

EXPRESSED EMOTIONS, SOCIAL SUPPORT AND RESILIENCE IN CAREGIVERS OF PATIENTS HAVING SCHIZOPHRENIA AND BIPOLAR AFFECTIVE DISORDER – A COMPARATIVE STUDY

Aanchal Singh¹, Aman Bharti², Jasleen Kaur³, Gauri Gupta³, Rahul Khatkar³, Poonam Bharti^{4*}, Vikas Kumar Pandey⁵, Manish Kumar Maity⁵

¹Senior Resident, Department of Psychiatry, Sarojini Naidu Medical College, Agra - 282003, Uttar Pradesh, India

²Associate Professor, Department of Medicine, Guru Gobind Singh Medical College and Hospital, Faridkot - 151203, Punjab, India

³Junior Resident, Department of Psychiatry, MM Institute of Medical Sciences and Research, Maharishi Markandeshwar (Deemed to be University), Mullana - 133207, Ambala, Haryana, India

⁴Head of the Department & Professor, Department of Psychiatry, MM Institute of Medical Sciences and Research, Maharishi Markandeshwar (Deemed to be University), Mullana - 133207, Ambala, Haryana, India

⁵Research Scholar, Department of Pharmacy Practice, MM College of Pharmacy, Maharishi Markandeshwar (Deemed to be university), Mullana - 133207, Ambala, Haryana, India

**Address for correspondence:*

Dr. Poonam Bharti

Head of the Department & Professor,
Department of Psychiatry,
MM Institute of Medical Sciences and Research,
Maharishi Markandeshwar (Deemed to be University),
Mullana - 133207, Ambala, Haryana, India
Email id – poonambharti109@gmail.com

ABSTRACT

• Background

Schizophrenia and Bipolar Affective Disorder (BPAD) are common major mental disorders which cause significant distress in environmental, circumstantial and other factors. The consequences of psychopathology usually have long lasting constraints on the level of functioning and preventing patients from recovering to their premorbid state. Hence the study is conducted to compare the caregiver expressed emotion, social support and resilience in caregivers of schizophrenia and bipolar disorder.

- **Materials and methods**

Data were collected from Psychiatry Out Patient Department, regarding socio-demographic characteristics followed by family emotional involvement and criticism scale; inter personal social support questionnaire and family assessment resilience scale. Descriptive statistics such as mean and standard deviation and unpaired t-test were applied. Spearman correlation was used to find correlation.

- **Results**

Present study shows that among BPAD group majority 55 patients (73.3%) were males and among Schizophrenia group majority 43 patients (57.3%) were males; p value=0.01, as p value is <0.05 , shows statistical significant. Correlation between expressed emotions, social support and resilience among care givers of Schizophrenia group and BPAD group shows statistical significance (p value is <0.001).

- **Conclusion**

This study concludes that there is significance between expressed emotions, social support and resilience among care givers of both Schizophrenia as well as BPAD people. Study shows that one of most important resources that can help in improvement of the Schizophrenia as well as BPAD people is Social support and resilience which helps in maintaining the communication among the family members which finally improves the family bonding that ultimately leads to decrease the stress of the family.

KEYWORDS - BPAD, Schizophrenia, Resilience, Social support, Expressed emotions

INTRODUCTION

Schizophrenia and BPAD are common major mental disorders and are chronic in nature. They cause significant distress in social, occupational and other important areas. The consequences of psycho-pathology have long lasting constraints on the level of functioning and preventing patients from recovering to their premorbid state which result in chronic nature of the disorder [1, 2].

An expressed emotion (EE) is a qualitative measure of the amount of emotion displayed, typically in the family setting, usually by a family or a caretaker. The three dimensions of high EE shown are hostility, emotional over involvement and critical comments. The patient who are hospitalized and return to a family environment characterized by high levels of expressed emotion are more likely to experience the recurrence than patients who are exposed to returning to low expressed emotions [3]. In India, family members are the primary providers of support and care for mentally ill patients [4].

As a result of the increased caregiving tasks, roles and responsibilities, the care givers experience significant stress and burden. Which trigger high EE and which in turn may affect the illness outcome [3, 5].

