

AN OVERVIEW OF EXPRESSED EMOTION

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Purpose of This Review

The intent of this piece is to gather together essential elements of Expressed Emotion (EE) — as preparation for articles expanding our knowledge of the emotional effects of family life — good and bad. I used an earlier version to prepare my editorial for *Military Medicine*, “Family’s Expressed Emotion to Returning Citizen Soldiers” (Rabstejnek, 2008). An impressive feature of this construct has been its survival for over a half century. EE has shown empirical consistency across studies of schizophrenia and then other mental health issues. Gestated in an era when families were considered instrumental in the etiology of schizophrenia, it has since survived the overwhelming biological and political movements that arose and prospered after introduction of Thorazine, as a treatment, in the mid-1950s — followed by the campaign, largely led by E. Fuller Torrey, to absolve parents of all blame. With the rise of biological theories, the academics essentially obliterated consideration of parents as a causative factor *before* the prodromal start of schizophrenia. EE advocates survived by judiciously making statements like: “Before we begin our discussion, one point warrants emphasis. Although this article describes a family variable that has been reliably linked to psychiatric relapse, there is no evidence that families cause disorders such as schizophrenia” (Hooley, 2007, p. 330). Survival of expressed emotion consistently emphasized relapse and not conditions before diagnosis.

Evolution of Expressed Emotion Concept

Several excellent positive reviews of expressed emotion were published (Kuipers, 1979; Hooley, 1985, 2007; Leff & Vaughn, 1985; Vaughn, 1989) so only the salient history will be elaborated herein. Expressed emotion was introduced in England in the 1960s by Brown and his associates (Kanter, Lamb & Loeper, 1987). A 1958 article in *The Lancet* (Brown, Carstairs & Topping) looked at the social environment into which long-stay psychiatric patients returned after discharge from the hospital. They observed:

In contrast to the usual findings with early cases, the outcome bore little relation to the patients’ ages, recorded diagnoses, or length of stay in hospital; it did, however, bear a significant relationship to the social group to which they returned and to their employment record. (Brown et al., 1958, p. 688)

Their more controversial statement was:

It is no new discovery that it is sometimes inadvisable for schizophrenic patients to return to their own families; the point has been made in many standard textbooks of psychiatry, and it provides one of the arguments in favor of foster homes. (Brown et al., 1958, p. 688)

Now, over 50-years later, considerable empirical studies have repeatedly supported the assertion of family complicity in relapse with a substantial series of studies (Butzleff & Hooley, 1998). After much biological research over the years, in 1997, the National Academy of Sciences reported:

And even the strongest advocates of genetic studies of schizophrenia agreed that parallel research in basic neurobiology, neurophysiology, microscopic neuroanatomy of the brain, and integrative neuroscience, as well as a continued search for environmental factors, will be essential for understanding the actions of the relevant genes and for devising new treatments. (Barondes et al., 1997, p. 1614)

This type of report was still made over a decade later (Kirkbride & Scoriels, 2009). For two decades I have read statements in the literature that schizophrenia was definitely biological *but* its cause was still unknown. Meanwhile, repeated empirical studies have provided us with EE data that can diminish relapse and reduce human suffering, until we find the sought biological grail.

Evolution of the Expressed Emotion Concept

Expressed emotion is a marvelous example of the careful development of a construct in a methodical manner. “The beginning question was: Why do some schizophrenic patients repeatedly relapse after hospital discharge?” (Vaughn, 1989). First, relationships between the patient and his family were observed and reported by Brown and others (1958).

Second, an experiment was conducted to test out competing explanations of the event (Brown, Monk, Carstairs & Wing, 1962). There was an observed link between the living conditions to which the patient returned, and if it was the patient’s mother, there was an association noted as to whether she worked outside the home. They found three-quarters of patients in highly emotional homes returned to the hospital as opposed to one-third of the remaining patients.

The third step was to develop an instrument to measure the variable(s) of interest (Brown & Rutter, 1966). Out of this study was the development of the Camberwell Family Interview (CFI), which is the foundation for expressed emotion measurements. The CFI was named after the area in which the original research took place, London’s Camberwell district. This approach took considerable time to train interviewers, conduct the sessions, and evaluate the results.

