THE CULTURALLY-SENSITIVE DIAGNOSTIC INTERVIEW RESEARCH PROJECT: A STUDY ON THE PSYCHIATRIC MISDIAGNOSIS OF AFRICAN AMERICAN PATIENTS

Arthur L. Whaley, Department of Social Psychiatry, NYS Psychiatric Institute; Department of Community Health and Social Medicine, City University of New York Medical School

INTRODUCTION

Numerous investigators have found that schizophrenia is overdiagnosed and affective disorder underdiagnosed in black patients (Snowden & Cheung, 1990; Trierweiler et al., 2000). Several African American mental health professionals assert that cultural aspects of paranoia, associated with a history of racism and oppression in American society, must be distinguished from pathology (Grier & Cobbs, 1968; Ridley, 1984; Whaley, 1997, 1998b). They contend further that this "cultural paranoia" being misinterpreted as pathological delusions is one cause of the psychiatric misdiagnosis of black patients. Although cultural bias has been touted as a reason for the misdiagnosis of black patients, no previous attempt had been made to empirically test this hypothesis. The construct of "cultural mistrust," i.e., blacks' mistrust of whites in various interracial situations, is a proxy for what has been described by some as cultural paranoia (Terrell & Terrell, 1981). Using the concept of cultural mistrust, the Culturally-Sensitive Diagnostic Interview Research Project (CSDIRP) is, to my knowledge, the first study to examine the notion that cultural bias is responsible for errors in the psychiatric diagnosis of African Americans. This article is a report on the CSDIRP and a summary of its research findings.

PROJECT OVERVIEW

The CSDIRP was conducted in two phases. The first phase of the project was conducted with funding of a Young Investigator Award from the National Alliance for Research on Schizophrenia and Depression. This first phase of the project involved the secondary analysis of data from a case-control study of schizophrenia and depression. The main goals of Phase I research were to test the feasibility of defining a continuum of paranoia using the scales of Distrust (DST), Perceived Hostility of Others (PHO), and False Beliefs and Perceptions (FBP) taken from the Psychiatric Epidemiology Research Interview (PERI; Dohrenwend, Shrout, Egri & Mendelsohn, 1980); and to explore the hypothesis that sociocultural differences in paranoid symptom expression exist when biases due to clinicians' lack of adherence to diagnostic criteria are taken into account by using research diagnoses. The sample included 404

community respondents, 96 cases of depression, and 65 cases of nonaffective psychosis (mainly DSM III schizophrenia) of blacks, Latinos, and whites. The details of this research have been published (Whaley, 1997, 1999).

The second phase of the CSDIRP was a NIMH-funded study involving primary data collection from a sample of African American psychiatric patients. This study involved the use of the Cultural Mistrust Inventory (CMI; Terrell & Terrell, 1981) as a culturally-specific measure of trust related to interracial attitudes among African Americans. The CMI is a measure of blacks' mistrust of whites in the domains of business/work, education/training, interpersonal relations, and politics/law. For the phase II study, the CSDIRP employed a multi-stage procedure to obtain culturally-sensitive diagnoses: 1) a screening interview including the CMI to assess cultural mistrust and other self-report measures followed by a chart review to obtain the intake diagnoses; 2) the Structured Clinical Interview for DSM IV (SCID) administered by master's level psychologists; and 3) best estimate diagnoses by African American mental health professionals, based on protocols derived from the data of the screening and SCID interviews.

TARGET SAMPLE AND COMPLETION RATE

The goal of the CSDIRP with respect to sampling for the Phase II study was to interview 180 African American psychiatric patients. The total sample of participants screened consisted of 182 patients. However, all patients screened did not participate in the last two stages of the study. There was also two subsamples: the pilot study sample (N = 22) and main study sample (N = 154). The subsequent description of the sample is broken down accordingly. Thus, 176 of the 182 (96.7%) patients recruited had provided sufficient screening data to be included in the study sample.

