Expressed Emotion Research in India: A Narrative Review

Anvar Sadath, Ram Kumar, Magnus Karlsson

ABSTRACT

Background: Expressed emotion (EE) is detrimental to patients with schizophrenia, mood disorders, eating disorders and many other psychiatric and neurological disorders. However, majority of the EE literature is generated from the west, and the results of those studies may have limited application in Indian setting. Hence, we conducted this review with the main aim of understanding EE research in India and its potential role in the course and outcome of psychiatric disorders and other chronic illnesses.

Methods: Using keywords, we performed searches of electronic databases (PubMed, IndMed, PsychInfo, Science-Direct and Google Scholar) and internet sources and a manual search in the bibliography of the retrieved articles to identify potential original research articles on EE in India. Results: As per the selection criteria, 19 reports of 16 studies were included and reviewed. The sample size of the EE studies ranged from 20 to 200, and majority of the studies were conducted in psychosis/schizophrenia, followed by obsessive compulsive disorder and epilepsy. Although high EE was found in most of the studies, the impact of EE on illness outcome is not well explored and only two studies examined the relationship between EE and relapse.

Discussion and Conclusion: There is a dearth of studies on EE, especially its relationship with relapse or clinical outcomes in the Indian context. We recommend more studies in these areas which may be helpful for clinical decisions and advancement of context knowledge in EE.

Key words: Criticality, emotional over-involvement, expressed emotion, Indian family, psychiatric illness

INTRODUCTION

Brown et al. found that individuals with schizophrenia who live in families with high criticism, hostility or emotional over-involvement, known as expressed emotion (EE), are more likely to relapse than those who live in families low in these characteristics. After five decades of research, the EE consistently proved to be detrimental to patients with schizophrenia, mood disorders and eating disorders. There is some emerging evidence to support its adverse effects in obsessive compulsive disorder (OCD), first episode psychosis (FEP) and substance use disorder. Apart from its role as regards the outcome of the illness, the EE itself is an indication of a maladaptive coping of the patients’ relatives.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Sadath A, Kumar R, Karlsson M. Expressed emotion research in India: A narrative review. Indian J Psychol Med 2019;41:18-26.
EE is associated with many clinical and demographic variables of patients and caregivers\(^{[17]}\) – patients' functioning\(^{[18]}\) employment status, cognitive functions, number of hospitalisations\(^{[19]}\) premorbid adjustment, illness duration,\(^{[20]}\) duration of untreated psychosis,\(^{[17]}\) number of people living with patients and caregivers' relationship with patients\(^{[21]}\) being some of them. EE is also closely associated with the caregivers' stress,\(^{[17]}\) psychological distress,\(^{[18]}\) burden,\(^{[22]}\) coping and negative appraisal.\(^{[23]}\) The components of EE such as criticality, hostility and emotional over-involvement arise from differing sources\(^{[24]}\) and have varying effects on patients\(^{[25]}\) across cultures.\(^{[26,27]}\)

Socio-cultural milieu plays an important role in determining EE. The construct of EE is essentially cultural in nature,\(^{[28]}\) and different cultural groups tend to be more critical or more emotionally involved because of their cultural background.\(^{[29]}\) Although the studies from western culture support the association between high EE and relapse\(^{[30]}\) the data from other cultures is less solid.\(^{[27]}\) The relationship between high emotional over-involvement and poor illness outcome is inconsistent, and emotional over-involvement may not be detrimental in all cultures.\(^{[26]}\)

In India, family members are the primary providers of support and care for ill family members.\(^{[31]}\) More than 90% of chronically mentally ill patients live with their families. The family members provide much-needed care and support including taking day-to-day care, supervising medications, taking the patient to the hospital and looking after the financial needs.\(^{[12,32]}\) This active involvement by the family members may occur partly because of the high sense of family responsibility, the value system and family integration, but often is a consequence of an inadequately resourced mental health system.\(^{[33]}\) As a result of the increased caregiving tasks, roles and responsibilities, the family caregivers experience significant stress and burden,\(^{[12,32]}\) and this could possibly trigger high EE, which in turn may affect the illness outcome. To date, no reviews have specifically examined the potential role of EE in the course and outcome of illness in Indian culture. The previous reviews\(^{[26,30]}\) had a very small representation of Indian studies. This review of Indian EE studies tries to answer the following questions.

1. In India, to what extent is EE evident among caregivers/families living with a person suffering from health or mental problems?
2. Does EE predict relapse or worsen the course and outcome of illnesses in an Indian setting?
3. What are the demographic and psychosocial correlates of EE?

METHODS

Potential studies were identified through a combination of electronic database searches, internet searches and bibliographic searches of the retrieved articles. A systematic electronic database search was performed in the PubMed and Science-Direct. Other electronic databases searched were IndMed, PsychInfo and Google Scholar. The last search was run on 7 March 2018. The first author (Anvar Sadath) performed initial literature searches and screening of the articles from the electronic databases and internet sources. The second author (Ram Kumar) performed an additional search to identify whether any potential studies had been left out.

