

# Acculturation and Expressed Emotion in Caucasian, Latino, and Black Relatives of Patients With Schizophrenia

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**Abstract:** High expressed emotion (high EE) in family members (high levels of criticism, emotional overinvolvement, and/or hostility) has been found to be predictive of a poorer course of illness for patients with schizophrenia in many different cultures. Acculturation has also been found to relate to symptom severity and clinical course in a number of disorders (e.g., substance abuse, schizophrenia). There is reason to believe that acculturation may interact with EE, however, this relationship has yet to be examined systematically. The present study evaluated the relationship between acculturation and EE in a sample of 57 Caucasian, Latino, and black caregivers of patients with schizophrenia. Drawing from earlier research, it was hypothesized that more acculturated Caucasian and Latino relatives and less acculturated black relatives would be designated as high EE. Hypotheses were partially supported as results demonstrated that greater acculturation was associated with high EE for Latinos and low EE for blacks.

**Key Words:** Acculturation, expressed emotion, schizophrenia.

(*J Nerv Ment Dis* 2007;195: 934–938)

Expressed emotion (EE) is a measure that has been widely used to assess family attitudes towards patients with mental and physical disorders. A family member is characterized as high EE when he or she expresses high levels of criticism, hostility, or emotional overinvolvement (EOI) towards another identified family member (Hashemi and Cochrane, 1999). Cultural research has demonstrated that EE patterns may vary depending on ethnicity. For example, Anglo households tend to be rated as high EE 3 to 10 times more often than are Latino households (Telles et al., 1995; Weisman et al., 2006). This base rate difference is alarming because high EE in family members is strongly predictive of a poorer course of illness for patients with schizophrenia from many different cultures (Butzlaff and Hooley, 1998; Kavanagh, 1992). For further understanding of EE within fam-

ilies, it is critical to explore cultural factors that are associated with high EE.

Some predictors of EE status considered to date have included: attributions, religiosity/spirituality, and coping styles. Findings have demonstrated that households with family members with more blaming attributional styles (i.e., perceiving that the symptoms are under that patient's control) (Hooley, 1987; Weisman and Lopez, 1997), less religious and/or spiritual beliefs (Weisman et al., 2003), and less religious or less emotion-focused coping styles (Rammohan et al., 2002) tend to be marked by higher levels of EE and familial discord.

Another area that may shed further light on EE is acculturation. Acculturation has been defined as the social and psychological exchanges that take place when there is continuous contact and interaction between individuals from different cultures (Berry, 1997; Ryder et al., 2000). Acculturation has been gaining more attention in psychopathology research. For example, Ramos (2005) found in a large-scale study focusing on Puerto Rican men that higher acculturation was associated with increased depressive affect and somatic symptoms. Similar results have been demonstrated with other Hispanics. For example, in this ethnic group, increasing acculturation was associated with higher alcohol consumption (Black and Markides, 1993) and more frequent cigarette smoking and marijuana usage (Epstein et al., 2001; Marin et al., 1989). Research with Hispanics has also demonstrated that greater acculturation to mainstream US norms is associated with fewer collectivistic values (Gomez, 2003) and a significant reduction in familism (e.g., the use of family networks as sources of emotional and instrumental social support) (Gil et al., 2000). Accordingly, Vega and Gil (1999) argue that acculturation can be a stressful process requiring the acquisition of new values and behaviors. Changes in acculturation in any 1 member can also have negative consequences on the entire family system. Conflict regarding beliefs and values often arise as gaps in level of acculturation grow among members.

Acculturation may also be relevant to examine in Caucasian families coping with psychopathology. For example, Koneru and Weisman de Mamani (2006) found that for Caucasian patients with schizophrenia, a higher level of acculturation (greater adherence to mainstream American values and norms) was associated with a more severe symptom profile. Koneru and Weisman de Mamani (2006) proposed that Caucasians who are exposed to other languages and cultural genres (less acculturated to mainstream US

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Supported by NIMH Grant No. 1R03MH60080-01.

