Schizophrenia Among Hispanics: Epidemiology, Phenomenology, Course, and Outcome

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Abstract
A number of studies point to the influence of culture and ethnicity on the presentation and course of schizophrenia. In general, a relatively powerful influence of environmental factors is identified. This article reviews the literature on schizophrenia among Hispanics in the United States and uses the results of this review as a basis for identifying directions for future study. Research is divided into three major areas: epidemiology, phenomenology, and illness course and outcome. Ethnic comparisons suggest similar prevalence rates of schizophrenia. However, differences in illness phenomenology between certain subgroups of Hispanics are also observed. Moreover, culture can affect various aspects of the illness process, including illness definition, help-seeking behavior, response to treatment, and post-treatment adjustment. Proposed guidelines to direct future research ventures include (1) better delineation of the sociocultural attributes of the group under study, (2) validation of assessment instruments across ethnic groups, (3) use of innovative approaches to assess incidence and prevalence, (4) incorporation of qualitative methodology, (5) use of illness behavior models to provide a conceptual framework to guide investigations, and (6) integration of cross-cultural and biological studies.


The goals of this article are to review the literature on schizophrenia among Hispanics in the United States and to use the results of this review as a basis for identifying areas for future research into cultural and ethnic factors that affect the presentation and course of schizophrenia in this group.

The underlying premise of this work is that culture and ethnicity can influence the presentation and course of schizophrenia in a variety of ways (Kleinman 1988). Much of the support for this premise comes from two related studies, the International Pilot Study of Schizophrenia (IPSS) and the Determinants of Outcome of Severe Mental Disorders (DOSMD) (Sartorius et al. 1977, 1986). These studies examined the prevalence and course of schizophrenia in a number of developing and developed countries. Some of the most important findings were that (1) the prevalence of schizophrenia did not differ significantly across sites and (2) the course of schizophrenia, from the vantage points of hospitalization and a wide range of measures of social functioning, was more benign in developing countries. Among the developing countries, there was one Hispanic site: Cali, Colombia.

The finding of similar prevalences across widely divergent cultures and ethnic groups according to the International Classification of Diseases criteria (ICD–9; World Health Organization 1978), is partial evidence that the phenomenology of schizophrenia is not grossly altered by the cultural and ethnic background of the patient. One must recognize, however, that...
there is a certain tautology in the IPSS study in that only patients who met certain phenomenological criteria were diagnosed with schizophrenia. There was (and is) no test for schizophrenia that is independent of phenomenological criteria. Thus, some aspects of schizophrenic psychopathology could differ substantially among groups in ways that significantly influence the applicability of diagnostic criteria while having little influence on gross measures of prevalence. Even more likely, cultural and ethnic backgrounds may influence the degree, form, and recognition of manifest psychopathology. Further, the cultural and ethnic backgrounds of the interviewers could also influence the recognition of overt psychopathology. It should be noted that the IPSS used raters of the same ethnic and cultural backgrounds as the interviewees. Consequently, the interactive effects of differing interviewer-interviewee backgrounds on the identification of psychopathology, a common reality in the United States, were not explored.

The differences in course of schizophrenia among countries are particularly intriguing. They suggest a powerful influence of environmental factors and imply the need for research into their nature and their ability to be modified for therapeutic purposes. Because the range of sociocultural environments in the countries of the IPSS was so great, it has been difficult to identify specific environmental factors that may have contributed to the differences in course of schizophrenia among countries. The study of Hispanic groups within the United States has the potential for identifying and measuring a more manageable number of variables that may affect the phenomenology and course of schizophrenia. Further, since there is variation in generation and immigrant status within members of each ethnic group, studying Hispanics in the United States could also allow for evaluating the relationship between cultural change and psychopathology. Moreover, there are coexisting comparison groups of different ethnicities, and they can be matched sociodemographically (e.g., income, rural versus urban) in order to assess the influences of culture and ethnicity independent of other sociodemographic factors.

**Review**

Our review of the literature is divided in three major areas: epidemiology, phenomenology, and illness course and outcome. It is important to note that the term Hispanic, when applied to the U.S. population, includes four major groups by area of family origin: Mexican, Puerto Rican, Central American, and Caribbean. Since there is considerable cultural heterogeneity across these groups, the review specifies the group examined in the discussion of each study.