Eligibility criteria

All the peer-reviewed published Indian research studies on EE, conducted among patients and/or caregivers/families of persons with a health or mental health problems, from its inception were included. Articles published in the English language, available in an electronic database or other internet sources in the form of journal articles were included. We included all types of studies (i.e. interventional/observational) which quantitatively measured EE as a whole or any of the components of EE such as criticality, hostility, emotional over-involvement, warmth and positive regard.

Search terms

The following search terms, with a combination of three or more from each category, were used to identify the potential studies: expressed emotion, criticality, emotional over-involvement, emotional involvement, hostility, warmth, positive regard along with mental illness, mental disorder, schizophrenia, psychosis, mood disorder, anxiety disorder, OCD, eating disorder, dementia, epilepsy, seizures, neurological illness, physical illness, along with India, Indian setting, Indian families and Indian culture. The truncation symbol (*) was applied to the basic search word and phrases to get all the associated terms. The Boolean search operator AND/OR was used to combine search terms wherever appropriate.

Data extraction

A data extraction form was prepared after taking into account the review objectives/questions. The variables extracted from the articles included the details of authors, year of publication, aim of the study, participant and setting, study type/design, variables measured, EE instrument and results.

RESULTS

As the results of the search, we obtained 19 eligible EE research reports from 16 studies. A narrative summary of the research reports has been presented in Table 1.
Table 1: Summary of expressed emotion studies in India

| Authors | Aim of the study | Participants and setting | Types/design | Variables measures | EE measurement | Results |
|---------|------------------|--------------------------|--------------|-------------------|-----------------|---------|
| Baruah et al. (2018)<sup>36</sup> | To examine the efficacy of a brief psychotherapeutic intervention as an adjunct to SRIs in OCD | 94 OCD patients randomised into brief family interventions or SRI groups OCD clinic, NIMHANS, Bangalore | Randomised controlled trial | Illness severity, family accommodation and EE | Family Emotional Involvement (FEI) and Criticism Scale (FEICS)<sup>31</sup> | High EE (FEI and criticism) t 3-month follow-up, EE declined significantly in intervention group |
| Reddy and Jagannathan<sup>36</sup> (2017) | To understand the predictors of coping behaviour and EE in persons with alcohol dependence | 60 adults with ADS on IP/OP treatment from CIP, Ranchi were randomly recruited | Observational/ cross-sectional | EE coping | Level of expressed emotion scale<sup>32</sup> | Age at first intake of alcohol was associated with perceived EE. It predicted 8% variance in EE |
| Sadath et al. (2017)<sup>33</sup> | To examine how stress and support shape EE in carer’s of FEP | 71 carers of persons with FEP recruited from inpatient psychiatric units, NIMHANS, Bangalore | Baseline assessment of an intervention study | EE (CC&EOI), stress and social support | Family questionnaire<sup>34</sup> | High EE in bivariate analysis, EE was correlated with age of patients and DUP and inversely with family income. In the regression model, stress increased EE but social support did not influence EE. Carers in the intervention group reported a reduction of EE and improvements in social support at 1-month follow-up. However, these benefits were not sustained at the 3-month follow-up |
| Sadath et al. (2017)<sup>35</sup> [Follow-up study of Sadath et al. (2017a)<sup>37</sup>] | To assess the effectivity of group intervention on EE and social support in carers of FEP | 71 carers of persons with FEP recruited from inpatient and outpatient psychiatric units, NIMHANS, Bangalore | Quasi-experimental non-equivalent comparison group design | EE (CC&EOI), stress and social support | Family questionnaire<sup>36</sup> | |
| Gogoi (2017)<sup>40</sup> | To assess EE among family members of patients with schizophrenia | 100 caregivers of persons with schizophrenia and patients | Observational/ cross-sectional | Expressed emotion | Family Attitude Scale<sup>41</sup> | The majority of the family caregivers (79%) had low EE. EE was associated with family members’ age and marital status (being married). Low EE among those who had onset of illness after 33 years or above | |
| Parija et al.<sup>42</sup> (2016) | To explore the burden and expressed emotion in caregivers of schizophrenia patients | 40 patients with schizophrenia and their caregivers were recruited from the outpatient department of psychiatry at the Institute of Mental Health and Hospital Agra | Observational/ cross-sectional | Psychopathology, caregiver burden and EE | FEICS<sup>35</sup> | High perceived criticism Unemployment and urban residence were associated with EE |
| Singh and Singh (2015)<sup>43</sup> | To compare EE and quality of life of the bipolar affective disorder and schizophrenia patients | 200 re-hospitalised patients with BPAD and schizophrenia. Study conducted in RINPAS, Ranchi | Observational/ cross-sectional/ comparative design | EE & quality of life | Attitude questionnaire<sup>44</sup> | All the domains of EE were higher among persons with schizophrenia than persons with BPAD |
| Verma et al. (2015)<sup>43</sup> | To understand the influence of perceived EE, stigma and comorbid depression among persons with epilepsy | 80 persons with epilepsy recruited from the Neurology Department OPD of AIIMS, New Delhi | Observational/ cross-sectional/ comparative design | Depression Perceived EE stigma | Level of expressed emotion scale<sup>33</sup> | Half of the patients perceived high EE. EE significantly influenced depression and stigma. Patients with high EE were thirteen times more likely to have depression and eight times more likely to have stigma than patients in low EE |
| Koujalgi et al. (2014)<sup>40</sup> | To compare EE in patients with OCD and normal control | 30 persons with OCD and 30 age- and sex-matched controls. Samples collected from a medical college at Belgaum, Karnataka | Observational/ cross-sectional/ Case control study | Severity of OCD & EE | Family Emotional Involvement and Criticism Scale (FEICS)<sup>31</sup> | High EE in OCD group All the domains of EE were higher in the OCD group than for the normal control |

