A Comparison of Psychiatric Symptoms Between Anglo-Americans and Mexican-Americans With Schizophrenia

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Abstract

Culture is widely thought to influence the form, content, and extent of symptoms experienced and expressed by the mentally ill. However, little is known about how specific cultural groups differ in their symptomatic presentation of mental illness. Using data derived from the Present State Exam, the current study compared 63 Anglo-American and 53 Mexican-American patients with schizophrenia on ten psychiatric symptoms. A series of logistic regressions offered several interesting findings. For instance, as hypothesized, Mexican-American patients were more likely to report physical symptoms than their Anglo-American counterparts. Also in line with expectations, Anglo-American patients reported experiencing a greater frequency of several psychiatric symptoms such as persecutory delusions, nervous tension, and blunted affect. Results from this study suggest that the presentation of even a very biologically determined disorder such as schizophrenia can be shaped by sociocultural factors. Specific aspects of Anglo-American and Latino cultures that may influence symptom patterns in patients suffering from schizophrenia are discussed.

Keywords: Culture, schizophrenia, psychiatric symptoms, Anglos, Latinos.

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Numerous investigators have argued that culture influences psychopathology (e.g., Kleinman 1988; Jenkins and Karno 1992; Al-Issa 1995). However, relatively few studies have used established, reliable, and validated instruments to systematically compare psychiatric patients from diverse cultural backgrounds on symptoms of mental illness. However, some evidence does suggest that the prevalence and chronicity of certain types of symptoms and disorders covaries with cultural factors. Convincing examples come from the World Health Organization's International Pilot Studies on Schizophrenia (WHO, 1973,

1979) and subsequent Determinants of Outcomes of Severe Mental Disorder studies (Jablensky et al. 1992). Despite approximately equal prevalence rates of schizophrenia worldwide (1% of the population), findings from the WHO investigations reveal that the course of schizophrenia is more favorable in "developing" than "developed" societies. These findings are also consistent with the findings of several earlier studies (e.g., Rin and Lin 1962; Murphy and Raman 1971; Waxler 1979).

Research in the area of expressed emotion (EE) further suggests that the course and outcome of schizophrenia may be related to sociocultural factors. Expressed emotion is a measure of criticism, hostility, and emotional overinvolvement in the household. Several international studies have demonstrated that patients living in environments characterized by high levels of these emotions (high EE) are significantly more likely to experience clinical relapse than are patients residing in households with low levels of EE (see Kavanagh 1992 for a review).

Certain cultural patterns in EE have also been observed (Kavanagh 1992). For example, less industrialized societies such as that in Chandigarh, India, appear to have significantly fewer families with high EE (23%) than do more industrialized countries such as England (48%) and the United States (67%). Sociocultural differences in EE patterns have also been observed between national groups residing within the same metropolitan area. For example, Jenkins et al. (1986) pointed out that in a matched sample of Anglo-Americans and Mexican-Americans living in Los Angeles, 66 percent of Anglo-Americans were rated as high EE, whereas only 31 percent of the Mexican-Americans fell into this category.

Several investigators have suggested that cultural variations in religious beliefs and values may also influence manifestations of psychopathology and others' reac-

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tions to it. Research suggests that Latinos endorse having greater religious faith than do Anglo-Americans (Weisman and López 1996) and use faith to cope with mental illness in a family member (Guarnaccia et al. 1992). Jenkins and Karno (1992) and Weisman (1997) speculate that the course of schizophrenia and low frequency of high EE observed in developing countries may relate to religious and cultural views that externalize blame for the disorder. In the largely Catholic Mexican-American society, religion serves as a core social and spiritual resource, and God is believed to be responsible for most events (Bach-y-Rita 1982). It would seem that this external control perspective might impress upon Latinos and members of other traditional societies the need to be more compassionate, understanding, and tolerant of other people's conditions such as mental illness. This orientation may account for the comparatively low levels of high EE (anger and hostility) exhibited by Mexican-American families when presented with relatives with schizophrenia.

