



# Shame and guilt/self-blame as predictors of expressed emotion in family members of patients with schizophrenia

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## ABSTRACT

Expressed emotion (EE) is a measure of the family environment reflecting the amount of criticism and emotional over-involvement expressed by a key relative towards a family member with a disorder or impairment. Patients from high EE homes have a poorer illness prognosis than do patients from low EE homes. Despite EE's well-established predictive validity, questions remain regarding why some family members express high levels of EE attitudes while others do not. Based on indirect evidence from previous research, the current study tested whether shame and guilt/self-blame about having a relative with schizophrenia serve as predictors of EE. A sample of 72 family members of patients with schizophrenia completed the Five Minute Speech Sample to measure EE, along with questionnaires assessing self-directed emotions. In line with the hypotheses, higher levels of both shame and guilt/self-blame about having a relative with schizophrenia predicted high EE. Results of the current study elucidate the EE construct and have implications for working with families of patients with schizophrenia.

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## 1. Introduction

Expressed emotion (EE) is a measure of the family environment that specifically assesses emotions articulated by a key relative towards a family member with a disorder or impairment (Hooley, 2007). EE was first measured by the Camberwell Family Interview (CFI; Leff and Vaughn, 1985). The CFI examines EE on three subscales – emotional over-involvement (EOI), criticism, and hostility. EOI is a composite rating of factors including a relative's exaggerated emotional response; over-identification with the patient; over-intrusive, over-protective, or overly self-sacrificing behaviors (e.g., "I no longer do anything for myself because taking care of his needs is now my top priority"); and excessive concern. (Barrowclough and Hooley, 2003). Criticisms are comments about the behavior and/or characteristics of a patient that a relative resents or finds irritating. Hostility refers to a more generalized version of criticism (e.g., "I can't stand John"). CFI studies have demonstrated that hostility is rarely seen in the absence of high-EE based on criticism. Thus, researchers using the CFI often combine these categories (e.g., Weisman et al., 1998, 2000; Lopez et al., 2009) and newer systems of rating EE, such as the Five Minute Speech Sample (FMSS; Magaña et al., 1986), do not measure hostility as a separate component; instead, it is combined with criticism. EE is important because it is a robust predictor of illness prognosis across a

broad range of psychiatric disorders (Wearden et al., 2000) and, with a few exceptions, across a range of cultures and ethnic groups (Weisman de Mamani et al., 2009). Thus, it is crucial to understand why some relatives respond to a loved one's illness in a critical or emotionally over-involved manner while others do not (Hooley, 2007).

In the current study, self-directed emotions were examined as predictors of EE because some scholars have proposed that both shame and guilt/self-blame may underlie the construct (Jenkins and Karno, 1992). Following Bentsen et al. (1998) who stated that "self-blame is an equivalent of guilt," the current study uses guilt and self-blame interchangeably. Shame and guilt/self-blame are both self-evaluative emotions (Tracy and Robins, 2006). Despite their similarities, however, they are distinct emotions, with different cognitive, affective, and behavioral components (Tangney, 1995). There is some empirical research to support this distinction. For example, Weisman de Mamani (2010) found that increasing shame proneness was positively associated with the general emotional distress (GED) of caregivers. However, increasing guilt proneness was negatively associated with GED.

While guilt/self-blame induces interpersonal engagement and reparation for wrongdoing, Silfver (2007) argues that guilt might be maladaptive, for example, when a person feels guilty for an uncontrollable event like an illness. Hatfield (1981) suggested that high EE is the consequence of guilt. Because guilt encourages reparative behaviors, relatives who feel excessively blameworthy regarding the patient's illness may resort to over-involvement or sacrificing conduct in order to mend behaviors and events for which they feel guilty. Indeed, Bentsen et al. (1998) found that high levels of guilt-

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proneness, or a tendency to engage in self-blame, were positively associated with the EOI component of EE. Thus guilt may induce reparative behaviors but simply the wrong kinds (those that are maladaptive).