Contd...
| Authors | Aim of the study | Participants and setting | Types/design | Variables measures | EE measurement | Results |
|---------|-----------------|--------------------------|--------------|-------------------|---------------|---------|
| Cherian et al. (2014) | To examine the effect of family accommodation (FA) and EE on 1-year naturalistic outcome of OCD | 94 OCD patients and their primary caregivers were followed up for 1 year with assessment in every trimester. OPD, NIMHANS | Observational/longitudinal | Severity of OCD, functioning, work and social adjustment, quality of life, EE, family accommodation and family burden | FEICS(25) | Above average EE Emotional involvement was high as compared to criticism Perceived criticism inversely correlated with relatives’ psychological quality of life and over-involvement inversely correlated with psychological, social and environmental quality of life Non-remitters compared to remitters had higher baseline score of EE |
| Nirmala et al. (2011) | To explore the relationship between caregivers’ burden and level of expressed emotions by the patients with schizophrenia | 35 patients with schizophrenia and their caregivers were recruited from the rehabilitation centre at NIMHANS | Observational/cross-sectional | Caregiver burden and expressed emotion | FEICS(25) | High EE (high perceived criticism and emotional involvement). EE was not associated with caregiver burden |
| Singh and Singh (2011) | To study the relationship between EE and behavioural problems among children with epilepsy | 30 epilepsy patients (15 boys and 15 girls) attending the Neurology OPD of the Institute of Human Behaviour and Allied Sciences, Delhi | Observational/cross-sectional | Expressed emotion and behavioural problems | FEICS(25) | Mild-to-moderate EE No significant gender difference in perception of EE |
| Devaramane et al. (2011) | To examine the impact of a brief family-based intervention on carers’ functioning, patients’ psychopathology and relapse | 20 patients with schizophrenia and their primary carers from a medical facility in Udupi, Karnataka | Intervention study. Assessments were carried out at baseline and at 3 months | Psychopathology, EE, burden and coping | FEICS(25) | Above average EE Emotional involvement was high as compare to criticism Significant difference in EE from baseline to 3 months follow-up |
| Haza et al. (2010) | To study the characteristics of EE in joint and nuclear families | 60 key relatives of persons with schizophrenia, each from nuclear and joint families. Outpatient department and schizophrenia clinic of the Central Institute of Psychiatry, Ranchi | Observational/cross-sectional | EE attitude to mental illness | Attitude questionnaire(44) | There was a significant difference between nuclear and joint families on EE The key relatives of joint families showed positive attitudes |
| Shammugiah et al. (2002) | To explore the relationship between OCD and EE in an Indian population | 35 consecutive patients with obsessive compulsive disorder, who presented to the OCD clinic at the NIMHANS, Bangalore | Observational/cross-sectional | Severity of OCD & EE | FEICS(25) | Above average EE EE was not correlated with YBOCS score or any other demographic or illness variables |
| Wig et al. (1987) | To measure the components of expressed emotion among two samples of relatives of first-contact patients from Aarhus (Denmark) and Chandigarh (India) (data derived from a WHO sponsored multicentre study) | 24 caregivers from Denmark and 104 samples from Chandigarh, India. The majority of the patients were diagnosed with schizophrenia | Observational/cross-sectional/comparative | EE | Camberwell Family Interview | The Danes were very similar in most respects to samples of British relatives, whereas the Indian relatives expressed significantly fewer critical comments, fewer positive remarks, and less over-involvement. Within the Chandigarh sample, city-dwellers were significantly more expressive than villagers of all EE components except over-involvement |

