

## IMPACT OF CAREGIVER’S EXPRESSED EMOTION ON RELAPSE AND MEDICATION COMPLIANCE OF PATIENTS WITH CHRONIC MENTAL ILLNESS

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### ABSTRACT

**Background:** The concept of expressed emotion (EE) describe the emotional climate of households. Expressed emotion is the critical, hostile and emotionally over-involved attitude of family or relatives towards a family member with a psychiatric disorder. **Aims:** The study was undertaken to assess the impact of caregiver’s EE on relapse and medication compliance of patients with chronic mental illness. The study also tried to find the association of expressed emotion with socio personal and clinical variables. **Materials and methods:** Using purposive sampling, 80 caregivers attending psychiatric inpatient and outpatient units of a tertiary care hospital in Ernakulam District were enrolled in the study. Socio-personal and Clinical proforma, David Kavanagh’s Family Attitude Scale and Kemp’s Clinician Rating Scale were used to collect the data. Number of re-admissions in the psychiatric unit were considered as relapses. **Results:** The results of the study showed that there is a significant association between expressed emotion and relapse of patients with chronic mental illness ( $p < 0.001$ ). Also, there is a moderate negative correlation between expressed emotion and medication compliance ( $r_s = - 0.48, p < 0.001$ ). The study also found a significant association between regularity of follow-up and expressed emotion ( $p < 0.01$ ). **Conclusion:** These findings highlight the importance of addressing EE for prevention of relapse and improving medication compliance among patients with chronic mental illness and the need for providing psycho-educational interventions for regulating EE among caregivers during hospitalization.

**Key words:** Expressed Emotions, Relapse, Medication Compliance, Patients with Chronic mental illness.

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### INTRODUCTION

The concept of expressed emotion (EE) describe the emotional climate of households. Expressed emotion is the critical, hostile and emotionally over-involved attitude of family or relatives towards a family member with a psychiatric disorder. The three dimensions of high expressed emotion shown are hostility, emotional over-involvement and critical comments.<sup>1</sup> The Expressed Emotion (EE) is an adverse family environment which includes the quality of interaction pattern and nature of family relationships among the family caregivers and patients with chronic psychiatric disorders.<sup>2</sup> The attitude

of the relatives determine the direction of the illness after treatment. The relatives influence the outcome of the disorder through negative comments and nonverbal action.<sup>3</sup> Many research studies have proved that high EE by family members towards the patient is one of the strong predictors of relapse in mental illness. Patients with schizophrenia in contact with relatives who have a high expressed emotion (EE) level are more likely to relapse.<sup>4</sup> Medication Compliance refers to the degree to which patients follow clinically prescribed medications. A variety of factors are related to compliance with medication in chronic mental illness. EE is an important



factor to account for in the understanding of patient's compliance and the direction of the relationship between EE and compliance is proved by studies.<sup>5</sup> From the evidence, it is clear that caregiver's contributions, partnership and attitude in the treatment of a mentally ill patient plays an important role.

The positive emotions expressed by the relatives help in faster recovery, like that the negative expressed emotions of the caregiver's contribute delayed recovery, decreased medication compliance, ultimately frequent relapses of the illness.<sup>6</sup>

Caregiver's expressed emotions is an important area which should be assessed and addressed properly for the effective and holistic treatment of the mentally ill patients. All the mental healthcare professionals have a significant role in managing expressed emotions. Hence, the present study is significant in the context of current status of mental health services in India especially in Kerala.

## 2. Materials and methods:

Descriptive analytical (Cross sectional) research design was used for the study. The study was conducted among 80 caregivers of patients with chronic mental illness who were attending psychiatric inpatient and outpatient units of a selected tertiary care hospital in Ernakulam District. The subjects were enrolled in the study by using purposive sampling technique. The sample size was estimated using the formula based on estimation of correlation between two variables.

Formal administrative permission was obtained from administrative director of the hospital and approval was also obtained from institutional ethics committee. After providing adequate information regarding the study, informed consent was taken from the participants and also confidentiality of the data was ensured.

Socio-personal and Clinical proforma, David Kavanagh's Family Attitude Scale and Kemp's Clinician Rating Scale were used to collect the data. Level of expressed emotion was assessed using David Kavanagh's family attitude scale. Level of medication compliance was assessed by Kemp's Clinician Rating Scale. Relapse is assessed by the number of readmissions that the chronic mentally ill patient had for past 2 years, which was obtained from patient's medical record. It took around 20 minutes for each participant for completing the research tool.

