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Family Values, Religiosity, and Emotional Reactions to Schizophrenia in Mexican and Anglo-American Cultures

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This study was designed to test whether two sociocultural variables, family cohesion and religiosity, related to affective reactions toward schizophrenia. It was hypothesized that increasing perceptions of one's family as cohesive and religious would be associated with the expression of more favorable and less unfavorable emotions toward patients with the disorder. Eighty-eight Anglo-American undergraduates from Los Angeles and 88 Mexican undergraduates from Guadalajara read vignettes of a hypothetical family member described as meeting DSM-IV criteria for schizophrenia. Results of this study suggest that perceptions of family unity may be one important factor underlying emotional reactions toward schizophrenia. As expected, increasing perceptions of family cohesion were associated with greater reports of favorable emotion and decreased reports of unfavorable emotion toward the patient. However, after controlling for social desirability, family cohesion no longer significantly predicted unfavorable affect. Contrary to expectations, religiosity was not found to predict unfavorable or favorable emotions. However, religiosity was found to covary with nationality. Mexicans, compared to Anglos, reported greater moral-religious values in their families. No national differences were found with respect to family cohesion. Implications of this study are discussed along with suggested directions for future research.

Family behaviors and attitudes correlate with the course of severe mental illnesses. International studies in the area of expressed emotion (EE) consistently demonstrate that patients with schizophrenia relapse more frequently when returning to homes in which relatives talk about them in a critical and hostile manner, as compared to patients whose relatives do not express these negative attitudes (Kavanagh, 1992). For years, however, EE researchers have been criticized for what Jenkins and Karno (1992, p. 10) term "the problem of prediction without understanding."

Fortunately, recent breakthroughs in schizophrenia research have provided a much needed theoretical framework for the expressed emotion construct. Three sets of investigators recently found that highly critical and hostile relatives (high EE) attribute symptomatic behaviors to factors more controllable by the patient than do relatives (low EE) who do not express as many of these negative attitudes (Barrowclough, Johnston, & Tarrier, 1994; Brewin, MacCarthy, Duda, & Vaughn, 1991; Weisman, López, Karno, & Jenkins, 1993). Weisman *et al.* (1993) further found that relatives who view the patient's behavior as controllable express more negative emotions when talking about the patient than do relatives who perceive the behavior as outside of volitional control. These studies support an attribution-affect model for understanding the expressed-emotion construct.

Although the application of attribution theory has contributed to a better understanding of expressed emotion, variability in controllability attributions only partially account for differences in EE. Little is known about other important factors underlying emotional reactions toward mental illness (Jenkins & Karno, 1992).

A few researchers, such as Jenkins and Karno (1992), advocate looking at sociocultural variables in order to understand better the origins and correlates of EE. In support of this view, certain cultural patterns in EE levels have been observed. For example, Kavanagh (1992) notes that less industrialized societies such as Chandigarh, India, appear to have significantly fewer high-EE profiles (23%) than do more industrialized countries such as England (53%) and the United States (67%). Sociocultural differences in EE have also been observed between national groups residing within the same metropolitan area. Jenkins, Karno, De La Selva, and Santana (1986) point out that, in a sample of Anglo-Americans and Mexican-Americans living in Los Angeles, 66% of Anglo-Americans were rated as high EE, whereas only 31% of the Mexican-Americans were in this category.

In our study, we propose that differences in family values and beliefs may make some individuals and cultures more tolerant and less critical of eccentric behavior. In Latino societies the family is often considered to be the single most important social unit (Murillo, 1976). Zavella (1987), for instance, reports that Mexican-Americans often have large kin networks residing in an area, and generally place higher values on closeness among relatives than do Anglo-Americans. This may explain, in part, the low levels of high EE observed by Jenkins *et al.* (1986): individuals with strong family ties

may respond to odd or disruptive behavior of a loved one in a more benign or sympathetic fashion in order to preserve the solidarity of the family.