**Contd...**
## Table 1: Contd...

| Authors                          | Aim of the study                                      | Participants and setting                                                                 | Types/design                                                                 | Variables measures                                                                 | EE measurement                        | Results                                                                 |
|----------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------|
| Leff and Ghosh (1987)            | To examine the relationship between EE and relapse in 1-year follow-up (data derived from a WHO sponsored multicentre study) | 93 caregivers of patients, 78 of whom had a centre diagnosis of schizophrenia. 1-year follow-up of patients who had made a first contact with psychiatric services in Chandigarh, North India | Observational/ follow-up assessment of the cohort                              | EE illness outcome                    | Camberwell Family Interview                                           | Significant relationship between high EE and relapse. However, only hostility was found to be significantly linked with relapse. Critical comments and emotional over-involvement showed a tendency to be associated with relapse. |
| Follow-up assessment of Wig et al. (1987) |                                                        |                                                                                          |                                                                              |                                    |                                       |                                                                        |
| Sethi et al. (1982)              | To compare the attitudes of the key relatives of schizophrenia patients and relatives of disturbed patients (scale validation study) | 46 relatives of schizophrenia patients and 41 relatives of disturbed patients hospitalised in a medical college at Lucknow | Observational/ scale validation study                                         | EE                                  | Attitude questionnaire                                             | No group differences in critical comments, hostility, warmth and emotional involvement domains. |
| Trivedi et al. (1983)            | To study the attitudes of the key relatives towards the patient on the course of schizophrenia | 45 key relatives of persons with schizophrenia who were on OP treatment in a medical college, Lucknow | Observational/ follow-up study                                               | EE, clinical course and social functioning                                      | Attitude questionnaire                                            | There was a trend towards the relatives of the relapsed or continuously ill patients expressing more critical comments, hostility, dissatisfaction and being more emotionally over-involved in comparison with the relatives of symptom-free patients |
| Follow-up study of Sethi et al.  |                                                        |                                                                                          |                                                                              |                                    |                                       |                                                                        |

**ADS** – Alcohol dependence syndrome; **FEP** – First episode psychosis; **OCD** – Obsessive compulsive disorder; **EE** – Expressed emotion

### Study characteristics

As per the selection criteria, 19 reports of 16 studies were included and reviewed. Three studies [17,44,52] produced six reports which included three follow-up reports. The sample sizes of the 16 studies were 64, [34] 60, [36] 71, [17] 100, [40] 40, [42] 200, [43] 80, [45] 30 (30 comparison group), [46] 94, [47] 35, [22] 30, [48] 20, [49] 60, [50] 33, [51] 104 (24 comparison group), [22,44] and 46. [44] Samples across the studies ranged from 20 to 200. Most of the studies were conducted in inpatient/outpatient (IP/OP) units of psychiatry tertiary centres/medical colleges. The highest number of studies were conducted on schizophrenia/psychosis (eight studies), [17,22,40,42,44,49,50,52] followed by OCD (four studies), [34,46,47,51] while two studies were on epilepsy, [45,48] one study was on alcohol dependence syndrome (ADS) [36] and one comparative study was on schizophrenia and bipolar affective disorder. [47] Most of the studies were observational and cross-sectional in nature; however, three studies were longitudinal/follow-ups and three were interventional/experimental. The Family Emotional Involvement and Criticism Scale (FEICS) was the most commonly used instrument to measure EE (eight studies), and all the studies with OCD samples used this instrument. The second most commonly used instrument was the Attitude Questionnaire (four studies).

Majority of the EE studies (13 studies) were conducted in the last decade, while two studies were carried out more than three decades ago. In terms of the professional affiliation of the first/corresponding authors, the majority of the EE studies were conducted by psychiatrists (seven studies), psychiatric social workers (five studies) and clinical psychologists (two studies), while one study each was conducted by researchers with neurology and psychiatric nursing backgrounds.

### Extent of EE in Indian studies

Among the 13 studies that examined the EE level, 9 reported above average or high EE among most of the participants, [17,22,42,43,46,47,49,51] while 3 studies reported low EE. [40,48,53] A multicentre study with a comparison of Danes and Indian samples suggested that Indian relatives express significantly fewer critical comments, fewer positive remarks and less over-involvement. [13] However, we could not find support for this in the other studies. Although high EE prevailed irrespective of diagnosis, all the four studies in OCD samples demonstrated high or above average EE [34,46,47,51] and five studies on schizophrenia/psychosis reported high EE. [17,22,42,43,49] In the two studies on epilepsy, one reported high EE among half of the study participants [41] while the other reported mild-to-moderate levels. [48]

### Role of EE in relapse клинический исход

Only two studies examined the relationship between EE and relapse. In this, Leff et al. (follow-up study of the Indian samples) did not find support for this in their study. However, we could not find support for this in the other studies.

---

*Sadath, et al.: Expressed emotion research in India*
Wig et al. followed up 93 patients predominantly schizophrenia diagnosis for 1-year period and found strong evidence for EE – hostility being statistically linked to relapse, while critical comments and emotional over-involvement showed only a tendency to be associated with relapse. Trivedi et al. followed up 45 relatives of patients with schizophrenia for a 6-month period and observed a trend among the relatives of relapsed or continuously ill patients to express more critical comments, hostility and over-involvement than relatives of symptom-free patients. However, both of the above studies are quite old, and no recent evidence is available to reach a reliable conclusion on EE and relapse.

