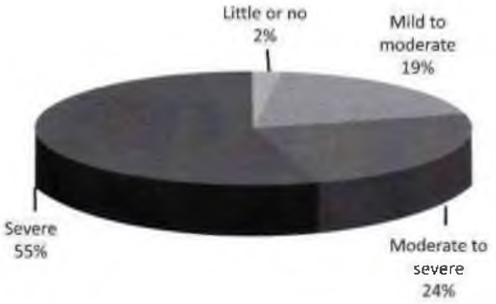

Table 6: Level of burden among caregivers according to the type of mood disorders of patients

Level of Burden	Types of mood disorder							
	MDD		BMD(M)		BMD(D)		Dysthymic disorder	
	n	%	n	%	n	%	n	%
Little or no	0	0.0	0	0.0	2	28.6	0	0.0
Mild to moderate	10	23.8	6	14.6	0	0.0	2	40.0
Moderate to severe	11	26.2	7	17.1	2	28.6	3	60.0
Severe	21	50.0	28	68.3	3	42.8	0	0.0
Total	42	100.0	41	100.0	7	100.0	5	100.0

p value: 0.067

Table 7: Relationship with the patients and the level of burden

Family type	**Level of burden**		**p value**
	No/title and Mild to Moderate (ZBI score <41)	Moderate to Severe and severe (ZBI score > 41)	

Relationship with the patients	**Level of Burden**								**Total**	
	Little or No		**Mild to moderate**		**Moderate to severe**		**Severe**			
	n	%	n	%	n	%	n	%	n	%
Spouse	0	0.0	11	11.6	7	7.4	23	24.2	41	43.2
Parents	1	1.1	4	4.2	11	11.6	18	18.9	34	35.8
Siblings	1	1.1	2	2.2	4	4.2	6	6.3	13	13.7
Offspring	0	0.0	1	1.1	0	0.0	2	2.2	3	3.1
Others	0	0.0	0	0.0	1	1.1	3	3.1	4	4.2
Total	2	2.1	18	18.9	23	24.2	52	54.7	95	100.0

p value: 0.555

Table 8: Family type of caregivers and level of burden

Family type	**Level of burden**				**p value**
	No/little and Mild to Moderate (ZBI score <41)		**Moderate to Severe and Severe (ZBI score > 41)**		
	n	%	n	%	
Joint	11	36.7	19	25.3	0.013
Nucl ear	9	63.3	56	74.7	
Total	20	100.0	75	100.0	

Discussion

This study found that 42.1% patients were within age group 18-27 years and 28.4% within 28-37 years. A previous study done in Spain found that more than 50% of patients with bipolar disorders were less than 40 years of age.[9] Regarding the burden level, the highest burden of caregivers (22.1%) was among those who took care of patients of 18-27 years. The univariate analysis showed occupation of the caregivers and the family type shows significant association with burden scores 41 or above.

Among 95 caregivers 27.3% were within 48-57 years age, 26.3% were within 38-47 years age and 24.2% were within 28-37 years age. It indicated that most of the caregivers are elderly than their patients, because in case of patients 18-27 years age group is more than any other groups. Previous study found that the mean age of the caregivers was 49.05 (+11.40).[9] Another study revealed the mean age of the caregivers 49.99 (+14.61).[8] These are consistent with our present study.