In many traditional societies, religion also serves as a core social and spiritual resource that may influence attributions toward mental illness by providing a reference point for the meaningfulness of all inscrutable events and behaviors (Lefley, 1990). Among the predominately Catholic Latino societies, for example, the will of God is frequently evoked as the cause of many events, including mental illness and suffering. Attitudes toward illness are governed by the basic premise that God put us on earth, governs our lives, and ultimately takes us from the world (Bach-y-Rita, 1982; Guarnaccia, Parra, De-schamps, *et al.*, 1992). It would seem that a worldview which emphasizes the influence of external factors on events and behaviors might well predispose Latinos toward more compassion, understanding, and tolerance of mental illness. This orientation may contribute to the comparatively low levels of anger and hostility exhibited by Mexican families toward relatives with schizophrenia (Jenkins *et al.*, 1986).

Research Goals

The research reviewed in the area of EE suggests that family members' emotional reactions toward schizophrenia may influence the course of the disorder. Evidence also suggests that affective responses toward schizophrenia differ across national groups (for a critique of this research, see Edgerton and Cohen, 1994). In the present study, we propose that certain key sociocultural variables may lie at the heart of these national differences. Using a sample of Anglo and Mexican college students, we attempted to identify two specific values and beliefs hypothesized to influence the expression of favorable and unfavorable emotions toward mentally ill relatives.

Hypotheses

First, we proposed that family values or family unity would relate to the expression of favorable and unfavorable affect. Stemming from the view that strongly united families would be motivated to avoid conflict in order to stay together, we hypothesized that individuals from cohesive families would be less likely to express unfavorable emotions and more likely to express favorable emotions toward a relative with schizophrenia. Second, we hypothesized that strong religious affiliation would be correlated with the expression of more favorable and less unfavorable emotions toward a mentally ill family member. That is, strong religious affiliation was expected to be associated with the view that mental illness is God's will for the patient, and thus warrants tolerance and compassion from relatives. Identifying the relationships between affect and variables such as family unity and moral and religious values is important for furthering our theoretical knowledge about factors that may relate to the course and outcome of psychiatric illnesses.

In addition to the main hypotheses, we tested for national differences in family cohesion and religiosity. Based on observations suggesting a strong religious (Bach-Y-Rita, 1982; Guarnaccia *et al.*, 1992) and strong family orientation in many Latino societies (Murillo, 1976; Zavella, 1987), we also hypothesized that Mexicans would report greater religiosity and greater cohesiveness in their families, as compared to Anglos.

Several investigators, however, warn that care be taken when analyzing and interpreting self-report data because individuals often provide socially desirable responses in order avoid criticism and gain social approval (Crowne & Marlowe, 1964). Some research suggests that, in a variety of situations, Latinos have an even greater disposition than non-Latino whites to present themselves in a favorable light (LeVine & Franco, 1981). Given the likelihood of this response bias, Marín and Marín (1991) suggest that researchers assess for any tendency toward social desirability responses when conducting research with Latino participants. By including a measure of social desirability, this study was in a position to examine whether this response pattern systematically related to any of our major hypotheses, and to control for social desirability if needed.

METHODS

Subjects

The sample consisted of 88 Mexican and 88 Anglo-American undergraduate university psychology students (60 female and males in each group). Subjects were recruited from two private universities: one in Guadalajara, Mexico, the other in Los Angeles, California. Mexican students participated on a voluntary basis. All Mexican students who were solicited to participate agreed to do so. In Los Angeles, students who agreed to participate received participation credit from their class instructors, and data were collected outside of regularly scheduled class time. To attain same-sized samples with equal gender constitution, data collection with Anglo female participants was halted after 60 completed surveys were obtained. Data collection continued with Anglo males until completed surveys were obtained. Additional demographic information about the sample is presented in the Results section.

Measures

English and Spanish language versions of the questionnaire used in this study were developed by the first author. The Spanish language version was then back-translated into English by a bilingual, advanced undergraduate student of Mexican decent, who was blind to the original English version. Although the two questionnaires were highly comparable, a few subtle discrepancies were found. These differences were discussed and addressed by forming a consensus translation. The following measures were then included in both the English and the Spanish language questionnaires:

Background information section: This section assessed demographic factors such as respondents' age, gender, and nationality.