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ISSN: 0022-3018/07/19511-0934

DOI: 10.1097/NMD.0b013e3181594821

values) may also have greater access to people, practices, and environments that are associated with more beneficial mental health (e.g., more cohesive family systems). Extending this to caregivers, it seems possible that Caucasian family members of patients with schizophrenia who endorse many mainstream beliefs, behaviors, and values (highly acculturated) may also be more likely to endorse attitudes (e.g., high EE) that result in less cohesive familial environments.

Research focusing on Black samples has demonstrated that more restrictive eating disorders (Abrams et al., 1993) and increased alcohol consumption (Klonoff and Landrine, 1999) are associated with increased immersion in mainstream US culture. Klonoff and Landrine (1999) also found that more acculturated African Americans had fewer traditional family values (e.g., more collectivistic, more supportive). Interestingly, a number of researchers have found that, in African American families, high-EE tends not to be predictive of a poorer course of illness (Moline et al., 1985; Rosenfarb et al., 2006; Tompson et al., 1995) and may be associated with better outcomes (Rosenfarb et al., 2006) for patients with schizophrenia. Researchers have argued that in many African American families, forceful and argumentative speech (i.e., high EE) is indicative of genuine caring and concern (Rogan and Hammer, 1998). Thus, while increasing acculturation seems to be associated with less adaptive family environments for African American families, the manifestation of this compromised home environment may be marked by low EE as opposed to high-EE. Other research also suggests that EE may operate differently in different ethnic groups. For example, research by Hashemi (1997) failed to demonstrate an association between high EE and relapse when considering British-Pakistani and British-Sikh groups. The author argues that high EE within these ethnic groups may be reflective of a typical familial communication style as opposed to a pathogenic trait (Hashemi, 1997).

### Study Goals and Hypotheses

To the best of our knowledge, this is the first study to explore whether acculturation is a predictor of EE and if this relationship varies among ethnic groups. Using a sample of 57 Caucasian, Latino, and Black caregivers of patients with schizophrenia, it was hypothesized that high EE would be associated with greater acculturation for both Caucasians and Hispanics and less acculturation for Blacks.

On an exploratory basis, we will also examine the association between acculturation and individual components of EE (criticism, hostility, and EOI). These analyses are relevant because many researchers have argued that the EE construct is heterogeneous (Hooley et al., 1995) and represents distinctive constructs. Research has demonstrated that the most important element of the EE construct is criticism because it has proven to be the best predictor of both poorer course of illness and negative treatment outcome (Chambless et al., 1999). Also, although EOI is similarly related to negative treatment outcome, pure high EOI families are rare (Barrowclough and Hooley, 2003) and EOI is not consistent because it has also been shown to be correlated with more positive comments (Hooley, 1998).

## METHODS

### Participants

Data from this study was drawn from a larger project (see Weisman et al., 2005) aimed at examining psychosocial correlates of schizophrenia. Participants consisted of 57 relatives (20 Caucasian, 21 Latino, and 16 Black) of patients diagnosed as having schizophrenia or schizoaffective disorder (based on criteria of the Diagnostic and Statistical Manual of Mental Disorders-IV; American Psychiatric Association, 1994). Twenty-four of the relatives were immigrants to the United States. Forty of the relatives were women and 17 were men. Family members ranged from 21 to 86 years of age, ( $M = 54.33$ ,  $SD = 14.43$ ) for the entire sample. No significant age [ $F(2, 54) = 2.04$ ,  $p > .05$ ] nor occupational [ $\chi^2(8, N = 56) = 15.4$ ,  $p > .05$ ] differences were found among the 3 groups. A 1-way ANOVA indicated that there were educational differences among ethnic groups [ $F(2, 54) = 4.46$ ,  $p < .05$ ]. Subsequent posthoc *t*-tests using Tukey HSD revealed that Caucasians ( $M = 4.65$ ;  $SD = 1.18$ ) had significantly higher levels of education than Latinos ( $M = 3.33$ ;  $SD = 1.59$ ),  $p < .05$  (see Weisman et al., 2005 for full description of occupational and educational assessment). When considering the group as a whole, age demonstrated a significant correlation with EE ( $r = .3$ ,  $p < .05$ ) and will be controlled for in subsequent analyses.