**Epidemiology.** Jaco (1959) conducted the first major psychiatric epidemiological study of Mexican-Americans, assessing the rate of new-onset psychosis in Texas over a 2-year period. He reported that the rate for Mexican-Americans in Texas was the lowest of three cultural groups (Anglo-Americans, African-Americans, and Mexican-Americans). Two major issues should be considered in evaluating this study. First, it focused on treated psychotic illness. Consequently, patients who were not in contact with mainstream health services were not included. Second, diagnostic criteria were not standardized. Therefore, individual variations among clinicians' perceptions of the clinical picture may have been present.

In contrast to Jaco's study, the Los Angeles Epidemiologic Catchment Area (LAECA) study (Karno et al. 1987) used a standardized instrument, the Diagnostic Interview Schedule (DIS; Robins et al. 1984) to assess the lifetime prevalence of specific DSM-III-defined psychiatric disorders (American Psychiatric Association 1980) in a community sample in Los Angeles. The results of the LAECA study indicated that although the lifetime prevalence of schizophrenia was not significantly different between Mexican-Americans (0.4%) and non-Hispanic whites (0.8%), there was a low rate among Hispanic males. Specifically, virtually no Hispanic males aged 30 and over were included in the 1-year prevalence category (Keith et al. 1991).

Although the use of standardized instruments and well-defined diagnostic criteria represents important methodological improvement, some issues are still problematic.

First, prevalence estimates can be affected by respondents' language, which can influence how symptoms are reported. In this regard, results have been conflicting. For example, Marcos et al. (1973) indicated that patients with schizophrenia who spoke primarily Spanish could appear more disturbed when interviewed in English. On the other hand, del Castillo (1970) and Segovia-Price and Cuellar (1981) reported that bilingual schizophrenia patients tended to express more psycho-
pathology when interviewed in Spanish.

Second, response styles may differ across ethnic groups. For example, Randolph et al. (1985) compared 81 Anglo and Hispanic subjects with schizophrenia in their responses to the DIS, the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham 1962), the Clinical Global Impression (CGI; Guy 1976), and the Hopkins Symptom Checklist 90 (SCL-90; Derogatis et al. 1974). The proportion of patients who “denied” lifetime schizophrenic symptoms in the DIS (DIS negative subjects) was very similar in both ethnic groups. Responses by DIS negative subjects to the SCL−90 were significantly different, however. While a subgroup of Anglo subjects volunteered symptoms in the SCL−90, Hispanics continued to deny symptomatology, suggesting that Hispanics may underreport symptomatology even when using self-report instruments. These results conflict with a previous study of applicants to outpatient psychotherapy (Skilbeck et al. 1984), in which Hispanic patients reported the highest symptom levels on 8 of 11 measures of the SCL−90. Differences in the stigma experienced by the two patient populations (psychotic patients versus candidates for outpatient psychotherapy) might explain the inconsistency.

Third, diagnostic categories are based on the prevailing definition of mental disorders as conceptualized by “Euro-American” psychiatry; cultural variations in the construction and definition of psychiatric syndromes have not been fully addressed, since most of the literature has focused on the so-called culture-bound syndromes.

In summary, no statistically significant differences in prevalence rates were reported. The very low prevalence rate among Mexican-American males is worth noting and warrants further investigation. The influences of the diagnostic criteria used, the language of the interview, and the response style of the subjects under study need to be evaluated as well.

**Phenomenology.** Several attempts have been made to evaluate the phenomenology of schizophrenia among Hispanics. The studies are quite diverse in terms of the population assessed and the methodology and criteria used.

Fabrega et al. (1968a, 1986b) compared the clinical profiles of Mexican-American, Anglo-American, and African-American patients in the Texas State mental hospital system. Their findings indicate the importance of controlling for social class variables and point to a trend toward greater impairment or pathology within Mexican-American patients with schizophrenia. The possibility of a more debilitating illness presentation among Hispanics (mainly Mexican-Americans) and African-Americans was also postulated by Velazquez and Callahan (1990) on the basis of the Minnesota Multiphasic Personality Inventory (MMPI; Hathaway and McKinley 1943) profiles of the sample. In contrast, Cuellar (1982), using the Psychotic Inpatient Profile (PIP; Lorr and Vestre 1969), concluded that Mexican-American psychotic patients (DSM−II; American Psychiatric Association 1968) displayed behaviors very similar to those of other psychotic groups.