Vignettes: Subjects read two vignettes of an individual who met the DSM-IV criteria for schizophrenia. One vignette displayed predominately positive symptoms (for example, hearing voices, fear that household items were possessed by the devil) while the other displayed predominately negative symptoms (for example, insufficient concern about personal hygiene, apathy). All subjects received both vignettes and the order of the positive and negative symptom scenarios was counterbalanced throughout.

Measure of affect: Unfavorable and favorable affect was assessed by asking participants to make ratings on five unfavorable and five favorable emotions found to be among the most frequently elicited affects by relatives of schizophrenic patients in an earlier study of expressed emotion and attribution theory (Weisman *et al*., 1993). Participants were asked to make ratings once following the positive symptom scenario, and once following the negative symptom scenario. The five unfavorable emotions were: anger, frustration, hatred, shame, and fury. The five favorable emotions were: sympathy, affection, pity, worry, and sorrow. Although some of the emotions classified as favorable in this study (for example, worry, sorrow) may be considered negative or unpleasant, they have been categorized as positive emotions because they are theorized to reflect positive sentiments toward another person in the form of compassion and concern.

Affect ratings were made for each emotion based on 9-point Likert-type scales, with 1 representing no feeling of the stated emotion and 9 representing a great deal of the stated emotion. Total unfavorable affect scores were derived by averaging across the unfavorable emotion ratings. Total favorable affect scores were similarly obtained by averaging across the five favorable emotion ratings. Higher scores indicated greater intensity of unfavorable or favorable emotions. Internal reliabilities using Cronbach's alphas were found to be .87 for unfavorable affect, and .70 for favorable affect. The unfavorable and favorable affect scales were found to be uncorrelated with one another ($r = .01$, $p > .05$).

Measures of family values: Family unity and religious and moral values were measured using subscales of the Family Environment Scale (FES). The FES consists of 90 true/false items divided into 10 sub-scales, designed by Moos and Moos (1981) to measure family members' perceptions of their family environment.

The Cohesion subscale of the FES was used to assess family unity. This subscale consists of 9 true/false items, designed to measure the degree of commitment, help, and support family members provide for one another. A sample item from the Cohesion subscale is as follows: "There is a feeling of unity and cohesion in our family." Cronbach's alpha for this subscale was found to be .78 by the scale's developers (Moos & Moos, 1981). In the present study, a reliability coefficient of .81 was obtained. For this scale, items were coded such that higher scores for the sum of the 9 items indicated greater family cohesion.

The Moral-Religious Emphasis subscale was used to measure moral and religious family behavior and values. This subscale also consists of 9 true/false items designed to measure the family's emphasis on ethical and religious values. A sample item from the Moral-Religious Emphasis subscale is as follows: "Family members attend church, synagogue, or Sunday School fairly often." As for the Cohesion subscale, Moos and Moos found the internal reliability for this subscale to be .78. An alpha of .71 was obtained in the present study. Scores for this subscale were coded such that higher scores for the sum of the 9 items indicated greater moral religious emphasis in the family.

Measure of social desirability: Social desirability was assessed using Crowne and Marlowe's (1960) Social Desirability Scale. This 33-item true/false test yielded an internal reliability correlation of .88 by its developers. In the present study, coefficient alpha was found to be .80. This scale was coded such that higher scores for the sum of the items indicated greater social desirability.

Procedure

We described the study to participants as an assessment of individuals' reactions toward a disturbed family member. Subjects were given oral instructions that were also included in written form in the questionnaire. Specifically, before reading each vignette, participants were told to assume that the person depicted in the scenario was their brother. Participants were asked to imagine that they had lived in the same residence with this brother while growing up, and that they had been very close. The difficulty of this assignment was emphasized both orally and in writing. Subjects were encouraged to "really think of how [they] might feel if [their] brother began behaving like the person described in the scenario."

RESULTS

Subject Characteristics

Several analyses were conducted to assess the comparability of cultural groups on important demographic variables. No significant age differences were observed between cultural groups, $t(174) = 1.65$, $p > .05$. Anglo students ranged in age from 17 to 39 years, with an average age of 20.01. Mexican students ranged in age from 17 to 43 years (mean age 20.93). A chi-square using three levels of father's occupation (skilled, semiskilled, and unskilled) revealed no cultural differences: χ^2 (2, n = 162) = .72, $p > .05$. However, a chi-square using four levels of mother's occupation (skilled, semiskilled, unskilled, homemaker) revealed that there were cultural differences on this variable: χ^2 (3, n = 167) = 50.59, $p > .0001$. This difference appears to be due to the fact that the majority of the Mexican mothers do not work outside of the home (64%), whereas only a small minority of the Anglo mothers do not work outside of the home (14%).