To meet eligibility requirements participants had to have an ongoing relationship with and must have been in regular face-to-face contact with the patient for 1 or more hours per week over the preceding year. In 95% of cases this was a first degree relative but in the remaining cases was a more distant relative (e.g., uncle), or a live-in significant other.

### Procedure

Patients were informed about this study primarily by their clinical case managers. Brief phone screening interviews were conducted to rule out participants who did not seem to clearly meet study criteria. Assessments occurred either in the home of the patient or relative, in the hospital or clinic where patients received psychiatric services, or at the University of Massachusetts, Boston. Because of concerns about variations in reading ability, all measures were administered in interview format (see Weisman et al., 2005).

### Language and Translation of Measures

Translation of measures used an editorial board approach that is considered a more effective alternative to translation back translation (Geisinger, 1994). This method accounts for the fact that there are often within-group language variations (see Weisman et al., 2005 for a more detailed description of translation procedures).

### Overview of Measures

#### Background Information

A demographic sheet was included to assess respondents' gender, age, ethnicity, occupation, caretaker occupa-

tion, length of residence in United States, generation in United States, educational level, and primary language.

### Acculturation

Acculturation was measured using an adapted version of the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA) (Suinn et al., 1992), which is currently one of the most widely used measures of acculturation (Ryder et al., 2000). The SL-ASIA assesses cognitive, behavioral, and attitudinal areas (Suinn et al., 1992) of acculturation and was directly modeled after and improved upon another successful acculturation rating scale for Latinos (Cuellar et al., 1980). This 21-item measure assesses 4 content areas of acculturation: (1) language familiarity, usage, and preference (sample items: What language(s) can you speak (write in?); What language do you prefer?); (2) ethnic identity (sample items: How do you identify yourself? What identification does [did] your mother use?); (3) cultural behaviors (sample items: What is your food preference at home? What is your music preference?); and (4) ethnic interactions (sample items: What was the ethnic origin of the friends and peers you had as a child from 6 to 18?; Whom do you now associate with in the community?). Each item has a 5-point Likert style rating. This scale yields an overall rating of acculturation to mainstream US culture, with a rating of 1 indicating a low degree of acculturation, a rating of 3 indicating a bicultural acculturation orientation, and a rating of 5 indicating a high degree of acculturation to mainstream US culture. A Cronbach's alpha of .96 indicated high internal reliability for this scale.

### Expressed Emotion

EE was measured using the Camberwell Family Interview (CFI; Vaughn and Leff, 1976), which is currently the most widely used measure to assess EE (Kavanagh, 1992). Relatives who made 6 or more critical comments, who expressed any type of hostility or who scored 4 or higher on a scale of EOI were rated as high EE. EE was coded by 2 trained coders for an earlier study (Weisman de Mamani et al., 2006). Both coders attended and successfully completed an intensive training course for scoring the Camberwell Family Interview (1 in Los Angeles, CA, led by Karen Snyder and the other in London, England, led by Christine Vaughn). Coders demonstrated interrater reliabilities above .80 with the gold standard raters on all EE dimensions across 10 training tapes.

## RESULTS

### Data Analysis

Table 1 presents means and standard deviations for acculturation and the subscales of acculturation for the overall group and broken down by ethnicity. A series of 1-way ANOVA's with 2-tailed Bonferroni-corrected posthoc *t*-tests were conducted and revealed significant differences between the ethnic groups on the total and 3 of the subscale scores of acculturation. Follow-up comparisons revealed, not surprisingly, that Latinos were significantly less acculturated than both Caucasians and Blacks on total acculturation. Latinos were also significantly less acculturated than Caucasians on 3 subscales: language, ethnic identity, and ethnic interactions.