A tendency to conceptualize psychiatric problems in somatic terms has been offered as another theory as to why Latinos show less EE and instead are more accepting of mental illness. Several researchers argue that Latinos have a much stronger tendency to view psychiatric symptoms in physical or medical terms than do Anglo-Americans (Canino 1982; Wilkenson 1982; Jenkins 1988), which shifts the blame away from the patient. In one study by Jenkins (1988), relatives of patients with schizophrenia presenting with similar constellations of symptoms were asked what type of problem they believed their relative was suffering from. While only about a quarter of the Mexican-Americans conceptualized their relative's problem as some type of mental or psychiatric disorder, the vast majority of Anglo-Americans did (89%). Mexican-Americans, on the other hand, considered the disorder to be almost entirely associated with "nervios" (nerves), which involves an understanding of the problem as primarily somatic and outside of the patient's personal control.

Evidence suggests that Latino patients themselves also appear to conceptualize mental illness in physical terms. Stoker et al. (1968) compared a sample of Mexican-American woman to a sample of Anglo-American women with comparable marital status and socioeconomic and educational backgrounds. They found that for similar psychotic and depressive disorders, Mexican-American woman reported four times more somatic complaints than did Anglo-American women. Two studies examining cultural variation in depression also found evidence of this effect. Mezzich and Raub (1980) and Escobar et al. (1983) both found that for depressed patients, Latinos residing in their homeland

(Peru and Colombia respectively) reported a higher proportion of somatic symptoms than did their Anglo-American counterparts.

Other cultural and environmental factors also appear to have an impact on manifestations of psychopathology. For example, the content of psychosis may be influenced by one's day-to-day cultural experiences. The psychotic experiences of South American Indians who practice witchcraft commonly include delusions regarding saints and jungle spirits (Murphy 1982). Simons and Hughes (1993) describe a common Chinese syndrome called "p'aleng." This syndrome is based on the humoral theory of the dynamics of nature and human well-being, which includes a widespread Chinese belief that one's actions and natural forces can interact to upset the balance of Nature. This disorder is characterized by a morbid fear of the cold, especially of the wind, as a factor in upsetting the optimum balance of forces. A final example of a culture-bound syndrome, described by Simons and Hughes (1993), is called "falling out" and appears primarily to affect blacks in the United States. This syndrome is characterized by lapsing into a state of semiconsciousness and is speculated to represent an extreme method of escape from an unbearable environment. These observations suggest that symptoms of psychopathology may in part reflect exaggerated cultural beliefs and elements of the society to which one is most frequently exposed.

From the studies reviewed above, it appears that sociocultural factors likely shape both conceptualizations of mental illness and the form, content, and extent of symptoms experienced by psychiatric patients. Few theoretically driven empirical studies have been conducted, however, that systematically examine how cultural groups differ in their symptomatic presentation of mental illness. Without data from studies that have clearly and directly assessed and identified cultural factors in the expression of psychopathology and that use psychometrically validated and reliable instruments, clinicians may be at risk of applying their own cultural assumptions. López and Hernandez (1986) found evidence for this pattern in a study in which clinicians were presented with vignettes of clinical cases. The authors found that psychopathology was judged to be less severe in almost all cases in which clinicians reported taking culture into account in their assessments. In these instances, the symptoms or the disorder as a whole were attributed to culturally normative behavior. López and Hernandez caution that researchers need to more thoroughly examine the role that culture plays in the pathogenesis and presentation of mental illness. Without knowledge of base rates of psychopathology in different cultural groups, clinicians may be at risk of overlooking or minimizing actual psychopathology. An empirical data base of culture and psychopathology could

contribute to reducing errors in the evaluation and treatment of patients by providing insight into the standards, norms, and variations of psychopathology within and across diverse cultural groups.

In this study we propose to contribute to such a data base by comparing Mexican-American and Anglo-American patients on the manifestation of ten psychiatric symptoms obtained from a semistructured diagnostic interview, the Present State Exam (PSE). The a priori hypotheses presented below are based on the assumption that the Anglo-American and Mexican-American cultures will influence the form and content of psychiatric experiences in a systematic fashion.