Given the nature of this study, it is conceivable that previous exposure to mental illness may influence attributions and emotional reactions. As a precaution, subjects were asked whether one of their family members had ever been diagnosed with a mental illness. Nineteen Anglos and 19 Mexicans reported having a relative diagnosed with mental illness. Table 1 reveals a breakdown of types of mental illnesses of family members by nationality. Taken together, these findings suggest that the two cultural groups were highly comparable on important demographic variables such as age, education (both from private universities), and prior exposure to mental illness.

Table 1
Frequency of Type of Illness by Nationality

	Anglo	Mexican
Chronic Mental Illnesses (schizophrenia, Bipolar)	10	8
Organic-Based Illnesses (Alzheimer's, Mental Retardation)	3	3
Drug Addiction/Abuse	3	2
Other/Unknown	3	6

To assess the main hypotheses, four regression analyses were performed. Two regressions were conducted to predict unfavorable affect (one for negative symptoms and one for positive symptoms),[1] and two similar regressions were conducted to predict favorable affect. In each analysis, nationality was entered in step 1 as a covariate. This was done because ethnicity is hypothesized to relate to both of the predictor variables in this study, and because previous findings with this sample revealed national differences in both unfavorable and favorable affect (see Weisman & López, in press). In step two of the regressions, family cohesion and religiosity were simultaneously added to the equations, and each independent variable's ability to predict affect, above and beyond nationality, was examined.

The results of the four regression analyses are presented in Table 2. As demonstrated in the Table under step 2, regressions revealed that family cohesion predicted both unfavorable and favorable affect for both symptom types. In other words, the more participants viewed their own family as supportive and cohesive, the more likely they were to express positive sentiments, and the less likely they were to express negative sentiments toward a hypothetical family member with schizophrenia. This relationship occurred regardless of whether the patient's behaviors were characterized by predominately positive or predominately negative symptoms. Contrary to expectations, religiosity was found to predict neither unfavorable nor favorable emotions for either symptom type ($p > .05$ for all).

Table 2
Regression Analyses Predicting Affect toward Negative and Positive Symptoms

	Unfavorable Affect				Favorable Affect			
	Negative		Positive		Negative		Positive	
	beta	t	beta	t	beta	t	beta	t
Step 1								
Nationality	-.41	-5.96**	-.33	-4.57**	-.04	-.62	-.23	-3.15**
Step 2								
Family Cohesion	-.14	-2.00**	-.15	-2.01*	.17	2.18*	.21	2.90**
Religiosity	.01	.20	.05	.62	-.08	-.98	-.08	-1.14

Note:
* $p < .05$;
** $P < .01$

To control for social desirability, we repeated all regression analyses. This was done because individuals with a social desirability response bias might be reluctant to report unfavorable emotions toward a mentally ill person, and/or may have a disposition toward reporting greater favorable or prosocial emotions. In each of the following analysis, social desirability was entered with nationality in step 1 as a block. Family cohesion and religiosity were entered simultaneously in step 2. Results of the four regressions are presented in Table 3. Examination of the beta weights under step 2 indicated that family cohesion no longer significantly predicted unfavorable affect—after controlling for social desirability—for either the positive or the negative symptoms. The inclusion of social desirability did not alter the significance levels in any of the other relationships reported.

