

Caregiver Expressed Emotion and Psychiatric Symptoms in African-Americans with Schizophrenia: An Attempt to Understand the Paradoxical Relationship

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Expressed emotion (EE) is a family environmental construct that assesses how much criticism, hostility, and/or emotional over-involvement a family member expresses about a patient (Hooley, Annual Review of Clinical Psychology, 2007, 3, 329). Having high levels of EE within the family environment has generally been associated with poorer patient outcomes for schizophrenia and a range of other disorders. Paradoxically, for African-American patients, high-EE may be associated with a better symptom course (Rosenfarb, Bellack, & Aziz, Journal of Abnormal Psychology, 2006, 115, 112). However, this finding is in need of additional support and, if confirmed, clarification. In line with previous research, using a sample of 30 patients with schizophrenia and their primary caregivers, we hypothesized that having a caregiver classified as low-EE would be associated with greater patient symptom severity. We also aimed to better understand why this pattern may exist by examining the content of interviews taken from the Five-Minute Speech Sample. Results supported study hypotheses. In line with Rosenfarb et al. (2006), having a low-EE caregiver was associated with greater symptom severity in African-American patients. A content analysis uncovered some interesting patterns that may help elucidate this finding. Results of this study suggest that attempts to lower high-EE in African Americans may, in fact, be counterproductive.

Keywords: African Americans; Schizophrenia; Expressed Emotion; Content Analysis; Communication Patterns

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Expressed emotion (EE) is a psychosocial construct that assesses the emotional climate of the family environment by measuring the extent to which family members make critical, hostile, or emotionally over-involved (EOI) statements when speaking about the patient (Hooley, 2007; Kopelowicz et al., 2002). Having high levels of EE in the family environment is widely recognized as a robust environmental risk factor for relapse and exacerbation of the illness (Cutting, Aakre, & Docherty, 2006; Hooley & Gotlib, 2000; Linszen et al., 1997), across numerous countries and cultures (Bhugra & McKenzie, 2003; Hashemi & Cochrane, 1999). However, there are several findings within the schizophrenia literature that point to different patterns of EE based on one's ethnicity. For example, several papers have documented key differences in Hispanic/Latino and Caucasian patients

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such as Mexican Americans being less likely to be rated as high-EE when compared with Caucasians and Mexican Americans having differing predictors of relapse rates (López, Nelson, Snyder, & Mintz, 1999; López et al., 2004; Kopelowicz et al., 2002; Weisman de Mamani, Kymalainen, Rosales, & Armesto, 2007). Importantly, a few studies also suggest that a different relationship between EE and symptomatology may exist for African-American patients. Results from a study conducted by Rosenfarb, Bellack, and Aziz (2006) demonstrated that for African-American patients, more criticism and intrusive behaviors were actually associated with *better* patient outcomes. Specifically, the authors found that increased relatives' critical comments and intrusive behaviors (coded from the Family Problem Solving Task, which the patient and their family member completed together) were associated with lower levels of African-American patient odd or unusual thinking (rated from the patient symptom profile) over a 2-year period (Rosenfarb et al., 2006). Furthermore, Weisman, Rosales, Kymalainen, and Armesto (2006) found that while Caucasian and Latino family members who expressed more criticism during the Camberwell Family Interview (CFI) were perceived as more critical by their ill family member, there was no association between EE criticisms and patient perceptions for African Americans. Additionally, Tompson et al. (1995) found that patient perceptions of their relatives' EE behaviors (based on scores from the Patient Interview for Assessing Patient Perceptions of Family Relationships) were 100% congruent with FMSS measures. However, this was not the case for African-American patients in the sample. In fact, patient perceived criticism was the sole predictor of symptom exacerbation in African-American patients (overall EE ratings, including EOI, and patient perceptions of family member "nagging" and EOI were not significant predictors in this study). The authors suggest that traditional assessment measures of EE may have less predictive validity when compared with patient perceptions, especially in ethnic minority populations. Thus, it seems possible that the meaning that patients ascribe to "criticism" may vary by ethnicity.