Pilot Study

Twenty-two black psychiatric patients were successfully recruited from outpatient and day treatment programs affiliated with a New York City hospital for the pilot study. The pilot study sample consisted of 13 males and 9 females. Participants ranged in age from 24 to 58 (M = 42.37, SD = 8.58). Half of the sample were high school graduates and their mean years of education was 10.76 (SD = 1.51). Reviews of patients' charts revealed that the predominant diagnosis was schizophrenia (68%), followed by diagnosis unspecified (18%), and then affective disorder (14%). They were hospitalized an average of 18.95 (SD = 33.76) times in the past. Although not systematically kept, the participation rate for the screening interview is estimated to be greater than 80% for the pilot study.

Main Study

During the study period, 655 patients were triaged in the upstate New York psychiatric hospital targeted and 53% (N = 349) were persons of African descent. Of the black patients who came through the triage unit, only 81.7% (N = 285) were available for participation in the study. Only 218 (76.5%) of the 285 patients met the eligibility criteria, while 12.6% (N = 36) were ineligible and 10.9% (N = 31) were discharged before being interviewed. The distribution of participation for the 218 eligible patients was 141 agreed (64.7%), 56 refused (25.7%), 14 positive conversions (6.4%), and seven negative conversions (3.2%). Conversions were people who initially agreed or refused then changed their mind and refused (negative) or agreed (positive), respectively. Based on the pool of eligible participants, the overall participation rate for the screening interview was 71.1%.

The final inpatient sample consisted of 154 eligible participants. The sample consisted of 116 males (75%) and 38 females (25%). The average age for participants was 38.88 (SD = 9.89). The distribution by marital status was: 99 (64%) never married; ten (7%) married; 25 (16%) divorced, separated, or widowed; and 20 (13%) missing data. Approximately one out of three (36%) or 55 participants were brought to the hospital by the police. Eighty-five (55%) of the participants were new admissions to this hospital and 69 (45%) were readmissions. The legal admission statuses crudely categorized were 17 (11%) voluntary admissions and 137 (89%) involuntary admissions. The sample breakdown by DSM IV intake diagnoses was 87 (56%) schizophrenic disorders, 37 (24%) schizoaffective disorders, 10 (6%) bipolar disorders, six (4%) major depressive disorders, three (2%) psychotic disorder NOS, four (3%) substance-related disorders, and seven (5%) no diagnosis given.

AIMS OF THE PROJECT

The original aims of the CSDIRP were as follows: 1) to see if cultural mistrust is related to more frequent diagnoses of schizophrenia versus depression in black patients; 2) to determine whether level of paranoia, both general and culture-specific, predict diagnoses of depression and schizophrenia differently in black patients as a function of whether structured versus unstructured diagnostic procedures are used; and 3) to determine whether the relationship between cultural mistrust and self-esteem is stronger in black patients with a diagnosis of depression than those with schizophrenia when diagnostic error is controlled by structured clinical interview and more culturally-sensitive procedures.

The above aims were predicated on the assumption that the sample would be evenly split between patients diagnosed with schizophrenia and depressive disorders. The proportion of participants with diagnoses of affective disorder broadly defined (i.e.,

including bipolar disorder) was less than 10% for chart diagnoses and about 13% for SCID diagnoses. The percentages are substantially less when major depression is considered alone. The overdiagnosis of schizophrenia became the principal focus of the study given the inadequate sample size to address the aims in relation to the underdiagnosis of depression. The first two aims of the study had to be modified and the third eliminated because of these methodological constraints. It was hypothesized that: 1) schizophrenia would be overdiagnosed, defined as a chart diagnosis of schizophrenia and a research diagnosis of some other disorder, in this African American sample; and 2) scores on the CMI would be positively correlated with the percentage of cases overdiagnosed.

SUMMARY OF RESULTS

Phase I

The approach involved a case-control study of the black and white subsamples (Whaley, 1997). Logistic regression analyses were conducted with depression and schizophrenia-like disorders (0 = control, 1 = case) as separate outcomes and the PERI paranoia scales, ethnicity/race, and their interaction as the predictors adjusting for sociodemographics and social desirability. Community respondents served as controls for both patient groups. The findings suggested decreasing ethnic/racial or sociocultural differences and increasing psychopathology along with movement from the scales of DST to PHO to FBP. Specifically, the scale of DST was associated with a diagnosis of depression in African Americans; the scale of PHO was associated with diagnoses of both depression and schizophrenia regardless of ethnicity/race; and the scale of FBP was associated with a diagnosis of schizophrenia regardless of ethnicity/race.