Primary symptoms of schizophrenia were also very similar among a group of Hispanic and Anglo veterans (Escobar et al. 1986). The Hispanic sample was relatively well acculturated, and more than two-thirds of the subjects were at least second-generation Americans. Symptoms were elicited by means of the DIS and a battery of rating instruments including the BPRS, the Global Assessment Scale (GAS; Endicott et al. 1976), and the SCL−90. Major differences were found between Anglo and Hispanic subjects in age at onset and use of services. Hispanics reported a later age at onset and less overall use of inpatient services. In addition, in DIS interviews Hispanics had a greater number of lifetime DSM−III diagnoses, including substance abuse and affective and somatization disorders. The existence of ethnic differences even in a fairly well-acclimated sample of Hispanic veterans supports the concept of ethnic (cultural or biological) factors influencing the clinical presentation of schizophrenia.

Ethnic differences between Hispanic groups in the DIS profile of psychotic disorder have also been reported. Rubio-Stipec et al. (1989) compared the psychotic disorder factor structure obtained in a Puerto Rican sample with an Anglo-American sample and a Mexican-American sample. They reported a lower level of concordance (0.66) between the Puerto Rican and the Mexican-American samples than between the Puerto Rican and the Anglo-American samples (0.92).

Two other developments in the study of schizophrenia have also contributed to the growing interest in the understanding of its phenomenology. First, schizophrenia has gradually been recognized as phenomenologically diverse. Second, the clinical significance of positive and negative symptoms as markers of separable aspects of the
illness in terms of etiology and prognostic significance has been increasingly recognized. These developments have raised important questions regarding the diagnosis of the different syndromes included under the term schizophrenia, and difficulties in conceptualizing these syndromes are still significant.

Using the Positive and Negative Syndrome Scale (PANSS; Kay et al. 1986), Ramirez et al. (1992) reported on ethnic differences in the total score of negative symptoms as well as in the scores of some of the subscales (passive-apathetic social withdrawal, lack of spontaneity in the flow of conversation) with Puerto Ricans showing fewer negative symptoms than Anglo patients. In addition, Puerto Ricans spent less time in the hospital and reported a later age at onset. The authors discussed various cultural explanations for these differences, including the placing of more emphasis on social interaction by Puerto Ricans than by Anglos.

In contrast, our own work has found that Mexican-Americans exhibited more withdrawal on the social activity factor and more impairment on the cognition factor of the Negative Symptoms Scale (NSA; Alphs et al. 1989) than Anglo-Americans (Dassori et al. 1993). These measures were obtained both at admission to the hospital and at the end of 1-2 weeks off antipsychotic drugs. Ethnic groups did not differ on any of the factors of the BPRS. Although these results are preliminary, they provide support for the hypothesis of ethnic differences in the presentation of negative symptoms in schizophrenia.

In summary, several studies suggest the existence of ethnic differences in the clinical presentation of schizophrenia. Moreover, differences in phenomenology appear to exist among certain subgroups of Hispanics. Inferences should be made with caution, since studies vary in the diagnostic groups assessed (psychosis, schizophrenia); the criteria used to select subjects (clinicians’ diagnoses, DSM-II, DSM-III, DSM-III-R [American Psychiatric Association 1987]); the samples included (hospital samples vs. community samples, new-onset vs. chronic patients); and the instruments employed for the evaluation of psychopathology (DIS, BPRS, CGI, SCL–90, MMPI, PIP, GAS, PANSS, NSA). Therefore, the extent to which the reported differences are due to the method of assessment, the type of population evaluated, or the impact of cultural or socioeconomic factors is still unclear.

Illness Course and Outcome. We have divided research done on the course and outcome of schizophrenia among Hispanics into four areas: (1) illness definition, (2) help-seeking behavior, (3) response to pharmacological treatment, and (4) posttreatment adjustment.