Several researchers have argued that African-American speech patterns tend to be more animated and expressive than their Anglo-American counterparts (Davidson, 2001). Rogan and Hammer (1998) suggest that African Americans may appreciate a more confrontational style, viewing this as a sign of honesty and sincerity. Thus, in African-American homes, behaviors generally designated as high-EE may instead be interpreted by patients as reflective of care and concern. Paradoxically, then, instead of exacerbating symptoms, high-EE attitudes may mitigate symptoms in this population.

The main purpose of the current study was to attempt to find similar evidence for the paradoxical EE symptom severity link observed by Rosenfarb et al. (2006) and to better understand this pattern by analyzing the content of speech samples taken from the Five-Minute Speech Sample (FMSS).

METHODS

The current study is part of a larger treatment study examining a culturally informed treatment for schizophrenia (see Weisman de Mamani, Weintraub, Gurak, & Maura, 2014, for a detailed description of the larger project). For the current study, only baseline data (prior to any treatment assignment or intervention) from African-American patients were used. Participants were recruited for a schizophrenia family treatment study from advertisements displayed locally in Miami, Florida (e.g., hospitals, newspapers, Miami's above-ground rail system, the Metrorail). After completing an eligibility phone-screen, participants came to the University of Miami for a baseline assessment interview which lasted approximately 3 hours. At this time, patient diagnosis of either schizophrenia or schizoaffective disorder was confirmed through use of the Structured Clinical Interview

for DSM-IV, Patient Edition (SCID-I/P, Version 2.0, Psychotic Symptoms module; First, Spitzer, Gibbon, & Williams, 2002).

Participants

The current sample was comprised of 30 African-American patients with schizophrenia or schizoaffective disorder and their primary caregiver. To ensure independence of data, if patients had more than one family member who participated in the study with them, the speech sample from their primary caregiver (designated as the family member who spent the most time with the patient) was selected. See Table 1 for patient demographic information and Table 2 for caregiver demographic information.

Informed Consent

All participants signed a University of Miami IRB-approved consent form. A research associate explained all key information verbally. Participants then had ample time to read over the form, ask questions, and, if they agreed, sign the form prior to participating in the study.

Diagnosis Confirmation

The Structured Clinical Interview for DSM-IV, Patient Edition (SCID-I/P, Version 2.0), Psychotic Symptoms module (First et al., 2002) is a semi-structured interview that is used to determine if a patient meets criteria for a variety of specific mental disorders. The Psychotic Symptoms module was used to determine if a patient met lifetime criteria for a diagnosis of either schizophrenia or schizoaffective disorder. The SCID-I/P has demonstrated high interrater reliability for both symptoms and diagnoses (Ventura, Liberman, Green, Shaner, & Mintz, 1998). Interrater reliability for the current study was determined by having the Principal Investigator (Amy Weisman de Mamani) and all other interviewers watch six videotapes of SCID-I/P interviews and provide their independent determinations of patient diagnoses. Interrater agreement for the current study using Cohen's Kappa is 1.0.

Caregiver Expressed Emotion

While the Camberwell Family Interview (CFI) has been established as the gold standard measure of EE due to its consistent demonstration of reliability, construct validity,

TABLE 1
Patient Demographic Variables (n = 30)

Category	Frequency	Percentage
Gender	Male = 19	63.3
	Female = 11	36.7
Ethnicity	African-American = 30	100
Education	Advanced degree = 0	0.0
	College degree = 2	6.7
	Some college = 9	30.0
	High School = 9	30.0
	Some High School = 7	23.3
	Grade 8 = 1	3.3
	Below grade 8 = 1	3.3
Missing = 1	3.3	

TABLE 2
Caregiver Demographic Variables (n = 30)