Proneness to shame correlates with a tendency to blame others by making external attributions for shame-eliciting events (Tracy and Robins, 2006). These attributions provoke defensive criticism toward those involved in the shame-eliciting situation, as well as anger, rage, and hostility (Gilbert, 1998). Jenkins and Karno (1992) suggested that shame about having a family member with schizophrenia may underlie EE because shame motivates rage, hostility, anger, and criticism. Ryan (1993) carefully examined the interaction between a man with schizophrenia and his wife, and pointed to verbal and nonverbal evidence of feelings of shame in the patient's high EE spouse. Ryan concluded that relatives' criticism might be a consequence of shame. Low EE family members, on the other hand, may feel less shame about their relatives' symptoms and illness (Harrison and Dadds, 1992).

In a study examining EE in relatives of patients with bipolar disorder, McMurrich and Johnson (2009) found depressive symptoms to be a significant predictor of EE while both guilt-proneness and shame-proneness were not. However, having a relative with bipolar disorder may not be as shame-inducing as having a relative with schizophrenia because bipolar disorder is frequently associated with positive behaviors such as creativity (Santosa and Sachs, 1999) and achievement (e.g. Johnson, 2005). Therefore the experience of shame and guilt may not generalize between the two disorders.

Weisman de Mamani (2010) also examined the relationship of self-directed emotions in relatives of patients with schizophrenia using a dispositional measure of shame and guilt. Dispositional measures assess endorsements of shame and guilt that are trait-like, or inherent, rather than situation-based. However, in this study neither shame proneness nor guilt proneness predicted EE. It is important to note that dispositional measures do not take into account the fact that there are individual differences in the specific types of events and situations that elicit shame, even in people with comparable overall propensity towards experiencing shame. Thus, Weisman de Mamani (2010) recommended that future studies assess whether EE is associated with relatives' shame and guilt specifically related to their loved ones' illness. This study is building upon the recommendations of Weisman de Mamani to specifically assess self-conscious (referred to in the current study as self-directed) emotions about having a loved one with schizophrenia as predictors of EE.

Unlike the Weisman de Mamani (2010) and McMurrich and Johnson (2009) studies which both used generic proneness measures of self-directed emotions, in the current study we examined the relationships among EE and relatives' feelings of shame and guilt/self-blame as a direct consequence of having a relative with schizophrenia. Based on the literature reviewed above, it was hypothesized in this study that greater shame and guilt/self-blame about having a relative with schizophrenia would each predict the occurrence of high EE in relatives of patients with schizophrenia. On an exploratory basis we examined whether shame and guilt/self-blame predicted the specific components of EE. We expected to replicate Bentsen et al.'s (1998) findings of guilt/self-blame predicting EOI. Furthermore, based on Tangney's (1995) and Gilbert's (1998) views that shame triggers anger, rage, hostility, and criticism, as well as Ryan's (1993) qualitative findings, it was hypothesized in this study that greater shame would predict the occurrence of high EE-critical attitudes.

## 2. Method

### 2.1. Sample

The current study was part of a parent study evaluating the efficacy of a 15-week, culturally informed, family-focused treatment for schizophrenia (CIT-5) compared with a treatment-as-usual control condition (TAU). Patients and their family

member(s) were recruited from Miami and neighboring cities through the use of local radio, newspaper, and Miami's above-ground rail system advertisements, and community outreach activities (e.g., lectures at support groups for the mentally ill and their family members, hospitals). Participants met the following criteria: the family member(s) had a relative with schizophrenia or schizoaffective disorder, the family member(s) and patient shared at least one hour of contact per week, and participants spoke English or Spanish. Participants were given the option to be interviewed in English or in Spanish and 18 chose to be interviewed in Spanish, while 54 chose to be interviewed in English. An editorial board was used to translate all measures into Spanish. An editorial board approach is considered to be more effective than translation-back-translation and accounts for language variations between Hispanic subgroups (Geisinger, 1994). A native Spanish speaker initially translated all measures from English to Spanish. Next, an editorial board consisting of native Spanish speakers of Cuban, Puerto Rican, Nicaraguan, Colombian, Mexican, and Costa Rican descent, and a non-native Spanish speaker, individually reviewed the Spanish translations and compared them against the original English versions. After independently reviewing the translations, the individuals met as a group along with the original translator to discuss and reconcile discrepancies and concerns with the translations. Board members agreed that the language used in the final versions of all the Spanish measures was clear, comprehensible, and relevant for members of all Spanish-speaking ethnic groups.