The data were analyzed according to the objectives and hypothesis stated using descriptive and inferential statistics. The data collected were coded in Microsoft excel. R software was used to analyze the data. Normality assessment was performed for continuous variables using Kolmogorov Smirnov test. Categorical variables were presented in terms of frequency and

percentage. Continuous variables were presented in terms of either mean and standard deviation or median and interquartile range based on the normality assumption. The relationship between caregiver's expressed emotion and relapse of patients with chronic mental illness, was computed using ANOVA as EE scores followed normal distribution in all the three categories of relapse. To find the relationship between caregiver's expressed emotion and medication compliance among patients with chronic mental illness, Spearman's rank order correlation correlation was computed based on the normality assumption. P value <0.05 is considered to be statistically significant.

## 3. Results

It is observed that mean score of expressed emotion was 55.41 with a standard deviation of 25.56. Relapse had three categories 1,2,3 and the number of subjects included in each categories were 18,35 and 27 respectively. The mean EE scores of relapse categories 1, 2, and 3 are 28.16, 47.91, and 83.29 respectively. The median score of medication compliance was 3 with  $Q_3$  and  $Q_1$  of 5 and 1 respectively.

### Relationship between caregiver's expressed emotion and relapse of patients with chronic mental illness.

The result shows a statistically significant relationship between expressed emotion and relapse ( $p < 0.001$ ). Hence, it is found that number of relapse is increased in the patients whose caregivers had high level expressed emotions. (Table 1)

### Relationship between caregiver's expressed emotion and medication compliance among patients with chronic mental illness.

The results showed a moderate negative correlation between expressed emotion and medication compliance ( $r_s = -0.48$ ,  $P < 0.001$ ). Hence, the finding revealed that patient's medication compliance decreases with high levels of caregiver's expressed emotions. (Figure 1)

### Association of expressed emotion with clinical variables of patients with chronic mental illness.

To find the association of expressed emotion with clinical variables of patients with chronic mental illness, ANOVA and Independent sample t test were done based on the number of categories in each clinical variable, since the caregiver expressed emotion scores followed the normal distribution. It was identified that regularity in follow-up ( $p = 0.01$ ) has a significant association with caregiver's expressed emotion (Table:7).



**Table 1: Relationship between caregiver’s expressed emotion and relapse of patients with chronic mental illness. n = 80**

	No. of. Relapse Categories	Test used	F- stat	p Value
Expressed emotion	1	ANOVA	91.32	<0.001*
	2			
	3 or more			