Category	Frequency	Percentage
Gender	Male = 9	30.0
	Female = 21	70.0
Ethnicity	African-American = 28	93.3
	Caucasian = 1	3.3
	Hispanic = 1	3.3
Relationship with patient	Mother = 4	13.3
	Significant Other = 11	36.7
	Sister = 1	3.3
	Brother = 1	3.3
	Daughter = 2	6.7
	Friend = 7	23.3
	Niece = 1	3.3
	Cousin = 3	10.0
Amount of weekly social contact with patient	0-2 hours = 0	0
	3-5 hours = 0	0
	6-10 hours = 2	6.7
	11-15 hours = 2	6.7
	16-20 hours = 1	3.3
	20-50 hours = 5	16.7
	50-100 hours = 5	16.7
	100 + hours or lives with patient = 10	33.3
Education	Missing = 5	16.7
	Advanced degree = 0	0.0
	College degree = 3	10.0
	Some college = 6	20.0
	High School = 14	46.7
	Some High School = 4	13.3
	Grade 8 = 2	6.7
	Below grade 8 = 0	0
Missing = 1	3.3	

and predictive validity (Hooley & Parker, 2006; Kymalainen & Weisman de Mamani, 2008; Van Humbeeck et al., 2004), it has some disadvantages in that it takes 1-2 hours to administer and then an additional 2-3 hours for coding. Furthermore, the training to be able to reliably code the CFI is time-consuming, costly, and difficult to obtain. Therefore, others have sought alternative measures of EE. One such measure is the FMSS (Magaña et al., 1986). While the CFI is the most widely used measure of EE, the FMSS is a close second; it has demonstrated concurrent validity with the CFI and predictive validity in schizophrenia (Hooley & Parker, 2006; Weisman de Mamani et al., 2007). Thus, the FMSS was used to rate caregiver EE in the current study.

The FMSS is similar to the CFI in that the primary family member speaks about the patient. However, the family member speaks in an unstructured manner, in their own words about the patient, and for only 5 minutes. During this time, they are asked to describe what kind of person the patient is and how they get along together. Similar to the CFI, the FMSS is audio-recorded for later coding. Family members are rated on criticism, EOI, and overall level of EE. However, unlike the CFI, there are no hostility or warmth ratings. A family member is designated as high-EE if they make one or more critical or negative comments, any statements indicative of EOI such as excessive praise of the patient, or have any explicit displays of emotion such as crying. According to the FMSS

Training and Scoring Guide (Zaden, 1998), criticisms are designated whenever a family member uses “. . . either a negative (critical) phrase or describes the relative in a negative, over embellished manner” (p. 19). Additionally, criticism can be scored based on critical content or tone of the statement (Zaden, 1998). Some examples of critical phrases provided by the manual include, “He infuriates me,” I can’t stand it,” and I don’t like him” (Zaden, 1998; p. 19). The manual defines an EOI statement as indicating one or more of the following subcategories: “self-sacrificing/overprotection/lack of objectivity, emotional display, excessive detail, statements of attitude, and positive remarks” (Zaden, 1998; p. 25). An example of a self-sacrificing EOI statement would be, “She takes a lot of my time. I have to rearrange my work schedule for her. Sometimes I’m afraid I’ll get fired for that.” (Zaden, 1998; p. 25). Additionally, excessive praise is determined by taking a frequency count of positive remarks which praise the patient’s “behavior or characteristics” (e.g., “He’s an excellent piano player”; Zaden, 1998; p. 31) or statements of attitude which are scored when the family member “expresses feelings of love or willingness to do anything for the relative in the future” (Zaden, 1998; p. 37). Example “statements of attitude” include, “I care about Johanna more than anyone else in the world” and “I’ll do anything in the world for Nigel” (Zaden, 1998; p. 37). Relatives are rated as high-EOI if they make any statement that falls within the five subcategories described above or have an emotional display (i.e., crying during the FMSS). They can also be rated as high-EOI if they have a combination of two or more of the following: five or more positive remarks about the patient, any statements of attitude, or excessive detail (Zaden, 1998). Excessive detail is defined as providing “an inordinate amount of extraneous information about the relative’s distant past” (Zaden, 1998, p. 30).