Although the direct association between EE and relapse in conditions other than schizophrenia was not examined in the studies, many studies have indicated the detrimental effect of EE on health/illnesses. For example, Verna et al. observed that EE significantly influenced depression and stigma, and high EE patients with epilepsy were 13 times more likely to have depression than low EE patients with epilepsy. Another study observed that OCD patients who are not in remission had high baseline scores of EE in comparison to those in remission, which implied a possible EE effect on remission. However, differences exist; one study found that the severity or other illness variables of OCD were not associated with EE.

**Demographic and psychosocial correlates of EE**

A study that examined the role of demographics in ADS found that higher age at first intake of alcohol significantly increased EE. Other studies have shown that patients’ age, duration of untreated psychosis, family income (inversely), family members’ age and marital status (being married), type of family, unemployment and urban residence were associated with EE in psychosis/schizophrenia. Sadath et al. observed that carers’ social support inversely correlated with EE, but could not predict in the regression model, while carers’ stress was a significant predictor of EE in FEP. However, another study could not demonstrate any relationship between EE and burden.

In OCD, carers’ perceived criticism and over-involvement inversely correlated with their psychological quality and with the social and environmental quality of life.

**DISCUSSION**

Although a fair number of EE studies are available from India, they are largely exploratory in nature and hence many critical aspects were unaddressed. EE as a concept received attention because of its significance in the course and outcome of illnesses, and a substantial body of research has demonstrated that EE predicts clinical relapse in a number of distinct psychiatric disorders. For example, a meta-analysis of 27 studies confirmed that EE significantly predicts relapse in schizophrenia. EE was also correlated with relapse in bipolar I disorder and substance dependence, and explained pathology in eating disorder. However, in this review it was found that recent Indian studies have not examined the predictive validity of EE on relapse in any illnesses. Also, not many studies have examined the role of EE on the course of illnesses. While EE was observed to be high in most of the studies reviewed here, the potential impact of EE on illness was not examined well. We recommend to conduct studies to examine the role of EE in predicting relapses and in illness severity in this culture. Such studies need to be longitudinal/prospective in nature so that the influence of EE on the course of the illness can be measured accurately over the time period.

Western studies have also examined the effects of EE in many chronic physical/neurological disorders like cancer, dementia and epilepsy. Although we have two published EE studies on epilepsy, many important aspects seem unaddressed. Evidence from the west suggests that high EE is associated with significantly higher seizure frequency and that high criticism resulted in poor drug compliance, while positive EE, such as warmth, resulted in better clinical and pharmacological compliance in seizure disorders. High family criticism correlated with higher depression and anxiety among the patients. A recent meta-analysis of EE studies on dementia found that relatives of those with high EE have increased depression and burden, and they are more likely to attribute the patient’s problems to factors that are personal and controllable by the patient. Many of these findings have significance for service delivery for patients and caregivers. However, we do not have relevant literature from India to verify these findings and we suggest that future research should focus on this area.

Although EE includes criticality, emotional over-involvement, hostility, warmth and positive regard, the most commonly measured EE components are the first three (negative EE). Positive EE (warmth and positive regard) is often less emphasised in the literature. This is because of the detrimental effects of negative EE on the course and outcome of the illness. Though positive EE is expected to act as a protective factor, not many studies have been done on these aspects. However, we think it might be very relevant to study the positive EE in Indian culture because of the critical role and support of the families in the care and treatment of patients. This might be helpful for deciding strength-based approaches to treatment.
Finally, all the negative EE components need not necessarily be detrimental to patients. Criticality and emotional over-involvement can have varying effects on patients across cultures. A systematic review of 34 studies concludes that the relationship between high emotional over-involvement and poor outcome is inconsistent across cultures.\(^{[28]}\) The construct and measurement of emotional over-involvement itself is culture-specific. The effect of high emotional over-involvement could be moderated by a high warmth and high mutual interdependence in kin relationships.\(^{[28]}\) Carers with high emotional over-involvement have attribution styles similar to those of low EE relatives. They may attribute a patient’s illness to external factors the patient cannot control, as opposed to hostile and critical relatives who consider the illness as internal and controllable by the patients.\(^{[60]}\) However, emotional over-involvement does more harm to the relative as it increases stress and the burden of care.\(^{[24]}\) Thus, we also recommend for Indian studies examining differential predictors of critical comments and over-involvement of the families caring for patients.