Brown and Rutter (1966) went to great pains to train and supervise their interviewers. As a result they achieved high interrater reliability. Five key scales were tested for agreement between raters: warmth, number of positive remarks, severity of criticism, number of critical remarks, and dissatisfaction. Later Vaughn and Leff (1976a) introduced a streamlined version that reduced the interview time to 60-90 minutes.

The fourth step by Brown (Brown, Birley & Wing, 1972) was to identify specific factors associated with *post-discharge relapse*, because: “Since each patient in the series already had an established schizophrenic illness, the study was not intended to be concerned with the original causes of this condition but only with factors influencing its course” (Brown et al., 1972, p. 242). Brown et al. were very concerned with the issue of parental blame. In their conclusion they wrote:

Therapy of relatives should take account of their liability to develop highly emotional responses to the patient. In the light of present knowledge, it should not be too readily assumed that the parent’s handling of the patient when a child has caused schizophrenia to develop; such an assumption may be wrong, in which case harm may be done both to relative and patient. (Brown, Birley & Wing, 1972, p. 256)

Of hundreds of ratings three showed significant and independent relationships:

**Hostility
Emotional Over-involvement
Relative's Critical Comments**

The positive conditions of warmth and complements did not significantly contribute to the association of relapse and environmental emotion. The three negative scales are combined into a measure called expressed emotion (EE). Critical comments is a frequency count and the other two are global measurements. By this time, they also determined the critical time that a discharged patient could spend with High EE relatives was 35 hours (Brown et al., 1972).

This construct continues to be worthwhile because we have yet to find a biological theory of schizophrenia. A 1995 conference of the National Academy of Sciences and the Institute of Medicine reported that “Despite extensive study for many years and many initially promising, but ultimately disappointing hypotheses, we do not have a clear understanding of either the causes of schizophrenia or how the causative factors lead to the clinical features” (Barondes et al., 1997, p. 1612). Kirkbride and Scoriels 2009 Symposium report said: “In the intervening years [2003-2009], the weight of expectation has only been, disappointingly, matched by the absence of any clear consensus on candidate genes for schizophrenia” (p. 259).

Second Stage in Expressive Emotion Evaluations

A generation later, Christine Vaughn and Julian Leff (Vaughn & Leff, 1976a, 1976b) took over the systematic development and validation of the expressed emotion concept. Leff (1976) elaborated on how expressed emotion is measured:

Critical comments are rated on content and tone of voice. For example, a statement made in a matter of fact way that the patient lay in bed all day would not be sufficient to rate as a critical comment. Only if it was uttered in a critical tone of voice would it be rated as such. The total number of critical comments made during the interview is recorded. *Hostility* involves not just a critical remark about behavior but either a generalization of criticism or a rejection of the patient as a person. For example, "he lies in bed all day and is the laziest person in the world." Hostility is rated on a four-point scale. *Warmth* is judged mainly from tone of voice and is rated on a six-point scale. *Emotional over-involvement* refers to unusually marked concern about the patient and is rated on the basis of feelings expressed in the interview itself and of behavior reported outside it. It includes obvious and constant anxiety about minor matters such as the patient's diet and the time he come home in the evening as well as markedly protective attitudes. It is rated on a six-point scale [*ital.* in original]. (Leff, 1976, p. 567)

They replicated EE tests in London (Vaughn & Leff, 1976b) and Los Angeles (Vaughn, Snyder, Jones, Freeman & Falloon, 1984). A follow-up study showed the Vaughn and Leff results held two-years after discharge (Leff & Vaughn, 1981). Their conclusions are:

In each of the studies, relatives' EE at the time of admission proved to be the best single predictor of symptomatic relapse, more powerful than any clinical feature of the patient's illness. Two other factors, regular phenothiazine medication and reduced contact with relatives, did exert a protective influence on patients returning to high EE homes. However, the link between relatives' EE and relapse remained independent of all other variables investigated (Vaughn, 1989, p. 15).

A prototypical representation of the findings from Vaughn and Leff (1976b, p. 132) is delineated on the next page [it is too long to fit on this page] that illustrates the relationships discussed above. Other data and values are included in Butzlaff and Hooley's (1998) meta-analysis, but the table developed by Vaughn and Leff nicely shows the effects of both drugs and social contacts.