Caregiver EE is a dichotomous categorical variable with caregivers coded as either low-EE or high-EE. Previous studies have demonstrated that the FMSS has good interrater reliability, concurrent validity with the CFI, and predictive validity in schizophrenia (Holley & Parker, 2006; Weisman de Mamani et al., 2007). The PI for this study (Amy Weisman de Mamani) completed a formal FMSS training program using Zaden’s (1998) FMSS Training and Scoring Guide (Zaden, 1998) and training tapes. This manual and training method was used to train coders in the current study. Immediately prior to the assessment phase of this study, coders were trained in a 4-week intensive seminar which included weekly in-person meetings to clarify any questions regarding scoring procedures. Coders for the current study first read the FMSS Training and Scoring Guide (Zaden, 1998). After reading the manual and becoming familiar with the standardized coding procedures, coders practiced on training tapes and compared their scoring to the training manual’s set of responses. When they appeared to understand the coding system and endorsed feeling prepared to rate tapes independently, they rated another set of 20 training tapes in order to demonstrate reliability with the criterion rater. In order to be deemed reliable, coders needed to achieve kappa coefficients with the criterion rater of 0.80 or higher for overall high- versus low-EE ratings and 0.74 or higher for the criticism and EOI subcomponents. Kappa coefficients with the criterion rater for the current study ranged from 0.80 to 1.0 for high-EE versus low-EE, from 0.83 to 1.0 for the criticism subcomponent, and from 0.74 to 1.0 for the EOI subcomponent. As noted above, because EE ratings were made within 1 month of the training, rater drift is unlikely to be an issue.

Symptom Severity

Patient symptom severity was assessed with the Brief Psychiatric Rating Scale (BPRS) (Lukoff, Nuechterlein, & Ventura, 1986; Overall & Gorham, 1962). The BPRS is a 24-item, semi-structured interview which assesses the following eight areas: unusual thought content, hallucinations, conceptual disorganization, depression, suicidality, self-neglect,

bizarre behavior, and hostility. Each of the 24 items is assessed using a 7-point anchor rating with 1 indicating “not present” to 7 indicating “extremely severe.” A total BPRS score was obtained by summing patient scores on all 24 items. Higher scores were indicative of greater symptom severity. The BPRS is reported to have good reliability and has been reported as having intraclass coefficients ranging from 0.74 to 1.00 on scale items (Weisman, Rosales, Kymalainen, & Armesto, 2005). The Principal Investigator (Amy Weisman de Mamani) has completed a UCLA BPRS training and quality assurance program and has demonstrated reliability with one of the scale’s creators, Dr. Joseph Ventura. Dr. Weisman de Mamani trained all graduate student interviewers. Interviewers then coded six training videotapes selected by Dr. Joseph Ventura. Intraclass correlations between interviewers and consensus ratings of Dr. Ventura ranged from 0.79 to 0.98 for total BPRS scores.

Data

All analyses were conducted using SPSS Statistics software, Version 21 (Armonk, NY: IBM Corp.). The variable of interest (symptom severity) was calculated such that higher scores were indicative of greater levels of psychiatric symptoms. Caregiver EE ratings from the FMSS, a dichotomous categorical independent variable, was coded with caregivers rated as either low-EE or high-EE. Normality was assessed and all variables were examined for outliers. The relationships between caregiver EE and demographic variables (patient age, caregiver age, patient gender, caregiver gender, patient level of education, caregiver level of education, hours of social contact between patient and relative) were examined as potential covariates. A *t*-test was conducted between high- and low-EE groups to assess whether low-EE predicted greater symptom severity.

RESULTS

Study Variables

All variables were assessed for normality and outliers. All study variables’ skewness and kurtosis values were within normal limits and no transformations were required. In fact, all values were within a conservative -1 to $+1$ range. Descriptive statistics for continuous study variables (patient age, caregiver age, patient symptom severity), including means and standard deviations, are presented in Table 3.

The relationships between the primary study variable of caregiver EE ratings from the FMSS and select demographic variables (patient age, caregiver age, patient gender, caregiver gender, patient level of education, caregiver level of education, hours of social contact between patient and relative) were examined for potential covariates. None of the aforementioned relationships were significant. Thus, no demographic variables were controlled for as covariates in this study.