Regarding the gender 45.2% were male and 54.8% were female among the caregivers. That means the female gender is predominant among caregivers. These findings also similar with two previous studies, where researchers found 66.0% and 68.6% care givers were female in gender.[9,14] Another study among the caregivers of patients with depression in Netherlands found 53% were female among the caregivers.[15] Another American study found an interesting result that just after diagnosis most of the patients received care (54%) from male caregivers (spouse or parents) but after one year 42% of caregivers had dropped out, and majority of them were male.[16] Then one year after the 37% was male caregivers and 63% was female caregivers. Regarding the occupation of the caregivers 43.1% were house wife and 40.0% were service holder. This findings is statistically significant (p=.000) with the level of caregiver burden. A study found that employment status of caregivers was statistically significant (<0.001) with the level of caregiver burden.[13] Our study is consistent with this study done in Nigeria among the caregivers of patients with mental illness. Among the 95 caregiver 54.8% posses severe burden, 24.2% having moderate to severe burden , 18.9% having mild to moderate burden and only 2.1% having little or no burden. The Nigerian researchers used same scale (ZBI) to measure the caregiver burden of patients with mental illness and found 60.7% had severe burden.[13] This is consistent with our present study. However, another study used same scale to measure burden of caregivers of disabled elderly and they found 37% caregivers had significant burden.[17] We can infer that caregiver of mood disorders possessed more burden than the caregivers of disabled elder persons, where the study population were different. In our study we found that, caregivers of bipolar mood disorder (manic) patients having more severe burden than any other form of mood disorders. It was found that 68.3% having severe burden, 17.1% moderate to severe burden and 14.6% having mild to moderate burden of the caregivers of Bipolar Mood Disorder (Manic). In our study 97.9% of caregivers possessed burden (mild, moderate and severe) , this finding is consistent with the previous study where they found 93% of caregiver of patients with mood disorders reported a significant level of burden when the patient was admitted to inpatient department or treated outpatient clinic, and 70% continued to report moderate or higher burden 15 months later.[14]

In present study we found 43.2% caregivers were spouse (18.9% husband, 24.2% wife) and 35.8% were parents (13.7% father, 22.1% mother) of the patients. A Spanish study 54.7% caregivers were parents and 38.4% were spouse.[9] In Bangladeshi culture the marital bondage is stronger and divorced rate is lower than the Western society. A western study the parents are more involved (44.3%) in care giving to patients with mood disorders than spouse (23.5%). Caregivers from nuclear family possessed more burden than caregivers from joint family.[14] In case of moderate to severe and severe burden (ZBI score > 41) 74.7% caregivers were from nuclear family and 25.3% from joint family. This finding is statistically significant (p=.013). An Indian study found that caregivers from nuclear family background reported higher levels of burden where the mean score 69.0 (+8.9) in caregiver reaction assessment scale.[18] But another Indian study on caregivers of Dementia found the burden in caregivers from joint families did not differ from nuclear families.[19]

The level of caregiver's burden and the duration of illness of the patients with mood disorders found statistically significant (p = 0.000). In this study duration more than 5 years most of the caregivers (96.4%) having severe burden but in case of disease duration less than 5 years the severe burden was only 37.3% and moderate burden is 34.3%. The duration of care giving and the level of burden also found statistically significant (p=.000). Most of the caregivers (96%) having severe burden when they were provided care more than 5 years, but in case of this duration less than 5 years the severe burden was only 40.0%, moderate burden was 32.8%, mild to moderate burden was 24.3% and little or no burden was 2.9%. Previously mentioned Nigerian study found the duration of patient's illness was statistically significant (0.004) with the higher burden level of caregivers.[14] this result is similar with our study. An African study estimated caregiver burden by using ZBI scales and they found high level of burden among the caregiver who has provided care at least 4 years to the patient with mental illness. [20] This finding also supported our result.

Conclusion

The current study demonstrates that most of the caregivers of patient with mood disorders have higher level of burden and it was significantly associated with the duration of patient's illness and the duration of care giving. The caregiver's occupation and family type found statistically significant to the degree of their burden level. In the analysis of the principal research instrument (Zarit Burden Interview-ZBI) it was found that the stigma, consequence of the illness to the patient and financial constraints were the caregivers most reported causes for burden.

In the country like, Bangladesh where the patient is mainly cared for physically and financially by the relatives or informal caregivers the study findings will be help to mitigate the caregiver burden and as well as provide well being for patients. It is necessary to incorporate the caregiver burden issue in the management plan of mood disorders and also other mental illness for the better outcome of the patient.

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