**CONCLUSION**

EE was found to be high in most studies. The impact of EE on illness outcome is not well explored in Indian studies, as only two studies examined the relationship between EE and relapse. Hence, we recommend more studies to address this gap and to build evidence base in this area.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

**REFERENCE**

1. Brown GW, Carstairs GM, Topping G. Post-hospital adjustment of chronic mental patients. Lancet 1958;2:685-8.
2. Brown GW, Birley JL, Wing JK. Influence of family life on the course of schizophrenic disorders: A replication. Br J Psychiatry 1972;121:341-58.
3. Marom S, Munitz H, Jones PB, Weisman A, Hermesh H. Expressed emotion: Relevance to rehospitalization in schizophrenia over 7 years. Schizophr Bull 2005;31:751-8.
4. Cochrane AHHR. Expressed emotion and schizophrenia: A review of studies across cultures. Int Rev Psychiatry 1999;11:219-24.
5. Sadiq S, Suhaib K, Gleeson J, Alvarez-Jimenez M. Expressed emotion and the course of schizophrenia in Pakistan. Soc Psychiatry Psychiatr Epidemiol 2017;52:587-93.
6. Ellis AJ, Portnof LC, Axelson DA, Kowatch RA, Walshaw P, Miklowitz DJ. Parental expressed emotion and suicidal ideation in adolescents with bipolar disorder. Psychiatry Res 2014;216:213-6.
7. Asarnow JR, Goldstein MJ, Tompstone M, Guthrie D. One-year outcomes of depressive disorders in child psychiatric in-patients: Evaluation of the prognostic power of a brief measure of expressed emotion. J Child Psychol Psychiatry 1993;34:128-37.
8. Rienecke RD, Richmond RL. Psychopathology and expressed emotion in parents of patients with eating disorders: Relation to patient symptom severity. Eat Disord 2017;25:318-29.
9. Moskovich AA, Timko CA, Honeycutt LK, Zucker NL, Merwin RM. Change in expressed emotion and treatment outcome in adolescent anorexia nervosa. Eat Disord 2017;25:80-91.
10. Schmidt R, Tetzlaff A, Hilbert A. Perceived expressed emotion in adolescents with binge-eating disorder. J Ahnorn Child Psychol 2015;43:1369-77.
11. Przeworski A, Zooliner LA, Franklin ME, Garcia A, Freeman J, March JS, et al. Maternal and child expressed emotion as predictors of treatment response in pediatric obsessive-compulsive disorder. Child Psychiatry Hum Dev 2012;43:337-53.
12. Sadath A, Muralidhar D, Varambally S, Jose JP, Gangadhar BN. Caregiving and help seeking in first episode psychosis: A qualitative study. J Psychosoc Rehabil Ment Health 2014;1:47-53.
13. Pourmand D, Kavanagh DJ, Vaughan K. Expressed emotion as predictor of relapse in patients with comorbid psychoses and substance use disorder. Aust N Z J Psychiatry 2005;39:473-8.
14. Watts M. High expressed emotion: Precipitating relapse in substance misuse disorder. Br J Nurs 2007;16:1396-8.
15. Barue D, Kuipers E, Bebbington P. Expressed emotion at first-episode psychosis: Investigating a carer appraisal model. Br J Psychiatry 2004;184:321-6.
16. Barrowclough C, Parle M. Appraisal, psychological adjustment and expressed emotion in relatives of patients suffering from schizophrenia. Br J Psychiatry. 1997;171:26-30.
17. Sadath A, Muralidhar D, Varambally S, Gangadhar B, Jose JP. Do stress and support matter for caring? The role of perceived stress and social support on expressed emotion of carers of persons with first episode psychosis. Asian J Psychiatry 2017;25:163-8.
18. Gomez-de-Regil L, Kwapiil TR, Barrantes-Vidal N. Predictors of expressed emotion, burden and quality of life in relatives of Mexican patients with psychosis. J Psychiatr Ment Health Nurs 2014;21:170-9.
19. Bentsen H, Notland T, Boye B, Munkvold OG, Bjege H, Larsbryggen A, et al. Criticism and hostility in relatives of patients with schizophrenia or related psychoses: Demographic and clinical predictors. Acta Psychiatrica Scandinavica 1998;97:76-85.
20. von Polier GG, Meng H, Lambert M, Strauss M, Zarotti G, Karle M, et al. Patterns and correlates of expressed emotion, perceived criticism, and rearing style in first admitted early-onset schizophrenia spectrum disorders. J Nerv Ment Dis 2014;202:783-7.
21. Karanci AN, Inandilar H. Predictors of components of expressed emotion in major caregivers of Turkish patients with schizophrenia. Soc Psychiatry Psychiatr Epidemiol 2002;37:30-8.
22. Nirmala B, Vranda M, Reddy S. Expressed emotion and caregiver burden in patients with schizophrenia. Indian J Psychol Med 2011;33:119-22.
23. Jansen JE, Gleeson J, Cotton S. Towards a better understanding of caregiver distress in early psychosis: A systematic review of the psychological factors involved. Clin Psychol Rev 2015;35:56-66.
24. Alvarez-Jimenez M, Gleeson JF, Cotton SM, Wade D, Crisp K, Yap MB, et al. Differential predictors of critical comments and emotional over-involvement in first-episode psychosis. Psychol Med 2010;40:63-72.