Due to the difficulties experienced by caregivers in the process of providing care to the patients they are more likely to have social isolation [6]. They have limited time to maintain their

friendships and social relations. Social isolation may increase as the patient's need for care increases; hence it is important that they must receive adequate social support from their family and friend [7]. The caregivers of patients suffering from Schizophrenia and Bipolar affective disorder had persistent or chronic feeling of loneliness and fear of responsibility for care [8]. Psychological resilience can be defined a conscious effort to move forward in an insightful and integrated positive way based on lessons learned from a negative experience [9]. It is the ability of a dynamic system to successfully adapt to disruptions that jeopardise the viability, function, and development of that system and a process to use resources in order to maintain well-being. The concept of psychological resilience in the family helps us to understand healthy family functions in difficult situations [10].

The stressors caused by crisis and problems can affect all family members and disrupt their relations and family functions. Therefore, inter-family processes should be well managed and optimally supported in the event of crisis and stress in the family [11]. It should be assessed in terms of family functions, socio cultural structure and life processes. The inability to overcome the stressful situation in the family can lead to failure. Families can be helped to regain psychological resilience through the structures such as family support groups, community resources and social systems [12].

The role of long term caregiver is accompanied with many burdens. The regular assistance to patient and stress of schizophrenia makes them emotionally depleted [13].

Since Schizophrenia & Bipolar affective disorder are chronic illness with a long course and unpredictable prognosis. So, it is very important to find a preventive measure to decrease the relapses. Therefore, we need to build up strong pillars in order to educate the caregiver about the prognosis of disorder. This will help in better recovery and decreasing the relapse rate. By evaluating the expressed emotions, social support and resilience in caregivers of schizophrenia and Bipolar Affective Disorder (BPAD), we can provide better psychosocial support to the patient and prevent the patient to go into rehabilitation cycle. Keeping these issues in mind the study was planned.

MATERIALS AND METHODS

This is a hospital based cross-sectional study. The study was conducted at the Department of Psychiatry, Maharishi Markendeshwar Institute of Medical Science & Research, Mullana, Ambala, Haryana, India. The study population contained patient's caregivers who came in the outpatient department in hospital and diagnosed as either Schizophrenia or BPAD. Data was collected over a period of 9 months from March 2021 to October 2021. The inclusion criteria for such patients were age should be between 18-60 years of age. Patients diagnosed as a case of schizophrenia and bipolar affective disorder according to ICD-10 [14].

The inclusion criteria for primary caregivers (parents/siblings/spouse/children) were age above 21 years of age and living with the patient for at least last 1 year. A separate informed consent was obtained from caregivers to participate in the study.

Exclusion criteria for the patients that they are not suffering from Neurological disorder such as seizures, movement disorders, cerebral palsy and other co-morbid psychiatric disorder. Exclusion criteria for caregivers were that they should themselves be not suffering psychiatric conditions, organic syndromes, Intellectual disability, substance dependence or chronic

physical illness. The study was approved by the hospital ethics committee. A total of 75 caregivers of schizophrenia and 75 caregivers of bipolar disorders gave consent for the study.

Data were collected with the help of pretested sociodemographic and clinical sheet from patients and caregivers. EE was measured with the help of Family Emotional Involvement and Criticism Scale (FEICS) [15], which has 14 items with two sub scales: Perceived Criticism (PC) and intensity of emotional involvement, Resilience was measured by Family Assessment Resilience Scale [16] and social support on Interpersonal Social Support Questionnaire [17].

Data were compiled in Microsoft excel. Descriptive statistics was enumerated by using mean; standard deviation frequency and percentage were used for quantitative and categorical data respectively. Chi square test, unpaired t test and spearman correlation were applied to analyze data by using Open Epi software version 2.3.1. The level of significance was taken P value <0.05.

RESULTS

1. Demographic Details of Patients

150 study participants divided in two groups in which there were 75 caregivers of schizophrenia and 75 caregivers of BPAD were taken shows the comparison of socio-demographic variables between the two caregivers groups.

Most of the patient's caregivers among BPAD group majority 55 patients (73.3%) were males and schizophrenia group majority 43 patients (57.3%) were males. Chi-square test, chi value =4.2, P value=0.01 shows statistical significance.