Hypotheses

In the present study, we hypothesize that Mexican-Americans will report more somatic symptoms in the form of tiredness and nervous tension and more hypochrondriacal symptoms than will Anglo-Americans. This is based on previous findings that Latinos tend to somaticize their psychological distress (Stoker et al. 1968; Mezzich and Raub 1980; Escobar et al. 1983) and that they conceptualize mental illness in physical terms (Jenkins 1988).

Latinos are also expected to have a greater frequency of religious delusions than Anglo-Americans. Research by Bach-y-Rita (1982) and Guarnaccia et al. (1992) suggests that Catholicism serves as a core social and spiritual resource for Mexican-Americans, influencing the experience of events such as mental illness. As discussed above, Weisman and López (1996) have also found that Mexicans endorse having stronger religious faith than do Anglo-Americans. This tendency toward greater religious faith is hypothesized to be internalized by Latino patients and manifested in the form of a greater frequency of delusions of a religious nature.

In line with observations by Murphy (1982), Simons and Hughes (1993), and Griffith and Baker (1993) on culture-bound syndromes, we also expect that Anglo-American culture will have a predictable influence on psychopathology. For instance, we hypothesize that Anglo-Americans will report experiencing a greater frequency, relative to Mexican-Americans, of auditory hallucinations in the form of critical voices and more persecutory delusions. This hypothesis stems from Jenkins et al.'s finding (1986) that Anglo-American relatives express more criticism regarding a family member with schizophrenia than do Mexican-American relatives. Thus Anglo-American patients are likely exposed to greater levels of negative attitudes in their home environments. This exposure is hypothesized to shape Anglo-American patients' psychotic experiences. In other words, the delusions and

hallucinations of Anglo-Americans are expected to reveal a greater tendency to experience the world as critical and persecutory.

Similarly, we also expect other aspects of mainstream American culture to have an effect on psychopathology. For instance, given the popularity of science fiction books and movies in popular American culture (e.g., Independence Day, Star Wars, Aliens), it is expected that the psychotic experiences of Anglo-Americans will include more frequent themes of extraterrestrial beings, spaceships, and controlling or penetrating alien forces than will the psychotic experiences of Latinos.

It is important to point out that the hallmarks of schizophrenia include both behavioral excesses or positive symptoms such as delusions and hallucinations and behavioral deficits or negative symptoms such as blunted affect, poor hygiene, and poverty of speech (DSM-IV, American Psychiatric Association 1994). Examining behavioral deficits along with behavioral excesses will put us in a better position to maximally assess for cultural differences in core symptoms of psychopathology. Little is yet known about the comparative cross-cultural prevalence of negative symptoms (Kay 1991). Crow (1980) hypothesizes that negative symptoms signify structural brain abnormality and therefore are more likely than positive symptoms to transcend geographic and societal grounds. However, there is some evidence suggesting that Anglo-Americans actually have a greater frequency of negative symptoms than do other U.S. ethnic groups. For example, in a comparison of blacks' and whites' differences in psychopathology, Fabrega et al. (1988) found that white schizophrenia patients scored significantly higher than did black schizophrenia patients on measures of negative symptoms. In the present study, Anglo-Americans and Mexican-Americans will be compared on the frequency of three nonpsychotic negative symptoms of schizophrenia. This will allow us to examine whether Anglo-Americans also score higher on this symptom dimension than do Mexican-Americans, which would extend Fabrega et al.'s finding to another minority group, or whether no differences on these symptoms are found, which would support Crow's hypothesis.

Participants and Method

The study sample consisted of 116 patients with a DSM-IV diagnosis of schizophrenia. Diagnoses and the content and frequency of psychiatric symptoms were derived from the expanded version of the PSE (Wing et al. 1974). Before interviews were commenced, all interviewers were trained to obtain a minimum mean intraclass correlation coefficient (ICC) of 0.85 for symptom presence and a minimum mean ICC of 0.90 for symptom

absence compared with experienced raters, trained at the Diagnosis and Psychopathology Unit of the UCLA Clinical Research Center for Schizophrenia and Psychiatric Rehabilitation. Item-by-item agreement on the full PSE ranged from 80 percent to 90 percent, while minimum agreement on specific schizophrenic symptoms was 90 percent.