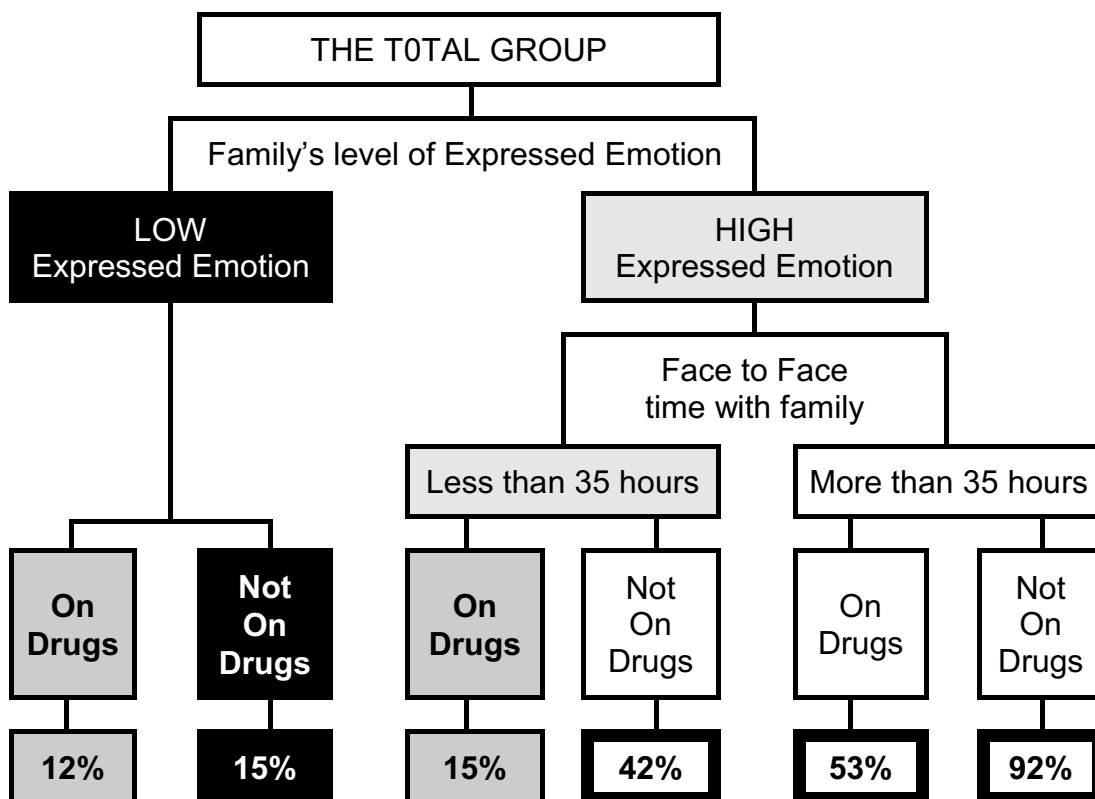
The Vaughn and Leff (1976b) study is sort of a standard against which other studies (Leff, Wig, Bedi, Menon, Kuipers, Korten, Ernberg, Day, Sartorius & Jablensky, 1987; Barrelet, Ferreo, Szigethy, Giddey & Pellizzer, 1990; Vaughn, Snyder, Jones, Freeman & Fallone, 1984) results are compared. The collection of authors for the Leff et al. (1987) comparisons listed, in the last sentence, represents a large cross-cultural gathering. Similar relationships were found in Chandigarh (Leff et al., 1987) and among a French cultural environment in Geneva (Barrelet et al., 1990). Vaughn et al. (1984) was made up of English and American researchers who set out to replicate the Vaughn and Leff (1976b) study in California. The data was more spurious, but essentially reinforced the same EE variables, and they were confirmed by Strachan et al. (1986).

We must, however, remember the maximum of statistics: "***correlation is not causation.***" Nonetheless, whatever the cause, psychoeducational treatment has shown some success.