Most of the caregivers were married in both groups. (n=62, 56 respectively). Many of the caregivers were studied below high school (n=41, 38 respectively) and hundred percentage of caregivers of patients with Schizophrenia were employed compared to 98 of caregivers of BPAD patients.

There were no significant differences with respect to marital status, (p=0.53), education (p=0.4) as well as occupational status (p=0.53) = among the two groups, Family type (p=0.9), Regional wise distribution (p=0.5), Locality (p=0.09).

Characteristics	Schizophrenia (n=75)	BPAD (n=75)	Chi Square	P-value
Gender				
Male	43(57.3%)	55(73.3%)	4.2	0.01
Female	32(42.7%)	20(26.7%)		
Marital Status				
Single	13(17.3%)	19(25.3%)	2.21	0.53
Married	62(82.7%)	56 (74.7%)		
Education				
High school and	34(45.3%)	37(49.3%)	4.4	0.4

above				
Below high school	41(54.7%)	38(50.7%)		
Occupation				
Employed	75(100%)	74(98.7%)	16.47	0.53
Unemployed	0	1(1.3%)		
Family Type				
Nuclear	41(54.7%)	41(54.7%)	0.5	0.9
Joint/Extended	34(45.3%)	34(45.3%)		
Religion wise distribution				
Hindu	66(88%)	68(90.7%)	1.04	0.5
Muslim	7(9.3%)	4(5.3%)		
Sikh	2(2.7%)	3(4%)		
Locality				
Urban	36(48%)	36(48%)	0.05	0.09
Rural	39(52%)	39(52%)		

Table 1: Comparison of socio-demographic variables of Schizophrenia & BPAD Caregivers

2. Characteristics Details

Characteristics of patients and caregivers were shown in Table 2. There was no statistical significance difference in either age of patients ($p=0.9$) and their caregivers ($p=0.9$) in two groups. Mean age of onset of illness was 26.6 years ($SD=6.9$) and 23.1 years ($SD=3.9$) in the patients with schizophrenia and bipolar disorder respectively, which was statically significant ($p=0.07$). The patients of bipolar disorder were hospitalized more often when compared to schizophrenic patients which was statically significant ($p=0.03$).

Characteristics	Grouping	N	Mean (SD)	P-value
Age(years)	Schizophrenia	75	36.2(9.6)	0.9
	Bipolar disorder	75	35.9(9.8)	
	Schizophrenia caregivers	75	39.1(12.5)	0.9
	Bipolar disorder caregivers	75	43.5(12.9)	
Age of onset (years)	Schizophrenia	75	26.6(6.9)	0.007
	Bipolar disorder	75	23.1(3.9)	
Number of hospitalization	Schizophrenia	75	2.1(1.5)	0.007
	Bipolar disorder	75	3.5(2.5)	

Table 2: Characteristics of patients with caregivers of Schizophrenia and BPAD

3. Behavioral Comparison

In the comparison of Expressed Emotions is divided in two groups. Expressed emotions had 2 components. Mean of final score of Emotional involvement among BPAD group was 27.2+7.1 and among Schizophrenia group was 25.6+7.06. Mean of final score of Perceived criticism among BPAD group was 26.3+6.9 and among Schizophrenia group was 26.6+6.1.

Components	BPAD		Schizophrenia		't' value	P value
	Mean	SD	Mean	SD		
Emotional involvement	27.2	7.1	25.6	7.06	1.38	0.16
Perceived criticism	26.3	6.9	26.6	6.1	-0.28	0.77

Table 3: Comparison of expressed emotion between two groups (schizophrenias and BPAD caregivers)

There was no statistical significance difference in expressed emotion experienced in both the groups. Mean of final score of Appraisal support among BPAD group was 9.3+3.3 and among Schizophrenia group was 10.5+2.6. Mean of final score of Belonging support among BPAD group was 12.1+9.4 and among Schizophrenia group was 10.4+13.2. Mean of final score of Tangible support among BPAD group was 9.1+3.6 and among Schizophrenia group was 9.3+3.4. There was statistical significance experienced in tangible support when compared in both the groups.