TABLE 3
Descriptive Statistic for Continuous Variable

Variable	<i>n</i>	Mean	Standard Deviation	Skewness	Kurtosis	Possible Range	Observed Range
Patient age	30	43.00	9.91	-0.952	0.141	18-100+	19-59
Caregiver age	30	44.50	12.72	-0.388	-0.513	18-100+	19-68
BPRS	29	56.90	10.92	-0.170	0.255	24-168	30-80

Note. BPRS = patient total symptom severity scores on the BPRS.

Caregiver EE and Patient Symptom Severity

A *t*-test was conducted to assess whether having a family member rated as low-EE was associated with greater symptom severity in African-American patients. Thirty patients had family member speech samples available and were classified as either high-EE ($n = 4$) or low-EE ($n = 26$). Of the high-EE relatives, three were rated as high critical and one as EOI (this participant also met Magaña et al.'s (1986) criteria for a borderline critical rating). Our primary hypothesis was supported in that having a low-EE caregiver was in fact associated with significantly higher BPRS scores $t(28) = 2.396$, $p = .023$ (low-EE: $M = 58.27$, $SD = 9.61$, high-EE: $M = 45.25$, $SD = 13.60$); $d = 1.12$ (large effect size; 95% CI: 1.88887–24.14959).

Content Analysis

A qualitative analysis of caregiver speech samples was conducted from verbatim transcripts of the FMSS. All caregiver speech samples of both high-EE ($n = 4$) and low-EE ($n = 26$) status were analyzed for the current study. The first author of this paper reviewed all speech samples and identified several major themes that were expressed. Next, the first and second authors discussed the major themes and came to a consensus on the three most frequently expressed themes, which are each described and discussed below.

The following three themes emerged: (1) High-EE family members were much more direct and expressive in their speech patterns; (2) Low-EE family members took a much more passive stance than did high-EE members and expressions of uncertainty were more frequent in their speech patterns; and (3) for both high- and low-EE family members, the importance of family collectivism and interdependence was stressed, but this was most pronounced for high-EE members. Several example statements from family members are provided for each theme below. Each statement in quotations is from a different participant.

- (1) *High-EE family members with more direct, expressive, and/or critical views:* While not present in the low-EE samples, a clear theme emerged in the high-EE speech samples. Family members utilized very directed speech which explicitly voiced concerns about the patient and his/her care, behaviors, or characteristics. Family members gave many examples of times in which they directly asked the patient about their behavior or informed them of a societal norm violation. Family members also very clearly communicated the fact that they were unwilling to give up on the patient. Despite not always knowing what the best course of action may be, they expressed persistence in continuing to try to help their family member in any way that they could. High-EE relatives also expressed taking direct action in trying to help their loved ones (e.g., trying to get them out of the house, keeping them involved in family activities, etc.). These types of statements were present in all four of the high-EE speech samples (100%).

Example statements from family members:

"He'll say, 'Girl, you just don't know what's in my head.' And I say, 'What's in your head? What's in your head?' He say, 'You don't wanna know.' I can never get him to tell me what's in his head ...when he takes his medication he kind of like ease down, you know, a little bit where I can like mostly get to him, you know, and get his attention, his opinion and stuff, talking to him. . ."

"I hate to give up on the good person that he is because of that other person that he becomes. . .you know, 'cause it says, 'for better or for worse,' so I'm trying to deal with the worst part of it. . .that's why I can't give up on him."