Data from 63 patients with complete PSE and Psychiatric Assessment Scale (PAS; Krawiecka et al. 1977) ratings were drawn from the Family Factors (FF) project (Vaughn et al. 1984). To meet criteria for the FF project, patients were required to be of Anglo-American ethnic origin. Data from 53 patients with complete PSE and PAS ratings were drawn from the Course of Schizophrenia Among Mexican-Americans (COSAMA) project (Karno et al. 1987). To meet criteria for the COSAMA project, patients had to be of bilateral Mexican descent. Sixty percent of this sample was first generation Mexican-American (born in Mexico), whereas the remaining 40 percent was born in the United States. The methodology used in the COSAMA project was purposefully modeled after Vaughn et al. in order to make cultural comparisons. With the exception of ethnicity, the inclusion criteria in the COSAMA and the FF projects are similar (Karno et al. 1987). All patients were drawn from public mental health service agencies in the Los Angeles and Ventura counties of California and met the following criteria: (1) aged 18-50 years, (2) within one month of hospitalization prior to the initial interview, and (3) have lived with a parent, spouse, or other close relative for at least one of the three months immediately prior to admission. In both the COSAMA and FF projects, patients were assessed using the PSE and the PAS as soon as possible after hospital admission, generally within 7-14 days of admission. However, there was some variability in time frames. In the FF project, all patients were required to be assessed within two weeks of admission, whereas in the COSAMA project a few assessments exceeded this time frame.

No significant ethnic differences were found with respect to age (mean [M] = 25.87 years for Anglo-Americans; M = 26.16 years for Latinos), number of previous hospitalizations (M = 2.82 for Anglo-Americans; M = 3.36 for Latinos), or total number of years since onset of illness (M = 4.58 for Anglo-Americans; 4.47 for Latinos); p > 0.05 for all. Anglo-Americans were found to have a significantly greater number of total psychiatric symptoms (M = 12.67) compared to Latinos (M = 10.80) on the PAS (t[114] = 2.5; p < 0.05). Anglo-Americans were also found to have had more years of education (M = 13.05) than did Latinos (M = 9.21); t(114) = 13.77, p < 0.0001. Finally, Anglo-American patients were found to be from families of a higher socioeconomic class (M = 1.000)

3.25) than were Latino patients (M = 4.44) according to Hollingshead's (1957) two-factor index of social position; t(114) = 2.14, p < 0.05. Please see Vaughn et al. for further details on Anglo-American sample characteristics and Karno et al. for further details on Latino sample characteristics.

Results

To examine cultural differences in the psychiatric symptoms previously discussed, logistic regression analyses were performed to predict the frequency of ten PSE symptoms as a function of ethnicity (Anglo-American vs. Latino). In this study we controlled for global psychiatric symptoms (using the PAS) because Latinos reported having fewer total psychiatric symptoms as compared to Anglo-Americans. This may be due to the fact that a few of the Latino patients from the COSAMA study were interviewed more than two weeks following the initial episode; thus, their symptoms may have attenuated. On the other hand, all Anglo-American patients were interviewed within two weeks of the initial hospitalization. It is important, therefore, to control for overall level of pathology, reducing the likelihood that any cultural differences found in symptoms could be attributed simply to different time frames in assessment. We also controlled for family level of socioeconomic status (SES, by using the Hollingshead social position index) and for the patient's total years of education, two factors that could conceivably influence symptoms of mental illness. In each analysis, these three potentially confounding variables (SES, education, and global psychiatric symptoms) were controlled for hierarchically by adding them to the equation first. Ethnicity was then added to the equation in step two. Table 1 presents the regression coefficients for each analysis.

Somatic Symptoms. As hypothesized, Latinos more frequently reported hypochondriacal thoughts in the form of overconcern with the possibility of death, disease, or malfunction. However, Latinos did not report more frequently feeling tired nor did they report greater nervous tension than did Anglo-Americans. Contrary to expectations, Anglo-Americans actually reported a significantly greater frequency of symptoms of nervous tension than did Latinos.