Participants consisted of 72 family members of patients with schizophrenia or schizoaffective disorder who completed the baseline assessment of the parent study. In the parent study, there were some cases where more than one family member participated. To ensure the independence of observations, only data from the family member who reported the most contact with the patient were included in the current study.

### 2.2. Measures

#### 2.2.1. Background information

A demographic sheet assessed respondents' gender, age, ethnicity, religion, educational level, and SES.

#### 2.2.2. Diagnosis confirmation

The diagnosis of schizophrenia or schizoaffective disorder in patients was confirmed using the psychotic disorders module of the *Structured Clinical Interview for the DSM-IV Axis I Disorders, Version 2.0, patient edition (SCID-I/P)*. The *SCID-I/P* (First et al., 2002) is a semi-structured interview designed for diagnosing patients with Axis I disorders according to DSM-IV criteria. The *SCID-I/P* has been widely utilized and has demonstrated high inter-rater reliability on individual symptoms and overall diagnosis of schizophrenia (Ventura et al., 1998). For the current study, the Principal Investigator trained all graduate-student interviewers. To assess inter-rater reliability in the current study, the Principal Investigator and all interviewers watched six videotaped interviews and determined an overall diagnosis. Interrater agreement using Cohen's Kappa was 1.0. In other words, there was complete consensus regarding the presence or absence of diagnosis.

#### 2.2.3. Expressed emotion

Expressed emotion was rated using the *Five Minute Speech Sample (FMSS; Magaña et al., 1986)*. While the CFI remains the gold standard for assessing EE, the more recently developed FMSS is the second most widely used method and is considerably shorter to administer and to code (Hooley, 2007). Family members spoke, without interruption, for five minutes about the patient, telling the interviewer what kind of person the patient is and how the two of them get along. Family members' responses were audiotaped in order to allow for later coding of their speech sample. Using the criteria of Magaña et al. (1986), family members received a high EE-critical rating if they made a negative initial statement about the patient or the relationship between the patient and themselves, if they reported a negative relationship with the patient, or if they expressed one or more criticisms about their patient. Family members received a high EE emotionally over-involved rating if there was evidence for self-sacrificing, overprotective, or lack of objective behavior toward the patient; an emotional display; or a combination of two or more of the following: a statement of attitude (i.e., feelings of love or willingness to do anything for the relative in the future), five or more positive remarks, or excessive detail about the patient's past. FMSS interviews were inaudible in four cases; therefore EE ratings were only available for 68 families. Of these, 19 were rated as high EE and 49 were rated as low EE. With respect to the specific components of high EE, 9 out of 68 family members received a high EE critical rating, while 11 out of 68 received a high EE-EOI rating.

An undergraduate research assistant and a graduate student participated in intensive didactic training sessions in the FMSS scoring system with a trained FMSS coder. During the training sessions, the trained coder thoroughly reviewed rating criteria and co-rated 10 training audiotapes with the trainees. The trainees then individually rated 10 additional audiotapes to assess their reliability with the trained coder. The kappa coefficient between the research assistant and the trained coder was 0.80 for rating high versus low EE, 0.86 for rating the critical component, and 0.74 for rating the EOI component. The kappa coefficient between the graduate student and the trained coder was 1.00 for rating high versus low EE, 1.00 for rating the critical component and 0.78 for the EOI component.