Illness definition. The first area involves understanding how Hispanics conceptualize schizophrenia, since that concept partially determines their attitudes toward the sick member, their help-seeking behavior, and compliance with treatment. Jenkins (1988) reported that relatively unacculturated Mexican-American families used the term nervioso to refer to a wide range of distressing emotional experiences and illness phenomena, including depression, anxiety, panic, and schizophrenia. She suggested that preference for the use of the term nervioso was linked to family efforts to reduce the stigma associated with mental illness, strengthening the bonds among the members. She postulated that its use could mediate the course and outcome of the schizophrenic disorder. In another ethnographic study of unacculturated Mexican-origin families of severely mentally ill patients (Urdaneta et al. 1991), the term nervioso was used by 47 percent of the family members to describe the ailment of their sick relative, while the term enfermedad mental was used by only 18 percent.

The knowledge of the terminology used by patients and families is only one step toward improving the understanding of schizophrenia cross-culturally. Further research is needed on identifying those symptoms that indicate the presence of an “illness” and trigger help-seeking behavior. And despite postulated interpretations of labels, further information from respondents on the meaningfulness of various terms would help guide interventions addressing perceptions of stigma, tolerance, or prognostic expectations.

Help-seeking behavior. Urdaneta et al. (1991) report that 60 percent of the respondents attached importance to the patients’ symptoms and tried to do something about them. Even when formal services were immediately consulted, almost a quarter of the whole sample reported attempting to treat symptoms at home. These results conflict with earlier beliefs that Mexican-Americans are fatalistically inclined and resigned to suffer whatever destiny brings them. In fact, Mexican-Americans, as well as other Hispanics, may attempt to cope with the problem of mental illness within the solidarity of the family (Edgerton and

A significantly more negative view of hospitalization among Mexican-Americans than among European-Americans was reported by Lawson et al. (1982) and partially supported by Escobar and colleagues' (1986) findings of less overall use of inpatient services in Hispanics. Yet, underuse of inpatient mental health services by Hispanics may not be a uniform phenomenon, as indicated by Snowden and Cheung (1990). Region, and type of institutions represented (public, private, and Veterans Affairs hospitals) in the data are important qualifiers.

Although results are far from conclusive, they point to the possibility that illness course among Hispanics may be characterized by fewer hospitalizations. The cause may be differential access to care, differential availability of services, or cultural characteristics that discourage use of professional services.

Response to treatment. Once patients are in treatment, ethnic differences in response to medication and in the prevalence of side effects can also be present. These factors have been identified as important in determining compliance, which in turn influences illness course.

Lu et al. (1987) reviewed records of 158 admissions from four ethnic groups (Asians, Hispanics, African-Americans, and Caucasians). They found no significant differences in prevalence of extrapyramidal symptoms (EPS) and neuroleptic dosage associated with EPS. However, when immigrant status was taken into consideration, immigrant Asians and Hispanics had significantly lower mean maximal dosages than the other Asian or Hispanic groups and also lower than the Caucasian and African-American groups. The authors propose that environmental and cultural factors (diet, alcohol and other substances, smoking, and exposure to toxins) could differentially affect the absorption and metabolism of neuroleptics (Mendoza et al. 1991).

Using a more general approach, Lawson et al. (1982) evaluated ethnic differences in treatment response by assessing the changes in psychopathology exhibited by a group of Mexican-American and European-American patients at the time of discharge from the hospital. There were no ethnic differences in degree of psychopathology at admission or in response to treatment. Both groups showed a high degree of improvement as measured by both MMPI and clinical judgment.

Posttreatment adjustment. The posttreatment adjustment of Hispanic patients with schizophrenia has been evaluated in terms of employment status, rehospitalization rates, and social functioning. This literature is scarce and tends to include patients with various psychiatric diagnoses within a single group. For example, Gonzalez and Cuellar (1983) reported on the readmission rates of Mexican-American patients discharged from the San Antonio State Hospital.

More than 60 percent of the patients carried a diagnosis of schizophrenia; the remaining patients had diagnoses of bipolar disorder and psychotic depression. Mexican-Americans were found to have re-admission rates similar to those of other ethnic groups.