Psychotic Symptoms. In line with expectations, Anglo-Americans reported experiencing a greater percentage of persecutory delusions than did Mexican-Americans.

¹Lower scores indicate higher socioeconomic status.

Table 1. Logistic regressions predicting PSE symptoms

PSE Variable	Coefficient	SE	
Somatic symptoms			
Hypochondriasis	1.07*	0.37	
Tiredness	-0.35	0.28	
Nervous tension	-1.09*	0.33	
Psychotic symptoms			
Persecution	-0.68**	0.27	
Critical voices	0.54	0.26	
Religiosity	-0.03	0.28	
Alien forces	-1.51**	0.64	
Negative symptoms			
Self-neglect	-0.66**	0.33	
Blunted affect	-0.97*	0.30	
Poverty of speech	-1.11	0.67	
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Note.—PSE = Present State Exam; SE = standard error.

However, the percentage of Anglo-Americans reportedly hearing critical voices was not, as hypothesized, greater than the percentage of Mexican-Americans reportedly hearing critical voices.

Also contrary to expectations, we found no evidence to support our hypothesis that Mexicans-Americans would report more frequent religious delusions than their Anglo-American counterparts. No significant differences were found in the frequency of religious delusions between cultural groups.

Finally, as hypothesized, Anglo-Americans reported experiencing a greater frequency of delusions of a science fiction or supernatural basis.

Negative Symptoms. Anglo-Americans and Latinos were also compared on the frequency of three of the most common negative symptoms of schizophrenia. As compared to Mexican-Americans, Anglo-Americans were found to have significantly greater levels of self-neglect and blunted affect. No ethnic differences were found in levels of poverty of speech.

Discussion

This paper set out to examine cultural differences between Anglo-Americans and Mexican-Americans in symptoms of psychopathology. As expected, we found that Mexican-Americans reported a greater frequency of hypochondriacal symptoms. That is, they had a stronger preoccupation with disease, fear of premature death, and general bodily malfunction. One Mexican-American woman, for instance, expressed an exaggerated concern with sore feet.

Although the pain was not described as severe, the patient was concerned that it would escalate, leaving her "trapped inside." Our findings are consistent with earlier results by Stoker et al. (1968), Mezzich and Raab (1980), and Escobar et al. (1983) suggesting a tendency toward greater somatization in Latino patients. For Latinos, somatization may serve as a culturally specific mechanism for coping with psychopathology. Escobar et al. (1986) suggest that in some cultures, somatic presentation of symptoms may result from there being fewer words or concepts to describe psychological symptoms. Thus, the experienced but cognitively unexplainable symptoms of psychopathology may emerge metamorphosed into more culturally congruent physical terms. A tendency toward hypochondriasis and somatization may shed light on the tendency observed by Jenkins et al. (1986) for Latino relatives to be more accepting and less critical of mental illness in a family member than are Anglo-American relatives. If symptoms are experienced and expressed by patients in medical terms, relatives may be more likely to view their family member as genuinely ill and less likely, therefore, to blame the family member for the symptoms.

Contrary to expectations, Latinos were not found to report feeling more tired than did Anglo-Americans, nor did they report experiencing nervous tension more frequently. In fact, for nervous tension, we actually found a significant difference in the direction opposite to that predicted. This finding is surprising given Jenkins' observation that a large proportion of Latino families view symptoms of schizophrenia as associated with nervios (nerves). One possible explanation for this counterintuitive finding is that while the interview probes on the PSE that assess this symptom do address somatic features of tension (i.e., Do you generally suffer from nerves or nervous exhaustion?), they also appear to tap cognitive or "psychological" elements of distress (Do you often feel "on edge, keyed up, and/or mentally tense or strained?"). These questions may assess symptoms related to anxiety or general nervousness that Canino (1982) and others have reported are generally more congruent with Anglo-American than Latino culture.