Components	BPAD		Schizophrenia		't' value	P value
	Mean	SD	Mean	SD		
Appraisal support	9.3	3.3	10.5	2.6	-2.4	0.01*
Belonging support	12.1	9.4	10.4	13.2	0.9	0.36
Tangible support	9.1	3.6	9.3	3.4	-0.34	0.72

Table 4: Comparison of social support between schizophrenia & BPAD caregivers

4. Comparison Data

Mean value of final score of Re silence among BPAD group was 113+42.4 and among Schizophrenia group was 111.8+30.4. And there was no statistical significance experienced

between the two groups.

Components	BPAD	Schizophrenia	't' value	P value
	Mean (SD)	Mean (SD)		
Re silence	113 (42.4)	111.8(30.4)	0.19	0.84

Table 5: Comparison of resilience between schizophrenia and BPAD caregivers

5. Correlation Value (BPAD Group)

The study shows correlation between expressed emotions, social support and resilience among care givers of BPAD group and Applying ANOVA, p value is <0.001, shows statistical significance.

Components	Mean	SD
Emotional involvement	27.2	7.1
Perceived criticism	26.3	6.9
Appraisal support	9.3	3.3
Belonging support	12.1	9.4
Tangible support	9.1	3.6
Re silence	113	42.4

Table 6: Correlation between expressed emotions, social support and resilience among care givers of BPAD group

6. Correlation Value (Schizophrenia Group)

The study shows correlation between expressed emotions, social support and resilience among care givers of schizophrenia group. Applying ANOVA, p value is <0.001, shows statistical significance.

Components	Mean	SD
Emotional involvement	25.6	7.06
Perceived criticism	26.6	6.1
Appraisal support	10.5	2.6
Belonging support	10.4	13.2
Tangible support	9.3	3.4
Resilience	111.8	30.4

Table 7: Correlation between expressed emotions, social support and resilience among care givers of Schizophrenia group

DISCUSSION

This study was conducted on patients with schizophrenia and BPAD and their caregivers visiting at Psychiatry Out Patient Department. Family Assessment resilience scale by Sixbey et al used in the present study to assess the caregiver expressed emotion, social support and resilience [15, 16].

Sociodemographic variable such as sex, marital status and residence compared using Chi-square method. There were no significant differences in the socio-demographic profile of caregivers of schizophrenia and BPAD. Hence the groups were comparable.

The mean age of onset is higher in schizophrenic patients as compared to BPAD patients. It is well established that the age of onset of schizophrenia varies widely, spanning much of early adulthood, peaking in males during late adolescence to early adulthood and later in Females in their mid to late 20s [18]. The age of onset of bipolar disorder is most commonly around 20 years, which is substantially lower than that of unipolar depression [19]. Because of bimodal age distribution of schizophrenia the findings of higher mean age of onset of the disorder in schizophrenia than in BPAD patients is within the expected range.

The number of hospitalization were more in BPAD patients as compared to schizophrenic patients, which is probably due to episodic nature of bipolar disorder requiring more hospitalisation, especially during episodes of mania.

- **Expressed Emotions (EE)** - Expressed emotions had 2 components. Mean of final score of emotional involvement among BPAD group was (27.2+7.1) and among Schizophrenia group was (25.6+7.06, $p=0.16$). Mean of final score of Perceived criticism among BPAD group was (26.3+6.9) and among Schizophrenia group was (26.6+6.1, $p=0.77$). Study showed that mean score of expressed emotions among BPAD group was 53.6+7.6 and for perceived criticism was (17.1+2.7) [20]. In 2016, at Indira Gandhi Government Medical College and Hospital, Nagpur conducted study to assess the expressed emotions among caregivers of patients with mental illnesses [21]. The results of study showed that 97 caregivers among 100 had severe emotional involvement score which shows that majority caregivers had high EE. Mean final score of expressed emotions was less in present study.
- **Social Support** - Social support had 3 components. Mean of final score of appraisal support among BPAD group was 9.3+3.3 and among schizophrenia group was 10.5+2.6. Mean of final score of Belonging support among BPAD group was 12.1+9.4 and among Schizophrenia group was 10.4+13.2, $p=0.36$. Mean of final score of Tangible support among BPAD group was 9.1+3.6 and among Schizophrenia group was 9.3+3.4, $p=0.72$. A study conducted by Lok & Bademli Showed that mean social support score was 41.89+5.27 [22]. Another study conducted by Sun X et al showed that mean score of caregivers of BPAD patient was 32.1+7.7 [23]. Similar findings were seen in other studies.
- **Resilience** - Mean of final score of Resilience among BPAD group was 113+42.4 and among Schizophrenia group was (111.8+30.4, $p=0.8$) showed that mean resilience