The posttreatment adjustment of the sample appeared to be bleak, since none of the nonreadmitted patients were employed full time after discharge. However, because of the severity and chronicity of the illness, it is very likely that posthospital employment may not have been a useful criterion for measuring rehabilitation in this sample. Further, rates of posthospital employment may reflect community factors such as vocational rehabilitation opportunities, stigma of mental illness, and ethnic discrimination.

In terms of social functioning, Sue et al. (1991) used the GAS as a measure of posttreatment adjustment and reported a better outcome for Mexican-Americans using outpatient services at the Los Angeles County mental health system. Ethnic match between therapist and client was significantly related to a decreased probability of dropping out from treatment only for the Mexican-American group whose primary language was not English.

Family factors may be moderators of the illness course and outcome of the sick relative. An important contribution of this research has been the attempts of Jenkins et al. (1986), Jenkins (1991, 1992), Jenkins and Karno (1992) to assess the cultural validity of the constructs under study. One of these constructs has been expressed emotion (EE), which assesses the family's extent of criticality/overinvolvement with the relative with schizophrenia. Karno et al. (1987) reported a significantly lower level of EE among Mexican-American households versus Anglo-American households. In addition, high levels of household EE, while significant, were slightly less predictive of relapse among Mexican-Americans than among Anglo-Americans and British patients. A tentative explanation
given by the authors is the buffering of the high levels of EE by the larger size of the Mexican-American households.

In summary, studies suggest that culture affects various aspects of the illness process and that family may have a central role in the course of illness. Nonetheless, the effect of inequalities in access to care, or type of assessment tools and outcome measures on the differences observed is still unclear. Furthermore, the interplay among illness definition, help-seeking behavior, response to treatment, and posttreatment adjustment requires further investigation.

Directions for Future Research

While research on schizophrenia among Hispanics in the United States has not been extensive, some intriguing findings have emerged. In fact, ethnic differences in phenomenology, clinical picture, and illness course and outcome have been reported. These results indicate the need for more research on the influence of ethnicity, on the various stages of illness, and on the context in which the illness process unfolds.

Some guidelines follow that can be used to direct future research ventures:

1. **Delineation of the sociocultural attributes of the group under study.** To address the heterogeneity of the Hispanic population, investigators should focus on specific ethnic groups (Mexican-Americans, Cuban-Americans, Puerto Ricans, etc.), since regional variations in the extent of Indian, African, or European influences and differences in the social and historical realities of these groups can determine the way in which schizophrenia is experienced. Regional comparisons within a group (rural versus urban, southern Texas versus southern California, etc.) could be attempted. Further, comparisons of Hispanic patients with their counterparts in other ethnic groups within a limited geographic area could also yield important results that could be used to extend the conclusions of the IPSS and DOSMD studies.

   Investigators need to evaluate how the process of cultural change influences the illness experience. As a first step toward achieving this goal, the concepts and operationalizations of acculturation should be refined. It is important to develop instruments that are inclusive enough to assess a wide array of cultural elements (values, behaviors, attitudes). At the same time, instruments should be succinct to allow efficient research applications. A possible approach could be to design an instrument in which investigators can select the number and nature of the cultural elements to be included on the basis of the problem under study. For example, some investigators may be interested in pursuing a detailed description of the cultural characteristics of a specific group. In this case, the assessment instrument should be as inclusive as possible. On the other hand, other investigators may be interested in evaluating the relationship between acculturation and compliance. In this case, the focus could be on the specific values (e.g., fatalism, religiosity) that the investigator conceptually identified as influential for the behavior under study.

   Finally, given that education and socioeconomic status can influence attitudes, values, and behaviors, investigators need to evaluate the variation of these cultural elements across social strata within the same ethnic group.

   Socioeconomic status and education levels should also be considered when illness process is compared across ethnic groups. Diverse approaches can be used (e.g., matching, stratification) in the study design and data analyses to help separate the influences of socioeconomic status and education from the influence of culture. However, these approaches are only partially helpful. For example, belonging to a specific social class or achieving a certain educational level may have very different implications across ethnic groups. To address some of these biases, investigators have proposed the use of "culture-neutral" measures as covariates. However, there is little agreement on how to define these measures.