- (2) *Low-EE family members with a more passive stance and many expressions of uncertainty:* A clear pattern of communication also emerged within the low-EE speech

samples in which family members were much less direct. When they had concerns about their loved ones, they reported that they did not express these concerns to them directly. This theme of passivity was seen solely in the low-EE speech samples and was not present in the high-EE samples. In contrast to the high-EE relatives, the low-EE family members expressed in their speech samples that they too had concerns about their loved ones' behaviors but did not directly express them to the patient. Instead, low-EE family members often reported saying "things are okay" instead of explicitly stating what was bothering them. The majority of low-EE family members seemed to discuss their relationship along the lines of "we get along okay." It should also be noted that low-EE family members tended to utilize the phrase "I don't know" very frequently when expressing their feelings or concerns about the patient (e.g., "I don't know what's wrong with him"). While the phrase "I don't know" was repeated 22 times in the low-EE speech samples (10 of the 26 speech samples), the phrase was only utilized once in the high-EE speech samples. Additionally, low-EE family members reported wanting to help their loved one but not knowing how to do this and also did not express that they were engaging in help-seeking behaviors (e.g., reading about the illness, contacting mental health professionals, etc.).

Example statements from low-EE family members:

"Sometime he make me think there is something going on with him. . . I guess that's just the way I think. . . ain't too much I can say. . . it's just that sometime I just be thinking things."

"That's why it's a little disturbing that he has to control this thing. . . I would point direction that he needs. . . I don't know. . . I have to fight with this yet I don't know what is wrong. . ."

"It's just sometimes she goes through her episodes and I just have to be able to deal with it. . ."

(3) *Importance of family collectivism and interdependence*: Interestingly, the importance of family collectivism and interdependence was very evident within both the high- and low-EE speech samples. It was also clear that violations of interdependence warranted criticism on the part of family members or attempts to get the patient to become more involved in social activities. The majority of speech samples (16 of 30 total speech samples [53%]; 3 of 4 high-EE samples [75%]; 13 of the 26 low-EE samples [50%]) included a reference to the valued construct of interdependence and the importance of the patient being involved in family activities.

Example excerpts include:

"Before we were very close, we travel together, lived together, we ate together, we went everywhere together. But now he really hardly participates in all this with the family. And, uh, he is not as social as he used to be. . ."

". . . I know he needs friends. You know he needs friends. He is always a person that loves to go out. He is always depending on his brother to go dancing at night some weekends or go to the beach. . ."

"During bad times and good times. . . we stick together, during the bad times. . . sometimes family is all you got."

DISCUSSION

While the schizophrenia literature demonstrates that having a high-EE family member is typically associated with greater patient symptom severity, Rosenfarb et al. (2006) offer data indicating that this may not be the case for African-American patients. The primary objective of the present study was to attempt to find similar evidence for this seemingly paradoxical finding. Our primary hypothesis was supported such that caregiver low-EE

ratings from the FMSS were found to be associated with *more* symptom severity for African-American patients.

While African Americans and Euro-Americans speak the same language (i.e., English), communication styles can vary drastically (Rogan & Hammer, 1998). While assertiveness and emotional expressiveness are highly valued in African-American culture and likely interpreted as sincere and truthful, Euro-Americans may view this type of communication as intense, loud, and aggressive (Davidson, 2001; Rogan & Hammer, 1998). Thus, results from the current study seem to highlight that it may have more to do with *how* the patient interprets family member communication than what is actually said. This makes a construct like EE highly dependent on the cultural group being assessed.

It is also interesting to note that despite only four family members being classified as high-EE, the association between EE status and patient symptomatology was strong with a large effect size. Therefore, based on the current study's findings as well as previously cited literature, results seem to further lend support to the idea that certain family environmental constructs may indeed serve a different function depending on one's ethnic background (Rosenfarb et al., 2006).

The content analysis further illustrates how statements made from high- and low-EE relatives may impact patient symptom severity. We observed three primary themes in family member speech samples: High-EE family members appear to be more directive and expressive in presenting their views, low-EE family members tend to take a more passive stance with frequent expression of uncertainty, and while both low- and high-EE African-American relatives discussed the importance of family collectivism and interdependence as valued constructs, this was surprisingly more common in high-EE relatives. Thus, it appears that a lively, more directive and interdependent approach to caregiving may be culturally sanctioned in African-Americans. This may lead African-American patients from high-EE homes to feel that their relatives are engaged in their care and genuinely concerned for their wellbeing.