25. Aguiler A, Lopez SR, Breitborde NJ, Kopelowicz A, Zarate R. Expressed emotion and sociocultural moderation in the course of schizophrenia. J Abnorm Psychol 2010;119:875-85.

26. Singh SP, Harley K, Suhail K. Cultural specificity of emotional overinvolvement: A systematic review. Schizophren Bull 2011;39:449-63.

27. Bhugra D, McKenzie K. Expressed emotion across cultures. Adv Psychiatr Treat 2003;9:342-8.

28. Jenkins JH, Kanno M. The meaning of expressed emotion: Theoretical issues raised by cross-cultural research. Am J Psychiatry 1992;149:9-21.

29. Lopez SR, Ramirez Garcia JI, Ulman JB, Kopelowicz A, Jenkins J, Breitborde NJ, et al. Cultural variability in the manifestation of expressed emotion. Fam Process 2009;48:179-94.

30. Butzlaff RL, Hooley JM. Expressed emotion and psychiatric relapse: A meta-analysis. Arch Gen Psychiatry 1998;55:547-52.

31. Chadda RK. Caring for the family caregivers of persons with mental illness. Indian J Psychiatry 2014;56:221-7.

32. Jagannathan A, Thirthalli J, Hamza A, Hariprasad V, Nagendra H, Gangadhur B. A qualitative study on the needs of caregivers of inpatients with schizophrenia in India. Int J Soc Psychiatry 2011;57:180-94.

33. Chakrabarti S. Research on family caregiving for mental illness in India and its impact on clinical practice: Are we doing enough to help families? Indian J Soc Psychiatry 2013;32:19.

34. Barua U, Pandian RD, Narayanaswamy JC, Bada Math S, Kandavel T, Reddy YCJ. A randomized controlled study of brief family-based intervention in obsessive compulsive disorder. J Affect Disord 2018;225:137-46.

35. Shields OG, Franke P, Harper JJ, McDaniel SH, Campbell TL. Development of the family emotional involvement and criticism scale (FEICS): A self-report scale to measure expressed emotion. J Marital Fam Ther 1992;18:395-407.

36. Reddy AS, Jagannathan A. Predictors of coping and perceived expressed emotions in persons with alcohol dependence in India: A pilot study. Asian J Psychiatry 2017;68:38-40.

37. Cole JD, Kazarjian SS. The level of expressed emotion scale: A new measure of expressed emotion. J Clin Psychol 1988;44:392-7.

38. Wiedemann G, Rayki O, Feinstein E, Hahlweg K. The family questionnaire: Development and validation of a new self-report scale for assessing expressed emotion. Psychol Med 2002;109:265-79.

39. Sadath A, Muralidhar D, Varambally S, Gangadhur BN. Does group intervention have benefits on expressed emotion and social support in carers of persons with first episode psychosis? Soc Work Ment Health 2017;15:524-37.

40. Gogoi K. Assessment of expressed emotion in family members of patients with schizophrenia in a selected Medical College Hospital, Assam. Open J Psychiatry Allied Sci 2017;2:62-70.

41. Kavanagh DJ, O'Halloran P, Manicavasagar V, Clark D, Piotkowka O, Tennant C, et al. The Family Attitude Scale: Reliability and validity of a new scale for measuring the emotional climate of families. Psychiatry Res 1997;70:185-96.

42. Parija S, Yadav AK, Steeraj V, Patel AK, Yadav J, Jain RK. Caregiver burden and expressed emotion in caregivers of patients with schizophrenia. J Psychosoc Rehabil Ment Health 2016;3:83-7.

43. Singh B, Singh A. Quality of life and expressed emotion in psychiatric rehospitalization. Delhi Psychiatry J 2015;18:54-61.

44. Sethi BB, Chaturvedi PK, Saxena NK, Trivedi JK. A comparative study of attitudes of the key relatives towards ‘schizophrenic patients’ and ‘patients of disturbed family’. Indian J Psychiatry 1982;24:126-30.

45. Verma M, Arora A, Malviya S, Nehra A, Sagar R, Tripathi M. Do expressed emotions result in stigma? A potentially modifiable factor in persons with epilepsy in India. Epilepsy Behav 2015;52:205-11.

46. Koujalgi SR, Nayak RB, Patil NM, Chate SS. Expressed emotions in patients with obsessive compulsive disorder: A case control study. Indian J Psychol Med 2014;36:138-41.

47. Cherian AV, Pandian D, Bada Math S, Kandavel T, Janardhan Reddy YC. Family accommodation of obsessive symptoms and naturalistic outcome of obsessive-compulsive disorder. Psychiatry Res 2014;215:372-8.