Elements of social treatment ... have included educating the family about the illness, improving communication within the family, teaching problem solving skills, helping patient and relatives to express negative feeling in more constructive ways and developing more realistic expectations for social functioning and performance. The demonstrated protective benefits of reduced face-to-face contact and regular medication for patients at risk of relapse is acknowledge. For example, programmes typically attempt to expand social networks and to ensure that ... patients are maintained on prescribed medication. Without exception, these family treatment programmes result in significant reductions in relapse rates compared with control conditions. In studies focused on high EE patients and their families, lowered relapse rates in family-treated on high EE patients and their families, lowered relapse rates in the family-treated group were associated and lowered levels of EE in the relatives (Vaughn, 1989, p. 18).

Thus, EE relationships can be ameliorated by psychoeducational therapy. The respected Cocharane Report (Pharoah, Mari, Rathbone, & Wong, 2010) elaborated on several treatment alternatives to the emotionalism within the patients family, be it parents or spouse. The clearly written “Seminar” piece in *The Lancet* (Mueser & McGurk, 2004) reviews many areas of the illness, including details on psychosocial interventions. The diagram below is shaded to emphasize the most promising paths and the tradeoffs between drugs and emotionally stressful family contact. In actual practice economic, political, and personal issues have to be considered.

Nine-month Relapse Rates for a Total Group of 128 Schizophrenic Patients



Source: Vaughn & Leff (1976b), p. 132.; Leff (1976), p. 571.

The Concerned Protectors of Family Innocence

E. Fuller Torrey, the perennial defender of parents of schizophrenics, seems to be faced with ambivalence about expressed emotion.

Although most of the EE researchers seem genuinely convinced that families do not cause schizophrenia in their family member, that is not true or all of them. Dr. Michael J. Goldstein of the University of California, Los Angeles, one of the more prominent researchers in the EE field, has carried out research on disturbed adolescent boys which he claims “provide evidence of family attributes measured during adolescence are associated with the *subsequent* presence of schizophrenia or schizophrenia-related disorders in the offspring once they entered young adulthood.” In other words, the family causes schizophrenia. In *The New York Times*, Goldstein was quoted as claiming that “the parents of these kids engaged in character assignments.” Such assertions make families of schizophrenics justifiably suspicious of EE research. Is EE research merely the offspring of Gregory Bateson’s double bind? (Torrey, 1988, p. 310).

Torrey (1988) is very protective of schizophrenic’s parents and he advises: “Be very careful ... that the mental health professional has an educational approach and will help you learn ways to manage the family situation, not a psychoanalytic approach that will merely produce guilt and blame” (p. 310). Similarly, Grinspoon and Bakalar (1990) comment: “Expressed emotion has been acclaimed as the guide that professionals need in their work with families, but it has been criticized as a new and subtler way of blaming parents for the symptoms of their mentally ill children” (p. 12). Torrey’s passion is illustrated in his writing “[A Fantasy Trial About a Real Issue.](#)”

The above are not alone in concern with the blaming aspects of expressed emotion (Hatfield, Spaniol & Zipple, 1987; Kanter, Lamb & Loeper, 1987), because the categories put families in dichotomous classifications. These critics recognize the replicated nature of the data and accept the results, but Hooley (1985) expresses her concern: “EE should not be viewed as just another way of blaming families of schizophrenics. Potentially positive aspects of high EE and negative aspects of low EE deserves consideration” (p. 137).

Discussion

We now have a half-century of data where expressed emotion in a family had detrimental effect on patients *already diagnosed* with schizophrenia. This information needs to be considered when deciding what sort of environmental and drug treatment is recommended after hospital discharge.

Beyond schizophrenia, there are studies that have shown EE is related to mood and eating disorders (Butzlaff & Hooley, 1998), anxiety disorders and substance abuse (Hooley & Parker, 2006), personality and mood disorders (Hooley, 2007), bipolar disorder (Miklowitz, 2007), and a host of other syndromes (Kuipers, 1994). It is obvious the emotionality in the family is detrimental for many different mental and behavioral difficulties and should not be ignored.

Studies have shown association between a person’s early environment and his or her genetic endowment. Meta-analyses have shown politically correct associations, as minority group position, growing up in an urban area, and early life trauma (van Os, Kenis & Rutten, 2010). Van Os and his associates are exploring the complex neuroscience behind the nature-nurture link.

Expressed emotion is a well-explored and generally supported concept that deserves to further understood with both politically correct and incorrect future research studies and editorials.

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