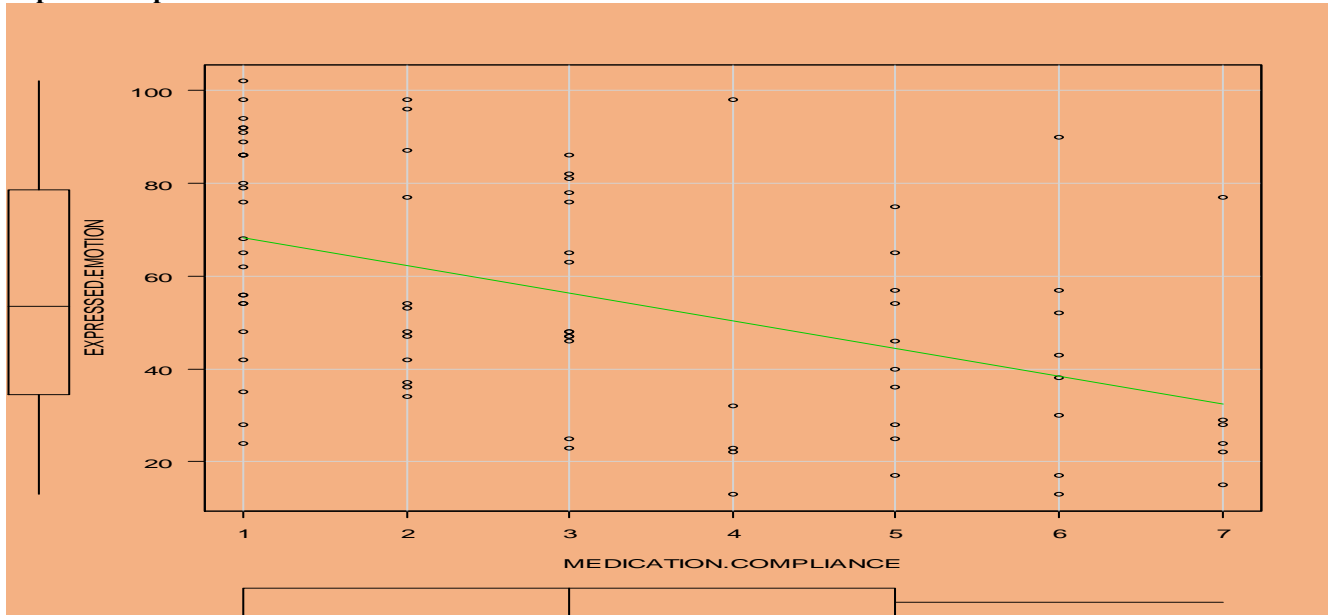
\*Significant at p < 0.05

**Table 2: Association between expressed emotion and clinical variables of patients with chronic mental illness. n = 80**

Clinical variables	Category	N	Mean	SD	Test Statistic	p value
Clinical diagnosis	BPAD	62	55.32	24.56	ANOVA (F=0.03)	0.96
	RDD	10	54.40	33.00		
	SCHIZOPHRENIA	8	57.37	26.69		
Duration of illness	2 year	8	47.00	31.01	Independent sample t test (t = -0.98)	0.33
	More than 2 year	72	56.34	24.97		
Level of dependency	Completely depended	32	52.31	27.57	ANOVA (F=0.53)	0.58
	Partially depended	24	59.50	22.68		
	Not depended	24	55.45	25.96		
Course of illness	Episodic	74	54.12	25.06	Independent sample t test (t = -1.60)	0.11
	Continuous	6	71.33	28.72		
Regularity in follow up	Regular	46	49.23	26.37	Independent sample t test (t = -2.60)	0.01*
	Irregular	34	63.76	22.16		
Status of the illness	Currently symptomatic	56	57.98	25.97	Independent sample t test (t = 1.38)	0.17
	On remission	24	49.41	24.04		

\*Significant at p < 0.05

**Figure 1: Scatter plot diagram showing relationship between caregiver’s expressed emotion and medication compliance of patients with chronic mental illness.**



#### 4. Discussion

The present study identified that there is a significant relationship between caregiver's expressed emotion and relapse of the patients with chronic mental illness ( $p = <0.001$ ). EE scores for relapse categories 1, 2, and 3 in the present study are 28.16, 47.91, and 83.29 respectively. This finding is supported by a study conducted among the caregiver's of chronic mentally ill patients by Moline et.al<sup>7</sup>. The researchers found a significant relationship between caregiver's expressed emotion and relapse among chronic mentally ill patients. This result was contradicted by a prospective study by Zanetti AC et.al<sup>8</sup> which found that there was no significant relationship between the expressed emotion and relapse ( $p = 0.13$ ). The difference in the findings of both the studies can be explained on the ground that relapse is multifactorial and EE alone may not be the sole cause for relapse among patient with chronic mental illness.

The present study revealed a moderate negative correlation between expressed emotion and medication compliance ( $r = - 0.48$ ,  $p < 0.001$ ). Hence the study concluded that, EE from the part of caregivers can cause reduced medication compliance in patients with chronic mental illness. A descriptive study conducted by Sellwood W et.al<sup>9</sup> with an aim to find the relation between caregiver's expressed emotions (EE) and patient's medication compliance supported the present study finding. This result was contradicted by a study conducted

Vedana KG et.al<sup>10</sup>, which found that there is no significant relationship between expressed emotion of the family and the medication compliance of the patient ( $p = 0.60$ ). This difference can also be explained on the fact that medication compliance can be influenced by many other factors other than expressed emotion.

The present study found that, in patient's clinical variables only the regularity in follow-up ( $p = 0.01$ ) is significantly associated with caregiver's expressed emotion. The empirical evidence for supporting this finding is very less, but many studies contradicts this finding. A comparative study conducted by Chacko PA et.al<sup>12</sup> at Kerala revealed that the level of expressed emotion is seen more in family caregivers of patients with Schizophrenia than family caregivers of patients with Mania ( $p < 0.05$ ). Where as in the present study clinical diagnosis of the patients has no association with expressed emotion.

#### Conclusion

The study concluded that caregiver's expressed emotion has a great impact on the relapse and medication compliance of the patients with chronic mental illness. High levels of expressed emotion among the caregivers contributes relapse and poor medication compliance. Hence, EE is an important area which need to be addressed while treating patients with chronic mental illness.

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