We also hypothesized that because Anglo-Americans hold more critical and hostile attitudes regarding family members than do Latinos (Jenkins et al. 1986), patients from Anglo-American families might internalize these negative emotions and have psychotic experiences that reflect this process. Specifically, we expected that Anglo-American patients would have more persecutory delusions and more auditory hallucinations in the form of voices criticizing them. As hypothesized, we did find a greater frequency of delusions of persecution in Anglo-Americans. That is, Anglo-Americans, more often than Latinos, reported persecutory beliefs such as the belief

^{*} p < 0.01; ** p < 0.05

that others were trying to harm, poison, or kill them. Several of the delusions even included specific references to family members. For instance, one patient stated that "[her] mother is trying to get rid of [her] by trying to push [her] into the psychotic world." Another patient, who reportedly did not get along with either of his parents, stated that he could feel his father's "special force just trying to mess [him] up." Interestingly, while the content of delusions with family references held by Anglo-Americans frequently connoted strained family relations, the content of Mexican-American patients' delusions instead tended to reflect positive sentiments toward family members such as concern or worry for their well-being and safety. By way of example, one Mexican-American patient held an exaggerated preoccupation that someone was going to harm his mother or that some other calamity would befall her.

On the other hand, we found no evidence for the second part of this hypothesis. That is, Anglo-American patients did not report experiencing more hallucinations in the form of hostile, threatening, or accusing voices. We are not sure why this is the case. Perhaps experiencing persecutory delusions is a more natural, albeit exaggerated, response following criticism than is re-experiencing these criticisms in the form of hallucinations. Beliefs may also be more culturally sensitive than are perceptual experiences, and therefore may be more prone to cultural variability following psychiatric decompensation.

Another interesting finding in line with our hypotheses was that Anglo-American patients did report experiencing a significantly greater frequency of delusions of a science fiction nature. Examples of these included one Anglo-American patient's report that "extraterrestrial forces have operated on [her] fallopian tubes." Another stated that "People from outer space are reading and stealing [his] thoughts." With the popularity of science fiction movies such as *Star Wars* and television shows such as *The X-Files* in mainstream America, this finding suggests once again that specific expressions of psychopathology are likely traceable to day-to-day experiences within one's culture.

Perplexingly, we did not observe a greater frequency of religious delusions in Latino patients. This finding is surprising in that religiosity is thought to play an extremely important role in the lives of Latinos (Canino 1982) and would be expected to influence most events, including psychotic experiences. This finding certainly warrants further investigation.

The last set of symptoms examined in this study had to do with the negative symptoms of schizophrenia. While no cultural differences were found in poverty of speech, we did find that Anglo-Americans had greater levels of blunted affect and self-neglect. This finding is inconsis-

tent with Crow's hypothesis that, unlike positive symptoms, negative symptoms should be similar in form and frequency across cultures because they reflect structural brain pathology. As an anonymous reviewer of this paper pointed out, Crow's hypothesis is also not supported by the cross-cultural literature in medical anthropology on such biologically based disorders as AIDS, diabetes, malaria, and so forth. There is a large literature documenting that infectious diseases and chronic medical disorders can take a distinctive social course and present with different culturally marked symptoms owing to cultural influences on symptom reporting. On the other hand, our findings may be viewed as extending Fabrega et al.'s (1988) observation of a higher frequency of negative symptoms in whites as compared to blacks, to another cultural group (Mexican-Americans) living in the United States. Perhaps there is something about Anglo-American culture that leads to a general decrease in behavior in response to schizophrenic illness. By the same token, there may be something inherent in African-American and Latino cultures that protects against this symptom dimension. For example, there is a widely held belief that Mediterranean and Latino populations are ebullient and emotive, whereas the gestural and facial languages of typical Anglo-Americans are much more constricted (Simons and Hughes 1993). Appearance, as well as the expression of affect, are structured in significant ways by cultural conditioning. Our finding suggests that this conditioning may play a role in the expression of psychopathology.

In conclusion, results from this study suggest that the content and presentation of psychiatric symptoms vary from Anglo-American to Mexican-American patients in a manner reflective of their respective cultures. Much like other events such as dreams, thoughts, and specific likes and dislikes, psychiatric experiences appear to be molded by an individual's past and by his or her experiences within a certain sociocultural context. This study helped us to define specific instances in which culture may impact symptoms in Latino and Anglo-American patients with schizophrenia. We do not mean to imply, however, that all Latinos or all Anglo-Americans with schizophrenia will display symptoms similar to the cultural patterns observed in this study. Rather, our findings indicate that psychiatric experiences do seem to be shaped, in part, by sociocultural factors.