Table 3
Regression Analyses Predicting Affect using Social Desirability as a Covariate

	Unfavorable Affect				Favorable Affect			
	Negative		Positive		Negative		Positive	
	beta	t	beta	t	beta	t	beta	t
Step 1								
Soc. Des.	-.14	1.90	-.15	-.98**	-.03	-.41	.01	.14
Nationality	-.37	-5.15	-.28	-3.80**	-.03	-.40	-.24	-.30**
Step 2								
Family Cohesion	-.12	-1.65**	-.13	-1.72	.17	2.21*	.22	2.92**
Religiosity	.02	.28	.05	.71	-.07	-.95	-1.11	.27

Note:
* $p < .05$;
** $P < .01$

In addition to the main analyses, three independent *t*-tests were conducted to assess for differences between national groups on social desirability, religiosity, and family cohesion. Table 4 presents means, standard deviations, and *t*-values for Anglos and Mexicans on these variables. Consistent with LeVine and Franco's (1981) observation and with Marín and Marín's (1991) warning, Mexicans were found to have a greater socially desirable response bias than were Anglos. Also as hypothesized, an independent *t*-test demonstrated that Mexicans reported significantly greater moral-religious values in their families than did Anglos. Contrary to expectations, a *t*-test revealed no significant national differences with respect to family cohesion.

Table 4
Means, Standard Deviations, Ranges and t Values for Anglos and Mexicans on Social Desirability, Religiosity, and Family Cohesion

Variable	Anglos (n = 88)	Mexicans (n = 88)	*t*-Values
Social Desirability			
Mean	14.51	17.89	4.16*
SD	5.66	5.10	
Range	4-28	5-28	
Religiosity			
Mean	4.35	5.14	2.25*
SD	2.43	2.19	
Range	0-9	0-9	
Family Cohesion			
Mean	6.56	6.76	$t < 1.0$
SD	2.60	2.22	

Range	0-9	1-9

Note:df = 174;
* = $p < .05$

DISCUSSION

Findings from this study suggest that perceived family unity may be one important factor influencing the emotions experienced when individuals are confronted with mental illness. As hypothesized, we found that the more individuals viewed their family as cohesive and supportive, the more likely they were to express favorable sentiments toward a hypothetical relative with schizophrenia. These findings appear to be robust across the manifestation of both positive (for example, hallucinations, delusions) and negative (for example, apathy, poor hygiene) symptoms.

Our hypotheses were also supported with respect to unfavorable affect. As expected, perceptions of family cohesion were negatively correlated with unfavorable affect. In other words, increasing perceptions of family cohesion were associated with decreasing expression of unfavorable sentiments toward a hypothetical patient with schizophrenia. This occurred regardless of whether the patient was described as displaying primarily positive or primarily negative symptoms. However, the association between family cohesion and unfavorable affect was no longer statistically significant after controlling for social desirability.

In the light of these findings, the relationship between family cohesion and unfavorable affect could be considered no more than an artifact of the relationship between social desirability and unfavorable affect. Individuals with a strong need to "look good" might report close family relationships, and deny negative emotions toward others, regardless of the true nature of their family dynamics or of their feelings. People with this response style might be expected to suppress or deny anger or frustration that they in fact feel, perhaps only for as long as they believe that they are being evaluated. An alternative explanation, however, is that social desirability and family unity are intrinsically interrelated, interacting to make up the emotional climate of a household. In other words, part of what separates "cohesive" from "noncohesive" households may be that family members from the former actually do suppress socially unacceptable or negative behaviors and attitudes. Less negativity in the environment may, in turn, contribute to the perception of closer and more cohesive family relationships.

Surprisingly, in this study, Mexicans and Anglos were not found to differ from one another on reported cohesiveness in their families. We are not sure why our results differ from prior observations (Murillo, 1976; Zavella, 1987). It is possible that the scale used to assess family values (the FES Family Cohesion Scale) is based more on perceptions of the home environment, and on how members get along, than on the interdependence and collectivism that is often portrayed as characteristic of Mexican families. Another plausible explanation is that the view that Mexicans value family more than do Anglos may not hold true for individuals from higher socioeconomic classes. There is increasing heterogeneity among Mexican families, especially since the industrial revolution (La Farge, 1959). Mexicans attempting to break away from the web of poverty are often forced to separate from family in search of higher education and better jobs. Given that the Mexican sample in this study was comprised of individuals with comparatively high education, and presumably high SES, it is possible that their family relations and values may not be representative of other, more common socioeconomic classes in Mexico.