#### 2.2.4. Shame and guilt/self-blame

The *Self-directed Emotions for Schizophrenia Scale* was created for the larger parent study described above. This scale is a two-item measure, with one item assessing

shame about having a relative with schizophrenia and the other assessing guilt/self-blame about having a relative with schizophrenia. Responses ranged from 1 (Not at all true) to 7 (Very true), with higher scores reflecting a greater degree of the self-directed emotion in question. The wording of the shame item is "Having a relative with schizophrenia is a great source of shame." The mean of this scale was 2.16 ( $SD = 1.92$ ). The wording of the guilt/self-blame item is "Having a relative with schizophrenia is something for which I feel blameworthy." The mean of this scale was 1.77 ( $SD = 1.46$ ).

### 2.3. Statistical analyses

This paragraph describes methods used to test associations between the primary study variables (i.e. shame, guilt/self-blame, and EE) and demographic variables. Pearson correlations were conducted to examine relationships between continuous variables (e.g., self-blame) and continuous demographic variables (e.g., hours per week of contact between the patient and family member). Two-way contingency table analyses were conducted to evaluate relationships between categorical demographic variables (e.g., gender) and categorical study variables (e.g., EE). One-way analyses of variance (ANOVAs) or t-tests were conducted to examine relationships between categorical variables (e.g., type of relative) and continuous variables (e.g., shame about the illness).

Block-entry binary logistic regressions were used for the primary analyses. When demographic variables were related to study variables, continuous covariates and/or dummy-coded categorical covariates were entered in block 1 and predictors were entered in subsequent steps. Covariates were controlled for only in the relevant primary analyses.

## 3. Results

### 3.1. Sample characteristics

The mean age of the sample was 53.44 ( $SD = 14.23$ ) and 71% of participants were female. With respect to ethnicity, 52% of participants identified as Hispanic, 29% identified as Caucasian and 18% identified as African American. The following is a breakdown of the type of relationship participants had with the patient, 34 mothers, 9 significant other/spouses, 9 siblings, 7 fathers, 5 long-term friends, 3 offspring, 2 aunt/uncle, 2 cousins, and 1 grandparent.

### 3.2. Preliminary analyses

Analyses were first conducted to assess for potentially confounding relationships between the primary study variables (i.e. shame, guilt/self-blame, and EE) and the following demographic variables: gender, ethnicity, religious affiliation, religious status, type of relative, education, age, and number of hours of contact per week between the relative and patient. Results of the preliminary analyses indicated that hours of contact per week between the relative and the patient were positively associated with self-blame about having a relative with schizophrenia,  $r(34) = 0.38$ ,  $p = 0.03$ . EOI was significantly related to relative's gender,  $\chi^2(1, N = 68) = 5.47$ ,  $p = 0.02$ . Specifically, 100% of males were low EOI, while 23% of females were high EOI. Finally, a significant difference existed between type of relative and self-reported shame about having a relative with schizophrenia,  $F(7, 61) = 2.48$ ,  $p = 0.03$ , such that mothers reported experiencing more shame than siblings and friends.

### 3.3. Primary analyses

#### 3.3.1. Shame and guilt/self-blame predicting EE

Two block-entry binary logistic regressions were conducted in order to test the hypotheses that greater shame and guilt/self-blame about the illness predict high EE. It is important to note that shame and guilt/self-blame demonstrated a moderately high correlation in this study ( $r = 0.67$ ,  $p < .01$ ). Thus, these constructs were analyzed in separate regression analyses to avoid multi-collinearity (Morrow-Howell, 1994), and to allow us to gain a more valid assessment of the unique predictive power of each independent variable.

To assess whether shame predicted EE, type of relative, which was significantly related to shame about the illness, was first entered into the regression model. Next, shame about the illness was entered. As

hypothesized, shame about the illness predicted overall EE status (i.e., high versus low), likelihood ratio  $\chi^2 = 6.65$ ,  $p = 0.01$ . Using Cohen's criteria, the effect size was large,  $Exp(B) = 1.55$ .

A second block-entry binary logistic regression was conducted in order to assess the hypothesis that greater guilt/self-blame about the illness would predict the occurrence of high EE attitudes. In step 1, hours of contact per week between the relative and patient, which was identified as significantly correlated with guilt/self-blame, was entered. In step 2, guilt/self-blame was added. Results revealed that guilt/self-blame about the illness predicted overall EE status (i.e., high versus low), likelihood ratio  $\chi^2 = 7.37$ ,  $p < 0.01$ . For each standard deviation increase in guilt/self-blame, the odds of being high EE increased by 0.34. Using Cohen's criteria, the effect size was large,  $Exp(B) = 2.09$ .