One caveat in interpreting our findings is that, although we did control for global psychiatric symptoms, we cannot entirely rule out that some of the cultural differences found were the result of noncultural factors such as different phases of illness or different overall levels of psychopathology. Future studies could help clarify this important issue by examining patients who are at or around the same stage in their illness and who are

assessed consistently within a uniform period following a psychiatric episode.

This study is also limited in that we did not include measures to assess specific beliefs, values, and practices that would allow us to evaluate culture more directly. Thus it is difficult to determine whether the ethnic differences we did observe in symptoms such as hypochondriasis, delusions of persecution, and blunted affect are indeed culturally related. Without direct measures of culture (e.g., patients' family values, beliefs about mind-body duality) we can at best say that our findings are consistent with a cultural hypothesis (López 1994). Future research in the area of culture and psychopathology might be enhanced by going beyond ethnicity as the cultural marker. It is important that researchers also begin to identify specific cultural elements such as those beliefs, behaviors, or practices expected to directly influence the content or form of psychiatric symptoms and patients' overall level of functioning.

References

Al-Issa, I., ed. *Handbook of Culture and Mental Illness:* An International Perspective. Madison, WI: International Universities Press, 1995.

American Psychiatric Association. DSM-IV: Diagnostic and Statistical Manual of Mental Disorders. 4th ed. Washington, DC: APA, 1994.

Bach-y-Rita, G. The Mexican-American: Religious and cultural influences. In: Becerra, R.; Karno, M.; and Escobar, J., eds. *Mental Health and Hispanic Americans: Clinical Perspectives*. New York, NY: Grune & Stratton, 1982.

Canino, G. The Hispanic woman: Sociocultural influences on diagnoses and treatment. In: Becerra, R.; Karno, M.; and Escobar, J., eds. *Mental Health and Hispanic Americans: Clinical Perspectives*. New York: Grune & Stratton, 1982.

Crow, T.J. Molecular pathology of schizophrenia: More than one disease process? *British Medical Journal*, 280:66–68, 1980.

Escobar, J.I.; Gomez, J.; and Tuason, V.B. Depressive phenomenology in North and South American patients. *American Journal of Psychiatry*, 140:47–51, 1983.

Escobar, J.I.; Randolph, E.T.; and Hill, M. Symptoms of schizophrenia in Hispanic and Anglo veterans. *Culture, Medicine, and Psychiatry*, 10:259–276, 1986.

Fabrega, H.; Mezzich, J.; and Ulrich, R.F. Black-white differences in psychopathology in an urban psychiatric population. *Comprehensive Psychiatry*, 29:285–297, 1988.

Griffith, E.E.H., and Baker, F.M. Psychiatric care of African Americans. In: Gaw, A., ed. *Culture, Ethnicity, and Mental Illness*. Washington, DC: American Psychiatric Press, 1993. pp. 147-173.

Guarnaccia, P.J.; Parra, P.; Deschamps, A.; Milstein, G.; and Argiles, N. Si Dios quiere: Hispanic families' experiences of caring for a seriously mentally ill family member. Culture, Medicine, and Psychiatry, 16:187–215, 1992.

Hollingshead, A.B. "Two-Factor Index of Social Position." Unpublished manuscript, 1957.

Jablensky, A.; Sartorius, N.; Ernberg, G.; Anker, M.; Korten, A.; Cooper, J.E.; Day, R.; and Bertelsen, O. Schizophrenia: Manifestations, Incidence and Course in Different Cultures: A World Health Organization Ten-Country Study. New York, NY: Cambridge University Press, 1992.

Jenkins, J.H. Ethnopsychiatric interpretations of schizophrenic illness: The problem of nervios within Mexican-American families. *Culture, Medicine, and Psychiatry*, 12:303–331, 1988.