These analyses lend support to the sociocultural hypothesis regarding the possible misdiagnosis of African Americans, because ethnic/racial differences were apparent even though research diagnoses were used. Moreover, the results suggest that mistrust among African Americans is more likely to reflect an underlying depression instead of schizophrenia (Whaley, 1997). These findings are consistent with the research literature showing an underdiagnosis of depression and an overdiagnosis of schizophrenia in black patients, if one accepts the premise that clinicians misinterpret mild, nonclinical symptoms of paranoia like distrust as psychosis. A second study (Whaley, 1999) used multidimensional scaling and cluster analysis to determine whether paranoia, as reflected by the scales of DST, PHO, and FBP form a distinct dimension of psychopathology apart from the other PERI symptom scales. The PERI paranoia scales did not form a unique dimension. The scales of DST and PHO clustered with symptoms of distress, and the FBP with symptoms of severe psychopathology, again confirming the continuum of paranoia.

Phase II

Pilot Study. Twenty-two black psychiatric patients were successfully recruited from outpatient and day treatment programs affiliated with a New York City hospital for the pilot study (Whaley, 1998a, 1998b). The pilot study dealt exclusively with methodological issues, namely the psychometric properties of the CMI and patients' reaction to the instrument. Internal consistency reliability analyses revealed that the CMI is highly reliable in this sample of psychiatric patients with an alpha = .86 for the total scale score (Whaley, 1998b). Data was systematically collected on the participants' reaction to the administration of the CMI. Two experienced doctoral level psychologists rated patients' verbatim responses to queries about their reactions to the CMI in terms of valence (positive, neutral, or negative) and affectivity (yes or no). Agreement between the two raters in terms of the valence of patients' reactions was very good: $6 = .71$, $p < .0001$. In contrast, interrater agreement for ratings of affectivity was poor: $6 = .36$, $p = ns$.

More than half (57%) of the responses were positive and only 5% were negative with the remaining being neutral (24%) or disagreeing (14%). Also, a little more than half (52%) of the patients did not react emotionally to the CMI and 19% did with the other 29% of responses being assigned both positive and negative valences by the different raters. I (Whaley, 1998a) concluded from these findings that black psychiatric patients' reactions to the CMI are likely to be positive most of the time, and that negative emotional reactions to the CMI are highly unlikely. Moreover, these findings demonstrate that the cultural reality of the patients was quite the opposite of the Committee's expectation that the content of the CMI would exacerbate symptoms of psychopathology. Clinicians who do not share the same cultural reality as black patients are also likely to misjudge attitudes and behaviors associated with the content of the CMI. This was the principal hypothesis underlying the main study.

Main Study. The overdiagnosis of schizophrenia was the principal focus of the study. It was hypothesized that: 1) schizophrenia would be overdiagnosed in this African American sample; and 2) scores on the CMI would be positively correlated with the percentage of overdiagnosed cases. First, the psychometric study was replicated and extended with the larger inpatient sample (Whaley, in press – c). The CMI was highly reliable, especially the total scale score (alpha = .85), and the poorest reliability was on the interpersonal relations subscale score. The scales of DST, PHO, and FBP from the PERI were used as measures of mild, moderate, and severe forms of paranoia, respectively. The CMI was significantly correlated with the scale of DST but not with PHO or FBP. This was evidence of discriminant validity. These findings support the conceptualization of the CMI as measure of paranoia at the mild end of the continuum. They also underscore the distinction between cultural aspects of paranoia and psychopathology made by a number of African American mental health profes-

sionals.

The overdiagnosis of schizophrenia hypothesis was tested in another study (Whaley, in press – b). Overdiagnosis was defined as a chart diagnosis of schizophrenia, which were based derived from standard clinical interviews, and a diagnosis of some other disorder according to research diagnoses. The distribution of diagnoses of schizophrenia in the sample of 118 participants were 61 cases (52%) by clinical diagnosis, 46 cases (39%) by SCID diagnosis, and 45 cases (38%) by best estimate diagnosis, $X^2_{(2)} = 5.56$, $p < .05$. The distribution of diagnoses of paranoid schizophrenia was 30 (25%) by clinical diagnosis, 19 (17%) by SCID diagnosis, and 20 (16%) by best estimate diagnosis, $X^2_{(2)} = 4.00$, $p < .07$. The distribution of diagnoses of paranoid schizophrenia in the schizophrenic subsample were 30 (49%) cases by clinical diagnoses, 11 (18%) cases by SCID diagnoses, and 11 (18%) cases by best estimate diagnoses, $X^2_{(2)} = 19.40$, $p < .0001$. Consistent with hypotheses, there was an overdiagnosis of schizophrenia in general, and paranoid schizophrenia in particular, during standard psychiatric admissions. Agreement among the three different sources of diagnoses was poor in all comparisons, except the SCID and best estimate diagnoses of the broad category of schizophrenia which showed good agreement.