**TABLE 1.** Means and Standard Deviations for Acculturation, and the 4 Subscales of Acculturation, for Overall Group and Broken Down by Ethnicity

Variable	M	SD	F Value
Acculturation			F (2, 54) = 242.7, <i>p</i> < 0.05
Total group	3.24	1.16	
Anglos	4.18	0.14	
Latinos	1.82	0.49	
Blacks	3.92	0.39	
Language			F (2, 54) = 3.91, <i>p</i> < 0.05
Total group	3.79	1.56	
Anglos	4.40	1.25	
Latinos	3.12	1.73	
Blacks	3.92	1.40	
Ethnic identity			F (2, 54) = 4.62, <i>p</i> < 0.05
Total group	3.46	1.65	
Anglos	4.03	1.50	
Latinos	2.65	1.59	
Blacks	3.83	1.55	
Ethnic interactions			F (2, 54) = 5.91, <i>p</i> < 0.05
Total group	2.80	1.15	
Anglos	3.40	1.15	
Latinos	2.26	1.07	
Blacks	2.75	0.94	
Cultural behavior			F (2, 54) = 0.895, <i>p</i> > 0.05
Total group	3.14	0.75	
Anglos	3.22	0.59	
Latinos	2.97	0.98	
Blacks	3.28	0.57	

Higher scores indicate greater acculturation. A score of 5 indicates fully Western identified, a score of 3 indicates a bicultural orientation, and a score of 1 indicates fully non-Western identified (Suinn et al., 1992).

Blacks did not differ significantly from Caucasians or Hispanics on any subscale of acculturation.

### Acculturation and EE

To examine the association between acculturation and EE, a point biserial correlation that allows for evaluation of the association between a continuous variable (i.e., acculturation) and a dichotomous variable (i.e., high vs. low EE), was used. Results, when considering the group collectively after controlling for age, indicated that greater acculturation was associated with high EE ( $r = .3, p < .05$ ). To determine whether this association varied by ethnicity, a series of point biserial correlations was conducted considering each ethnic group separately. For Latinos, greater acculturation was positively associated with high EE ( $r = .48, p < .05$ ). However, for both Caucasians and Blacks, greater acculturation was not associated with higher EE ( $r = .04, p > .05$  and  $r = .20, p > .05$  respectively).

On an exploratory basis, a series of point biserial correlations were conducted to analyze the association between the subscales of acculturation (i.e., language, ethnic identity, ethnic interaction, and cultural behavior) and EE for the entire group and each ethnic subgroup. Analyses revealed

**TABLE 2.** Means and Standard Deviations for Criticism, Emotional Overinvolvement and Hostility for the Overall Group and Broken Down by Ethnicity

Variable	M	SD
Criticism		
Overall group	3.20	3.81
Anglos	4.32	4.71
Latinos	1.35	1.87
Blacks	4.19	3.75
Emotional overinvolvement		
Overall group	1.66	1.41
Anglos	2.00	1.52
Latinos	1.40	1.46
Blacks	1.59	1.23
Hostility		
Overall group	0.38	0.89
Anglos	0.47	1.02
Latinos	0.15	0.49
Blacks	0.56	1.09

that the individual subscales were not significantly associated with high EE for either the entire group nor for any subgroup (all *p*'s >.05). Interestingly though, when considering the Black subgroup, 3 of the 4 subscales [language (*r* = -.32), ethnic identity (*r* = -.34), and cultural behavior (*r* = -.21)] demonstrated a modest effect size (Cohen, 1988), though nonsignificant, negative associations with EE.

Table 2 presents means and standard deviations for criticism, EOI and hostility for the overall group and broken down by ethnicity. The second set of exploratory analyses examined the association between the individual components of EE (criticism, hostility, and EOI) and acculturation. When considering the group collectively, total acculturation was significantly and positively correlated with criticism (*r* = .41, *p* < .05). When considering each ethnic subgroup, total acculturation was significantly and strongly correlated with criticism (*r* = .54, *p* < .05) for Latinos. No other significant patterns were found.

## DISCUSSION

This study, to the best of our knowledge, was the first to examine the relationship between acculturation and EE in family members of patients with schizophrenia. When considering the sample collectively, our results seem to indicate that a greater level of acculturation to mainstream US culture is associated with higher EE and, more specifically, with higher criticism. These findings are in line with previous work demonstrating that an increasing level of acculturation can be associated with a reduction in supportive family structures (Gil and Vega, 1996; Klonoff and Landrine, 1999). Vega and Gil (1999) have argued that the stress associated with acculturation can be associated with significant familial conflict.