score was 88.15 ± 11.62 . As like similar findings but different data were seen in other study [23, 24, 25] where mean resilience score was 121.51 ± 25.5 . P-value was 0.01. showed that indicates resilience score of BPAD cases (57.34 ± 12.09) was below the national norm [26]. The impact of caregivers' burden on the psychological resilience was statistically significant ($P < 0.05$).

- **Correlation between expressed emotions, social support and resilience among care givers of BPAD group** - Correlation between expressed emotions, social support and resilience among care givers of BPAD group shows statistical significance (p value is < 0.001). Sun X et al., showed negative correlation and statistical significance [23]. A study conducted by Ayush Sharma et al., showed that higher use of coping mechanisms such as avoidance and resignation by caregivers were associated with the higher perception of EE, whereas the use of coping mechanisms such as information seeking, communication, and social involvement by the caregivers was associated with the perception of lower EE among the patients [27].
- **Correlation between expressed emotions, social support and resilience among care givers of Schizophrenia group** - Correlation between expressed emotions, social support and resilience among care givers of Schizophrenia group shows statistical significance (p value is < 0.001). Some study showed that there was a statistically significant positive relationship between resilience with total score of perceived social support & its component [28]. Social support seems to have positive effects on resilience, family function and health outcomes for all family members [29].

CONCLUSION

Present study concludes that there is significance between expressed emotions, social support and resilience among care givers of both Schizophrenia as well as BPAD patients. Study shows that one of most important resources that can help in improvement of the Schizophrenia as well as BPAD people is Social support. It helps the individual to adapt and decrease the workload burden appearing in numerous forms. Likewise, resilience also helps in maintaining the communication among the family members which finally improves the family bonding which ultimately leads to decrease the stress of the family.

REFERENCES

1. Cousineau N, McDowell I, Hotz S, Hebert P. Measuring chronic patient's feelings of being a burden to their caregivers: Development and preliminary validation of a scale. *Med Care* 2003;41:110-8.
2. Tamminga CA. Introduction and Overview of Schizophrenia and other psychotic disorders. *Comprehensive textbook of psychiatry*; 9th ed. Vol I .p 1432.
3. Aguilera A, Lo'pez SR, Breitborde NJ, Kopelowicz A, Zarate R. Expressed emotion and sociocultural moderation in the course of schizophrenia. *Journal of Abnormal Psychology*. 2010 American Psychological Association. 2010; 119(4):875-85
4. Chadda RK. Caring for the family caregivers of person with mental illness. *Indian J Psychiatry* 2014 ;56:221-7.