High scores on the measures of distrust and social desirability increased the chances of a chart diagnosis of paranoid schizophrenia relative to the SCID. Comorbid substance abuse, on the other hand, decreased the chances of a chart diagnosis of paranoid schizophrenia. The results of the current project are consistent with the literature in showing the overdiagnosis of schizophrenia, especially the paranoid subtype, in African Americans. However, contrary to expectations, the theoretical explanation that the overdiagnoses of schizophrenia during standard admission psychiatric interviews can be explained by the misdiagnosis of patients with high levels of cultural mistrust was not supported. Unexpectedly, best estimate diagnoses of paranoid schizophrenia, compared with SCID diagnoses, had a greater chance of occurring with a unit increase in cultural mistrust scores.

Cultural bias in the form of overdiagnosis is an unlikely explanation for the positive correlation between cultural mistrust and best estimate diagnoses of paranoid schizophrenia. I would argue that best estimate diagnosticians, because of their cultural expertise, were better able to arrive at the appropriate diagnoses for patients with confluent paranoia. Ridley (1984) proposed a typology based on pathological paranoia and cultural paranoia as two orthogonal dimensions with individuals high on both dimensions exhibiting "confluent paranoia." Clinicians who treat cases of confluent paranoia must possess both working knowledge of the culture and the clinical skills to accurately judge the relative contributions of culture and pathology to paranoid symptom expression. The best estimate diagnosticians are more likely to have such a combination of cultural knowledge and clinical skills. A reliability

check on the culturally-sensitive diagnostic procedure indicated that best estimate clinicians' ratings of cultural mistrust agreed more with patients' self-reports than SCID interviewers' ratings (Whaley, 2001b). The finding that elevated cultural mistrust shows an association to diagnoses of paranoid schizophrenia by the best estimate method is still consistent with the cultural bias perspective.

Other Studies. The hypothesis that SCID interviewers were unable to recognize confluent paranoia in African American patients was tested via a secondary analysis of the data from the CSDIRP (Whaley, 2001c). Consistent with the hypothesis, SCID interviewers underestimated the level of cultural mistrust among patients with confluent paranoia. Using the data from the CSDIRP, another study examined African American patients' attitudes toward white mental health clinicians as a function of their level of self-reported and clinician-rated cultural mistrust (Whaley, 2001d). Specifically, it tested the hypothesis that patients with high levels of cultural mistrust will report more negative attitudes toward white mental health clinicians. Scores on both the self-report and clinician-rated measures of cultural mistrust were positively correlated with measures of negative attitudes toward white mental health clinicians. These findings are consistent with the view of this cultural mistrust as a potential cause of the psychiatric misdiagnosis of African Americans (Grier & Cobbs, 1968; Ridley, 1984; Whaley, 1997, 1998b). The fact that cultural mistrust may influence severely mentally ill African Americans' attitudes toward clinicians also suggests that sensitivity to these cultural beliefs are necessary to keep them in proper context and to avoid diagnostic or treatment errors. I (Whaley, 1998c; Whaley, in press – a) recommend several strategies from a cognitive perspective to facilitate the training of clinicians to improve the diagnosis and treatment of African Americans.