We also attempted to replicate Bentsen et al.'s (1998) finding of guilt/self-blame predicting EOI. A block-entry binary logistic regression was conducted in order to assess whether greater guilt/self-blame about the illness predicts the occurrence of high EE-EOI subgroup status. In step 1, hours of contact per week between the relative and patient and gender, which were identified as significantly correlated with one or more variables of interest, were entered. In step 2, guilt/self-blame was added. Results failed to demonstrate a significant relationship between guilt/self-blame and EOI, likelihood ratio  $\chi^2 = 0.37$ ,  $p = 0.30$ .

Furthermore, based on Gilbert's (1998) and other's view, a block-entry binary logistic regression was conducted in order to test the hypothesis that greater shame about the illness would predict high EE-critical subgroup status. First, type of relative, which was significantly related to shame about the illness, was entered. Next, shame about the illness was entered. Contrary to the hypothesis, results failed to indicate that shame predicts EE-critical subgroup status, likelihood ratio  $\chi^2 = 0.56$ ,  $p = 0.46$ .

## 4. Discussion

Expressed emotion is one of the most reliable predictors of relapse across a range of psychiatric illnesses (Hooley, 2007). While previous studies have examined underlying factors of EE such as personality characteristics (Hooley and Hiller, 2000) and locus of control (Bentsen et al., 1997; Hooley, 1998), limited research to date has paid attention to the self-conscious emotions that may underlie EE. The current study was the first to consider the role of a relative's shame and guilt/self-blame specifically about having a family member with schizophrenia as underlying EE. Study results supported the hypothesis that shame predicts high EE, with a large effect size. This finding validates previous research (Harrison and Dadds, 1992; Jenkins and Karno, 1992; Ryan, 1993) that shame underlies high EE and that shame is related to dysfunctional family dynamics (Pulakos, 1996). The fact that we used a direct measure of shame specifically about a relative's schizophrenia rather than generally assessing shame-proneness may explain why our findings differ from those of Weisman de Mamani (2010) and McMurrich and Johnson (2009). As research in social psychology strongly indicates, the associations among beliefs, attitudes, behaviors, and emotions are strongest when the constructs and the behavioral or emotional result are assessed in a manner that is highly specific to the context (Myers, 2010).

Similarly, guilt/self-blame for having a loved one with schizophrenia predicts high EE, with a large effect size. This finding contributes to the argument that guilt/self-blame about having a relative with schizophrenia may be maladaptive (Silfver, 2007; Dost and Yagmurlu, 2008). Family members may defend against the experience of blaming themselves by shifting the blame onto the patient in a critical manner or by engaging in emotionally over-involved behaviors to repair their wrong-doing. Unlike Bentsen et al. (1998), the current study did not find a relationship between increasing levels of self-blame and emotionally over-involved behaviors and attitudes. This null finding may partially be attributable to the fact that

there were only 11 family members whose FMSS merited a high EE-EOI rating. Similarly, contrary to hypotheses, this study failed to demonstrate a significant positive relationship between shame about having a loved one with schizophrenia and critical attitudes. The ability to find a significant relationship may have also been underpowered due to the fact that there were only nine out of 68 family members whose FMSS merited a high EE-critical rating.

It is also worth noting that, in the current study, more hours of contact per week were associated with greater guilt/self-blame about having a loved one with schizophrenia. Guilt/self-blame motivates a tendency to engage with others, including the one who was wronged, and to repair wrongdoings. Relatives who feel that they are to blame for having a loved one with schizophrenia may seek more contact with the patient in order to mend the offenses they believe they have inflicted on the patient. Given the current study finding that greater self-blame appears to be associated with high EE, the increased contact between guilt-ridden relatives and patients may actually have detrimental consequences for patients. This hypothesis warrants further attention in future research.