5. Jagannathan A, Thirthalli J, Hamza A, Hariprasad VR, Nagendra HR, Gangadhar BN. A qualitative study on the needs of caregivers inpatients with schizophrenia in india. *Int J Soc Psychiatry* 2011;57:180-94
6. Butzlaff RL, Hooley JM. Expressed emotion and psychiatric relapse: A meta-analysis. *Arch General Psychiatry* 1998;55:547-52
7. Adelman RD, Tmanova LL, Delgado D, Dion S & Lachs MS. Caregiver burden: A clinical review. *JAMA*. 2015;311(10):1052–60
8. Chrostek A, Grygiel P, Anczewska M, Wciorka J & Switaj P. The intensity and correlates of the feelings of loneliness in people with psychosis. *Comprehensive Psychiatry*. 2016; 70:190–9.
9. Lima ICS & de Andrade Lima SB. Experiencing feelings and weaknesses of care in schizophrenia: Family caregivers' vision. *Revista de Pesquisa: Cuidado É Fundamental Online*. 2017;9(4):1081–6.
10. Gooding PA, Littlewood D, Owen R, Johnson J & Tarrier N. Psychological resilience in people experiencing schizophrenia and suicidal thoughts and behaviors. *Journal of Mental Health*. 2019;28(6):597–603.
11. Walsh F. Applying a family resilience framework in training, practice, and research: Mastering the art of the possible. *Family Process*. 2016;55(4):616–32.
12. Bergstrom J, van Winsen R & Henriqson E. On the rationale of resilience in the domain of safety: A literature review. *Reliability Engineering & System Safety*. 2015;141:131–141.
13. Zubin, J. and Spring B (1977) Vulnerability: A New View on Schizophrenia *Journal of Abnormal Psychology* 86,103-126.
14. World Health Organisation: The ICD-10 classification of mental and behaviour disorder: Clinical Descriptions and Diagnostics Guidelines, World Health Organisation, Geneva, 2002, 70-173.
15. Shields CG, Franks P, Harp JJ, M.D. Campbell TL, McDaniel SH. Family Emotional Involvement and Criticism Scale (FEICS): II. Reliability and Validity Studies. *Fam Syst Med*. 1994;12:361-77.
16. Cohen S & Hoberman, H.M. Positive events and social support as buffers of life change stress. *J. Appl. Soc. Psychol.* 1983;13;19-125
17. Sixbey, M.T. Development of the Family resilience assessment scale to identify family resilience constructs. Doctoral Dissertation, University of Florida; 2005
18. Gunvant K., Thaker MD. Chapter 12.11. Schizophrenia: Phenotypic manifestations. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. 9th ed. Lippincott Williams & Wilkins; 2009.
19. Rihmer Z, Angst J. Mood disorders: Epidemiology. Kaplan & Sadock's Comprehensive Textbook of Psychiatry. . 9th ed. Lippincott Williams & Wilkins; 2009.
20. Murkey, B. H., Gunjan, S. P. Study of expressed emotion and caregiver burden in bipolar manic patients. *Indian Journal of Applied Research*, 2017; 59(6), S198.
21. Batra B, Ghildiyal R, Milind A. Expressed emotions among caregivers of patients with mental illness. *IOSR J Dent Med Sci*. 2016;15(07):59-68

22. Lök, N., & Bademli, K. The Relationship Between the Perceived Social Support and Psychological Resilience in Caregivers of Patients with Schizophrenia. *Community mental health journal*. 2021, 57(2), 387-99
23. Sun X, Ge J, Meng H, Chen Z, Liu D. The Influence of Social Support and Care Burden on Depression among Caregivers of Patients with Severe Mental Illness in Rural Areas of Sichuan, China. *Int J Environ Res Public Health*. 2019;16(11):1961.
24. Manhas RS, Manhas GS, Manhas A et.al. Factors associated with resilience among caretakers of patients suffering from bipolar affective disorder. *International Journal of Research and Review*. 2019; 6(7):588-593
25. Irene J. Su, Hao Liu, Ai Li, Jing-Fang Chen, Investigation into the psychological resilience of family caregivers burdened with in-home treatment of patients with bipolar disorder, *Journal of Affective Disorders Reports*, 2021, Volume 3, 100059, ISSN 2666-9153,
26. Sun X, Ge J, Meng H, Chen Z, Liu D. The Influence of Social Support and Care Burden on Depression among Caregivers of Patients with Severe Mental Illness in Rural Areas of Sichuan, China. *Int J Environ Res Public Health*. 2019;16(11):1961.
27. Ayush Sharma, Ritu Nehra, Sandeep Grover. Correlates of expressed emotions as perceived by patients with bipolar disorder. *International journal of social psychiatry*. Heba Mohamed Abdelaal, Lamiaa Hassnin Eita, Mahmoud Mohamed Khedr. Resilience and Perceived Social support among Family caregivers of Patients with Schizophrenia. *Egyptian Journal of Health Care, EJH*. 2021; vol. 12 (1) no. 1:1108
28. Heba Mohamed Abdelaal, Lamiaa Hassnin Eita, Mahmoud Mohamed Khedr. Resilience and Perceived Social support among Family Caregivers of Patients with Schizophrenia. *Egyptian Journal of Health Care, EJH*. 2021; vol. 12 (1) no. 1:1108
29. Wang X, Chen Q, Yang M. Effect of caregivers' expressed emotion on the care burden and rehospitalization rate of schizophrenia. *Patient Prefer Adherence*. 2017;11:1505-11