Many studies have demonstrated an association between high EE and poor outcome (relapse and rehospitalization) in patients with schizophrenia (Butzlaff and Hooley, 1998). However, a few studies have demonstrated that EE can

operate differently in different ethnic groups (Hashemi and Cochrane, 1999; Rosenfarb et al., 2006). Results from the present study support this. For Latinos, greater acculturation to mainstream US culture was strongly associated with higher EE and, more specifically, with increased criticism. High EE has certainly been found to have a detrimental link to mental health. Thus, in a sense, our findings are in line with previous research. Findings are consistent with a number of results from previous studies demonstrating that increasing acculturation for Latinos can be associated with deleterious outcomes. For example, researchers have demonstrated that increasing acculturation is associated with higher rates of depression and anxiety (Miranda and Umhoefer, 1998), more frequent alcohol (Lovato et al., 1994) and drug use (Epstein et al., 2001; Marin et al., 1989), and a reduction in familial support systems (Gil et al., 2000).

In the present study, for both Caucasians and Blacks, neither total acculturation nor any subfactor was significantly associated with high EE. Interestingly, for Blacks, 3 of the 4 subfactors of acculturation (language, ethnic identity, and cultural behavior) were negatively though not statistically significantly associated with EE. In other words, there was a trend for greater acculturation to be associated with lower EE. Research has demonstrated that EE may operate differently within African American families (Moline et al., 1985). Rosenfarb et al. (2006) demonstrated that higher levels of relatives' critical and intrusive behavior, when interacting with a patient with schizophrenia, are associated with better outcomes. The authors argue that, within African American families, seemingly negative behavior may be reflective of caring and concern. As African American families become more acculturated they may be moving away from their own cultural norms in which sincere communication patterns are associated with confrontation, forceful speech, and emotional intensity (Davidson, 2001; Rogan and Hammer, 1998). Thus, for African American families, increasing acculturation being associated with low EE may, in fact, be a detrimental outcome for this ethnic group. Although approximately 40 years (see Butzlaff and Hooley, 1998; and Kavanagh, 1992 for a review) of research shows a strong link between EE and outcome, as noted above, EE patterns and their link to illness course have been found to vary by culture. Thus, future EE studies should attempt to separately investigate whether EE is predictive of course of illness as well as how it relates to illness prognosis for each ethnic group included in the study sample.

Several limitations of this study should be noted: (a) the correlational nature does not allow us to infer causality nor directionality. However, findings of this study are consistent with many large scale studies which demonstrate that increasing acculturation can be associated with less adaptive family functioning; (b) the SL-ASIA measures acculturation as a unidimensional construct, suggesting that adaptation occurs along a single continuum in which acquisition of host culture values is accompanied by loss of culture-of-origin values. The scale attempts to account for this limitation by indicating that biculturalism is reflected in a score of 3 on a 5-point scale. Future research may benefit by moving to bidimensional measures that assess maintenance and/or strengthening values from an individual's culture of origin separately from acqui-

sition and/or adaptation to values of the mainstream culture. This type of assessment would allow for a fuller evaluation of biculturalism or integration; (c) this study demonstrated a relationship between acculturation and EE. However, future studies are clearly needed to clarify what mechanisms may be underlying this relationship. In other words, subsequent research should attempt to investigate the cultural processes mediating and/or moderating the relationship between acculturation and EE. Results from this type of investigation could provide beneficial targets for therapeutic intervention; and (d) because of the small sample size, particularly when stratified by ethnicity, we view this study's findings as preliminary, which need replication with larger sample sizes. Finally, the Latino subsample in this study was heterogeneous and Latino subgroups (e.g., Cubans, Mexicans) may vary on important values, beliefs, and behaviors that may interact with EE. It will be important for future research to evaluate whether associations among EE and acculturation are uniform for all Latino subgroups.

## ACKNOWLEDGMENTS

The authors thank Jennifer Kymalainen, Grace Rosales, Jorge Armesto, Harriet Lefley, Steven Brady, and Alex Kopolowicz for their assistance with study recruitment. The authors also wish to thank all of the study participants and NIMH.

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