The current study possessed a number of limitations. As noted above, the first was the small sample size, in particular, the number of family members rated as high EE. These small subsamples may have particularly limited the examination of the hypotheses that shame and self-blame would predict high EE-critical and high EE-EOI attitudes, respectively, since these analyses required that the high EE sample be divided into even smaller subsamples. Thus, the small sample and subsamples warrant caution when interpreting this study's non-significant trends and null findings. Future research exploring predictors of EE should be conducted with larger samples. The means in this study for both shame and guilt were quite low. This may be a function of the scale used to assess these self-directed emotions or it may reflect the fact that relatives willing to acknowledge their family member's illness by participating in a research study may be less prone to experience these self-directed emotions than those who are unwilling to participate in a study on mental illness in the family.

A second limitation is that the current study utilized the *Five Minute Speech Sample* to determine EE. While the FMSS is easy to administer, predicts clinical outcome in schizophrenia (Marom et al., 2002, 2005), and correlates with the *Camberwell Family Interview* (CFI; Magaña et al., 1986; Weisman de Mamani et al., 2007), it appears to be less sensitive than the CFI in the detection of high EE (Hooley and Parker, 2006). With large samples this issue may be less salient. However, in future studies, when sample sizes are expected to be relatively small (as is common in clinical research), researchers may benefit from assessing EE with the CFI.

There were also methodological limitations with the Self-directed Emotions for Schizophrenia Scale. The constructs of shame and guilt/self-blame were measured with just one item each. Longer scales tend to be more reliable and valid (Smith et al., 2000) and should be considered when conducting follow-up work in these areas. Another important limitation of this scale is the wording used to assess guilt/self-blame. This item asked relatives whether having a loved one with schizophrenia was something for which they felt blameworthy. Although Bentsen et al. (1998) considered blameworthiness to be equivalent to guilt; it is possible that relatives would have responded differently had they been asked if having a loved one with schizophrenia was something for which they feel guilty. For instance, perceptions of self-blame may function more similarly to feelings of shame than to feelings of guilt. It is noteworthy that shame and guilt/self-blame were correlated in this study ( $r=0.67$ ,  $p<0.01$ ). Similarly, both psychologists and laypeople alike often use the terms shame and guilt interchangeably (Tangney et al., 1996). Therefore, it is possible that in the current study, the majority of family members did not make a distinction between shame and guilt/self-blame. Not only would this account for the parallel findings between shame and guilt/self-blame as predictors of high EE, but it

might also explain the inability for shame and guilt/self-blame to differentially predict EE-critical attitudes and EE-EOI attitudes, respectively. Finally, the current study's findings for shame and guilt/self-blame may reflect that high-EE relatives are more likely to feel negatively about their family member's illness than are low-EE relatives. As guilt and self-blame were highly correlated in this study, it is possible that both of these constructs are also correlated with other personality factors such as negative disposition. This hypothesis should be evaluated further in future research.

In conclusion, the findings that both shame and guilt/self-blame about having a loved one with schizophrenia predict high EE suggest that clinicians should assess for self-directed emotions directly in response to a family member's illness and aim to alleviate feelings of shame and self-blame around this. Psychoeducation that is aimed at imparting information about the biological underpinnings of schizophrenia (e.g., Falloon et al., 1984) may be effective in this aim. Interventions for shame may also benefit from including broader efforts to reduce stigma, perhaps by encouraging multi-family groups and other social interactions among people coping with schizophrenia. Self-blame interventions might include emphasizing the diathesis-stress model and pointing out that it is unlikely that any single behavior or family member is responsible for onset or maintenance of schizophrenia. Furthermore, recent research indicates that patients from high EE families may benefit from interventions aimed at improving their ability to manage difficult family environments (Meneghelli et al., 2011). Future studies that measure both specific and dispositional measures may offer the greatest insights into how self-directed emotions relate to coping with mental illness in a loved one. Future research that is longitudinal in nature would also be beneficial in further elucidating the role of shame and guilt/self-blame in the development of EE attitudes.

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