2. **Validation of assessment instruments across ethnic groups.** The applicability of commonly used instruments to subjects from different cultural backgrounds needs to be examined. In general, investigators have addressed this issue by restricting their samples to English-speaking subjects, limiting the generalizability of results to other segments of the population. Recently, steps have been undertaken to develop methodologically sound translations, although few instruments have actually undergone this process (Bravo et al. 1991). In fact, little attention has been directed at regional language variations (i.e., local idioms, bilingual flexibility). Furthermore, the psychometric properties of the translated instruments have rarely been evaluated. To address this issue, investigators have to examine the internal consistency of instruments.
as well as the distribution of scores in the population.

As a complement to these validation studies, it would be important to evaluate the effects of the ethnic and cultural match between interviewer and interviewee on expression and perception of psychosis.

3. Use of innovative approaches to assess the incidence and prevalence of illness in the various Hispanic groups and regions. For example, the incidence and prevalence rates of schizophrenia could be initially examined by using a single set of diagnostic criteria. Subsequently, the effects on incidence and prevalence rates under broader and narrower definitions of schizophrenia in different ethnic cultural groups could be assessed.

4. Incorporation of a qualitative approach to research methodology. Although the strategies discussed above represent important steps, the applicability of the constructs under study to cultural groups other than non-Hispanic whites remains elusive. Determining that applicability is a difficult process that implies the identification of universal versus group-specific concepts and requires using qualitative analyses. A qualitative research approach focuses more on understanding the subject's perspective (emic) than on understanding the investigators' perspective (etic). Investigators, in turn, function primarily as witnesses to minimize artificial influences on the data collection process. This approach allows the identification of indigenous categories, semantic expressions, attitudes, values, and norms. A qualitative analytic approach is also useful for theory building, since it can provide information to identify potentially important variables, point to possible causal networks, and generate hypotheses (Strauss and Corbin 1990). Likewise, since process is essential for this research strategy, a qualitative approach offers a good opportunity to investigate dynamic processes such as decisionmaking, interactions with health care providers, and so on (Marshall and Rossman 1989).

Many investigators have been reluctant to apply a qualitative approach because of concerns with generalizability, subjectivity, and validity. Recent work has addressed these concerns, providing a systematic methodology for using these techniques (Eisenhart and Howe 1992; Denzin and Lincoln 1994).

5. Use of specific illness behavior models (Suchman 1972). The use of specific models can benefit researchers by providing them with a conceptual paradigm to better understand the illness as a process. Through the use of a general model, investigators can conceptualize schizophrenia at various stages. For example, following the Suchman model, studies can focus on the prepatient phase or on the patient phase. The former includes the study of areas such as problem onset, recognition and identification, and response (lay consultation, lay referral, self-medication). The patient phase comprises the study of the patient-practitioner encounter and relationship, treatment compliance, and rehabilitation.

Investigators can focus on specific aspects of the model, or they can apply longitudinal research strategies to assess the unfolding of the illness process through the various phases, to identify help-seeking pathways (Rogler and Cortes 1993) as well as to delineate the relationships among phenomenology, context (e.g., culture, family, socioeconomic factors), and course (prepatient and patient phases). A longitudinal approach can also be applied to the study of ethnic/cultural differences in treatment careers in which the assessment of use patterns across the whole array of services (e.g., day hospital, case management, outpatient clinic, emergency room, substance abuse) could be included.

6. Integration of cross-cultural and biological studies. Biological measures (plasma/cerebrospinal fluid, 3-methoxy-4-hydroxyphenylglycol [MHPG], homovanillic acid [HVA]) and new, advanced diagnostic techniques such as positron emission tomography scanning should be applied to cross-cultural studies for better insight into the biological substratum of the illness. For example, studies could evaluate the relationship between phenomenology and specific biological measures across ethnic groups. In doing so, investigators could start comprehending whether ethnic differences are the result of cultural or biological variations.

Research on the relationship between schizophrenia and culture should not be understood as the result of an ethnocentric interest of few investigators and as a product with limited practical applications. The growing number of culturally diverse patients demands an understanding of cultural influences if diagnosis and treatment are to be optimized.

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