Jenkins, J.H., and Karno, M. The meaning of expressed emotion: Theoretical issues raised by cross-cultural research. *American Journal of Psychiatry*, 149:9–21, 1992.

Jenkins, J.H.; Karno, M.; de la Selva, A.; and Santana, F. Expressed emotion in cross-cultural context: Familial responses to schizophrenic illness among Mexican-Americans. In: Goldstein, M.; Hand, I.; and Hahlweg, K., eds. *Treatment of Schizophrenia: Family Assessment and Intervention*. New York, NY: Springer-Verlag, 1986. pp. 35–49.

Karno, M.; Jenkins, J.H.; de la Selva, A.; Santana, F.; Telles, C.; López, S.R.; and Mintz, J. Expressed emotion and schizophrenic outcome among Mexican-American families. *Journal of Nervous and Mental Disease*, 175:143–151, 1987.

Kavanagh, D.J. Recent developments in expressed emotion and schizophrenia. *British Journal of Psychiatry*, 160:601–620, 1992.

Kay, S.R. Positive and Negative Syndromes in Schizophrenia. New York, NY: Brunner/Mazel, 1991.

Kleinman, A. Rethinking Psychiatry. New York, NY: Free Press, 1988.

Krawiecka, M.; Goldberg, D.; and Vaughan, M. A standardized psychiatric assessment scale for rating chronic psychotic patients. *Acia Psychiatrica Scandinavia*, 55:299–308, 1977.

López, S.R. Latinos and the expressions of psychopathology: A call for the direct assessment of cultural influences.

In: Telles, C.A., and Karno, M., eds. *Mental Disorders in Hispanic Populations*. Washington, DC: National Institute of Mental Health, 1994.

López, S.R., and Hernandez, P. How culture is considered in evaluations of psychopathology. *Journal of Nervous and Mental Disease*, 176:598–606, 1986.

Mezzich, J.E., and Raab, E.S. Depressive symptomatology across the Americas. *Archives of General Psychiatry*, 37:818–823, 1980.

Murphy, H.B.M. Culture and schizophrenia. In: Al-Issa, I., ed. *Culture and Psychopathology*. Baltimore, MD: University Park Press, 1982. pp. 49–82.

Murphy, H.B.M., and Raman, A.C. The chronicity of schizophrenia in indigenous tropical peoples: Results of a twelve-year follow-up survey in *Mauritius*. *British Journal of Psychiatry*, 9:237–249, 1971.

Rin, H., and Lin, T. Mental illness among Formosan aborigines as compared with the Chinese in Taiwan. *Journal of Mental Science*, 108:134–146, 1962.

Simons, R.C., and Hughes, C.C. Culture bound syndromes. In: Gaw, A., ed. *Culture, Ethnicity, and Mental Illness*. Washington, DC: American Psychiatric Press, 1993. pp. 75–99.

Stoker, D.H.; Zurcher, L.A.; and Fox, R. Women in psychotherapy: A cross-cultural comparison. *International Journal of Social Psychiatry*, 15:5–22, 1968.

Vaughn, C.E.; Snyder, K.S.; Jones, S.; Freeman, W.B.; and Falloon, I.R.H. Family factors in schizophrenic relapse. *Archives of General Psychiatry*, 41:1169–1177, 1984.

Waxler, N. Is the outcome for schizophrenia better in non-industrialized societies? *Journal of Nervous and Mental Disease*, 167:144–158, 1979.

Weisman, A. Understanding cross-cultural prognostic variability for schizophrenia. *Cultural Diversity and Mental Health*, 3:2–13, 1997.

Weisman, A., and López, S.R. Family values, religiosity, and emotional reactions to schizophrenia in Mexican and Anglo-American cultures. *Family Process*, 35:227–237, 1996.

Wing, J.K.; Cooper, J.E.; and Sartorius, N. The Measurement and Classification of Psychiatric Symptoms. London, U.K.: Cambridge University Press, 1974.

World Health Organization. *The International Pilot Study of Schizophrenia*. Geneva, Switzerland: WHO, 1973.

World Health Organization. Schizophrenia: An International Follow-Up Study. New York, NY: John Wiley, 1979.

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