With respect to religiosity, we did find, as expected, that Mexicans reported greater moral-religious values in their families than did Anglos. This finding is consistent with Bach-y-Rita's (1982) and Guarnaccia *et al*.'s (1992) view that religiosity is an important force in the lives of Mexican and other Latino families. However, findings from this study do not support our sociocultural hypothesis that religiosity may actually lead to more favorable and less unfavorable emotion toward patients. Contrary to expectations, moral-religious beliefs were not found to be associated with the expression of either unfavorable or favorable emotion.

Although cultures that display differing amounts of negative emotions toward relatives with schizophrenia may also differ in content and intensity of their religious values and beliefs, our findings do not support the view that religiosity is directly associated with the expression of affect. It is important to point out that the scale used to measure religiosity (the Family Environment Scale) assesses specific religious attitudes and practices (for example, "We don't say prayers in our family"). A relationship between religiosity and emotions toward others, however, may have more to do with spiritual interpretations of or attributions about events than with adherence to specific religious practices. Future studies investigating emotional reactions to mental illness may help clarify this issue by incorporating measures of religious beliefs such as "religious fatalism"—a belief about God's role in bringing on and controlling human experiences.

Finally, results from this study show that the self-presentational style known as social desirability differs between national groups. Mexicans were characterized by greater socially desirable response biases than were Anglos. This finding is important in that it replicates LeVine and Franco's (1981) earlier observation about Latino-Americans, and adds support to Marín and Marín's caveat that investigators should include social desirability assessments whenever their research samples include Latinos. Given our finding that a socially desirable response bias is associated with decreased reporting of

negative emotions, researchers may wish to assess and control for this response pattern, especially when examining Latinos' self-reports of the expression of unfavorable affect.

As stated previously, however, this is a complicated issue. A disposition toward suppressing socially undesirable thoughts and feelings may be intrinsically related to an actual tendency to suppress unfavorable sentiments toward another individual (rather than reflecting a volitional under-reporting of negative emotion). A reserved affective style may have a beneficial impact on patients who are unable to cope with the demands of intense emotional interaction. This view is consistent with Anderson, Hogarty, Bayer, and Needleman's (1984) finding that high-EE relatives (based on emotional overinvolvement) were characterized by outgoing personality styles and emotional expressiveness. Thus, social desirability, or the suppression of some kinds of affect may be one factor that distinguishes the course of illness for patients from high- and low-EE families. This point warrants future investigation.

Study Limitations

One limitation of this study is that actual relatives of schizophrenic patients were not assessed. Living with a relative who suffers from schizophrenia can clearly be overwhelming. Participants in a research study might have difficulty accurately estimating the valence and extent of their emotional reactions under such difficult circumstances. To assess the external validity of our results, additional studies examining emotional reactions to schizophrenia in relatives who actually reside with mentally ill patients would be beneficial.

Another limitation of this study is that the cross-sectional nature of the data does not address the issue of causal direction. We hypothesized that individuals who feel close to and united with their real family members would respond to a presumed relative with schizophrenia in a kind and favorable manner. Although our results would seem to support this view, it is also possible that favorable and unfavorable emotions actually precede or influence perceptions of family unity. A home environment in which relatives frequently express compassion and sympathetic attitudes may lead to the perception that the family is unified and in solidarity. Similarly, households where relatives frequently express anger or other negative attitudes may lead to the view that the home lacks cohesion or is disjunctive. Future studies may benefit from examining the relationship between family cohesion and expressed affect longitudinally.

CONCLUSION

In conclusion, results of the present study suggest that strengthening perceived family unity may prove useful in reducing negative emotions and increasing positive emotions directed toward patients with schizophrenia. This finding is important in that research in the area of expressed emotion strongly indicates that negatively charged home environments are associated with a poor course for patients with schizophrenia. Intervention programs may be enhanced by including techniques specifically geared toward fortifying family members' perceptions of group spirit, and increasing their feelings of unity, cohesion, and trust. Identifying relatives as "partners" in the treatment process may be one effective means of enhancing perceptions of family solidarity.

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[1]Separate analyses were conducted because negative symptoms, relative to positive symptoms, have been found to be associated with the expression of more unfavorable and less favorable emotions toward patients with schizophrenia (Weisman & López, in press).