While many statements rated as high-EE may be interpreted as lively and direct expressions of care, concern, and inclusion by African-American patients, and ultimately may be associated with a reduction in symptomatology, not all high-EE expressions are likely to be perceived as such. It will be important for clinicians and researchers to learn to distinguish between comments that are likely to be perceived as affirmative (e.g., "Stop being lazy in your room all day and come spend some time with us.") versus those that are apt to be perceived more adversely (e.g., "Stop being a lazy bum and doing nothing in your room all day.").

The importance of family collectivism and interdependence as valued constructs in African-American culture is well documented (Davidson, 2001; Kane, 2000; Kymalainen & Weisman de Mamani, 2008; Kymalainen, Weisman, Rosales, & Armesto, 2006). One of the key characteristics of African-American families is having a strong family kinship network and the recognition that an individual is an integral part of the community (Davidson, 2001; Kane, 2000). In fact, Kymalainen and colleagues found that violations of interdependence warranted the greatest amount of criticism in Black families (Kymalainen & Weisman de Mamani, 2008; Kymalainen et al., 2006). In the present study, the majority of the speech samples that were analyzed alluded to the value placed on community, social network, and social interaction, as well as the importance of the patient participating in family gatherings and other social activities. This was true of both high- and low-EE family members but especially true of high-EE members. While results from the current study demonstrate that family collectivism and interdependence may be of particular importance to African-American families, previous studies suggest that fostering these constructs in all families (regardless of ethnicity) may also benefit family members by helping to reduce caregiver burden and distress (e.g., Suro & Weisman de Mamani, 2013).

Limitations and Future Directions

There were a number of limitations in the present study. First, this sample was comprised of cross-sectional data. Therefore, we are unable to speak to any longitudinal influences or directions of the associations that were observed. Second, we used the FMSS which has a tendency to under-detect high-EE (Hooley, 2007; Weisman de Mamani et al., 2007). Accordingly, our sample contained a small number of relatives who were rated as high-EE. It is possible that the FMSS failed to identify some high-EE relatives, which may have influenced our results. However, because the study supports an earlier finding by Rosenfarb et al. (2006) and our effect size was large, we believe the effect is real and meaningful. Finally, another potential limitation is that we did not assess for rater drift over time on the SCID and the BPRS. Fortunately, these instruments are highly structured and manualized and tend to have excellent interrater reliability. We are less concerned with rater drift on the FMSS, however, because training to score this instrument happened just prior to the actual EE coding.

Although our results are interesting, replication and extension in a larger and/or longitudinal sample is certainly needed. Furthermore, with larger sample sizes, future research should further examine the nature of EE as well as examine the different components separately (e.g., criticism, EOI). It will also be important to further analyze high-EE statements using different dimensions. For example, it would be useful to identify the impact of critical statements that appear purely rejecting (i.e., critical, hostile, or intrusive) versus those that are more constructive in nature (i.e., lively expressions of care and concern and/or direct and constructive feedback about patient behaviors). Additionally, future research should further explore how EE manifests and is perceived across cultures. Some interesting questions to explore would be: How do African-American patients perceive high-EE messages? Is the content of EE statements in African-American families different from that of other ethnic groups? How do criticism and EOI interrelate in the content of EE statements in African-Americans and other ethnic groups?

Clinical Implications and Conclusions

In conclusion, study results suggest that EE may be a cultural construct. Evidence from the current study seems to indicate that in some cultures, patients might perceive some themes that are commonly associated with high-EE in a different, more positive way. While we are in no way encouraging clinicians to attempt to “increase high-EE” in African-American caregivers, attempts to reduce some specific high-EE attitudes may be contraindicated in this population. Instead, clinicians may have more of an impact on psychiatric symptoms by working with African-American families to increase lively expressions of care, concern, and commitment to their ill family member and to help patients perceive their environments as such. Study results seem to suggest that as clinicians and outside observers of family dynamics, we should be more cautious about how we conceptualize and label what is viewed as critical in African-American populations.

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