48. Singh LK, Singh U. Perceived expressed emotions and problem behaviours in epileptic children. Indian J Commun Psychol 2011;7:65-76.

49. Devaramane V, Pai NB, Vella S-L. The effect of a brief family intervention on primary carer’s functioning and their schizophrenic relatives levels of psychopathology in India. Asian J Psychiatry 2011;4:183-7.

50. Hazra S, Chakrabarti S, Sahu K, Pillai RE, Khess CRJ. Attitude towards Mental illness and expressed emotion of key relatives of persons with schizophrenia nuclear vs. joint family. Indian J Soc Psychiatry 2010;26:52-8.

51. Shammugiah A, Varghese M, Khanna S. Expressed emotions in obsessive compulsive disorder. Indian J Psychiatry 2002;44:14-8.

52. Wig NN, Menon DK, Bedi H, Leff J, Kuipers L, Ghosh A, et al. Expressed emotion and schizophrenia in north India. II. Distribution of expressed emotion components among relatives of schizophrenic patients in Aarhus and Chandigarh. Br J Psychiatry 1987;151:160-5.

53. Leff J, N W, Ghosh A. Influence of relatives’ expressed emotion on the course of schizophrenia in Chandigarh. Br J Psychiatry 1987;151:166-73.

54. Trivedi J, Chaturvedi P, Sethi B, Saxena N. A study of attitudes of key relatives of schizophrenic patients. Indian J Psychiatry 1983;25:264-6.

55. Wig NN, Menon D, Bedi H, Ghosh A, Kuipers L, Leff J, et al. Expressed emotion and schizophrenia in north India. I. Cross-cultural transfer of ratings of relatives’ expressed emotion. Br J Psychiatry 1987;151:156-60.

56. Hooley JM, Gotlib IH. A diathesis-stress conceptualization of expressed emotion and clinical outcome. Appl Prev Psychol 2000;9:135-51.

57. Shimodera S, Yonekura Y, Yamaguchi S, Kawamura A, et al. Bipolar I disorder and expressed emotion to the treatment of social anxiety disorder in adolescents. J Adolesc 2009;32:1371-6.

58. Steel JL, Hammond J, Carr BJ, Gamblin TC. Expressed emotion, depression, and survival in patients diagnosed
Sadath, et al.: Expressed emotion research in India

with hepatobiliary carcinoma. J Clin Oncol 2009;27:e20597-e.

61. Favez N, Cairo Notari S, Antonini T, Charvoz L. Expressed emotion in couples facing breast cancer in women is associated with psychological distress in the first year after surgery. J Health Psychol 2017. doi: 10.1177/1359105317738575.

62. Safavi R, Berry K, Wearden A. Expressed Emotion in relatives of persons with dementia: A systematic review and meta-analysis. Aging Ment Health 2017;21:113-24.

63. Bledin KD, MacCarthy B, Kuipers L, Woods RT. Daughters of people with dementia. Expressed emotion, strain and coping. Br J Psychiatry 1990;157:221-7.

64. Bressi C, Cornaggia CM, Beghi M, Porcellana M, Iandoli, II, Invernizzi G. Epilepsy and family expressed emotion: Results of a prospective study. Seizure 2007;16:417-23.

65. Stanhope N, Goldstein LH, Kuipers E. Expressed emotion in the relatives of people with epileptic or nonepileptic seizures. Epilepsia 2003;44:1094-102.

66. Barrowclough C, Johnston M, Tarrier N. Attributions, expressed emotion, and patient relapse: An attributional model of relatives’ response to schizophrenic illness. Behav Ther 1994;25:67-88.

Author Help: Online submission of the manuscripts

Articles can be submitted online from http://www.journalonweb.com. For online submission, the articles should be prepared in two files (first page file and article file). Images should be submitted separately.

1) First Page File:
Prepare the title page, covering letter, acknowledgement etc. using a word processor program. All information related to your identity should be included here. Use text/rtf/doc/pdf files. Do not zip the files.

2) Article File:
The main text of the article, beginning with the Abstract to References (including tables) should be in this file. Do not include any information (such as acknowledgement, your names in page headers etc.) in this file. Use text/rtf/doc/pdf files. Do not zip the files. Limit the file size to 1 MB. Do not incorporate images in the file. If file size is large, graphs can be submitted separately as images, without their being incorporated in the article file. This will reduce the size of the file.

3) Images:
Submit good quality color images. Each image should be less than 4096 kb (4 MB) in size. The size of the image can be reduced by decreasing the actual height and width of the images (keep up to about 6 inches and up to about 1800 x 1200 pixels). JPEG is the most suitable file format. The image quality should be good enough to judge the scientific value of the image. For the purpose of printing, always retain a high quality, high resolution image. This high resolution image should be sent to the editorial office at the time of sending a revised article.

4) Legends:
Legends for the figures/images should be included at the end of the article file.