Supplementary data collected during the second phase of the CSDIRP has also allowed for tests of hypotheses relevant to psychiatric research on African Americans but not central to the project. The signs and symptoms of psychopathology recorded in the charts by admitting psychiatrists were subjected to cluster analysis to determine whether schizoaffective disorder overlaps more with schizophrenia or affective disorder (Whaley, 2001h). Some researchers follow the DSM IV criteria and place cases of schizoaffective disorder in the schizophrenia category (Trierweiler et al., 2000), while others exclude these cases from the schizophrenia category (Whaley, in press – b). Given that the issue of misdiagnosis of African Americans involve the underdiagnosis of depression as well, it would be important to determine how schizoaffective disorder patients should be classified. Schizoaffective disorder cases overlapped 41% with affective disorder cases and 71% with cases of schizophrenia thereby supporting the DSM IV classification.

Residential status was systematically recorded because of the large number of patients (89%) being admitted who had an immediate history of homelessness. Al-

though being African American and having a history of mental illness have been found independently to be associated with greater likelihood of homelessness, no research has focused on the subgroup of African American mentally ill patients. Four factors were positively correlated with an immediate history of homelessness in this sample: being married, the presence of comorbid substance abuse, high levels of severe paranoia, and high self-esteem (Whaley, 2001f). Moreover, when these factors were used to develop risk groups, there was a positive dose-response relationship between the number of risk indicators and percent of cases of homelessness. I (Whaley, 2001g) also examined predictors of patients' racial self-labeling (African American, Black, Negro, or Other) to determine whether particular labels were associated with more symptomatology. There is a school of thought among some African American clinicians that the choice of "African American" reflects greater political consciousness and better mental health. Consistent with past research, the label "black" was the most popular followed by "African American." There was some evidence to support the assumption that individuals' choice of "African American" is correlated with better mental health.

Finally, I conducted a meta-analysis of the literature on culture mistrust comparing studies of mental health to studies of other psychosocial domains (Whaley, 2001d). The main substantive issue was whether or not cultural mistrust is manifested similarly in the mental health context and under other circumstances. The effect sizes for cultural mistrust in studies of mental health services were not significantly different from those in studies of other psychosocial domains. This finding is consistent with the assumption that the influence of African Americans' cultural mistrust on their attitudes and behaviors in the mental health treatment context is no different from the role of cultural mistrust in their responses to other social situations (Maultsby, 1982; Ridley, 1984). This is further evidence that mental health service providers need to be sensitive to cultural issues to ensure that their interventions with African Americans are appropriate. A first step toward mental health clinicians becoming more sensitive is to identify areas where there may be cultural biases that cause them to provide inappropriate diagnoses and treatment. The goal of the CSDIRP was to contribute to that effort.

CONCLUSION

The CSDIRP was designed to examine cultural biases in the psychiatric diagnoses of African American patients. The project has gone beyond its original goals to answer other questions about members of the black community who are being treated for severe mental illness. It is clear that many of the assumptions about cultural mistrust in the larger black community are applicable to persons with chronic mental illness. Future research can go in two directions: 1) culturally-relevant case-control studies should be done with patient and controls from similar segments of the black commu-

nity; and 2) studies of cultural bias in the psychiatric diagnosis of African Americans should examine treatment implications. Such research may lead to a better understanding that can enhance the delivery of mental health services for African Americans.

References

Dohrenwend, B. P., Shrout, P., Egri, G. & Mendelsohn, F. S. (1980). Measures of nonspecific psychological distress and other dimensions of psychopathology in the general population. Archives of General Psychiatry, 37, 1229-1236.

Grier, W. H. & Cobbs, P. M. (1968). Black rage. New York: Basic Books.

Maultsby, M. C., Jr. (1982). A historical view of blacks' distrust of psychiatry. In S. M. Turner & R. T. Jones (Eds.), Behavior modification in black populations (pp. 39-55). New York: Plenum.

Ridley, C. R. (1984). Clinical treatment of the nondisclosing black client: A therapeutic paradox. American Psychologist, 39, 1234-1244.

Snowden, L. R. & Cheung, F. K. (1990). Use of inpatient mental health services by members of ethnic minority groups. American Psychologist, 45, 347-355.

Terrell, F. & Terrell, S. L. (1981). An inventory to measure cultural mistrust among blacks. Western Journal of Black Studies, 5, 180-184.

Trierweiler, S. J., Neighbors, H. W., Munday, C., Thompson, E. E., Binion, V. J. & Gomez, J. P. (2000). Clinician attributions associated with the diagnosis of schizophrenia in African American and non-African American patients. Journal of Consulting and Clinical Psychology, 68, 171-175.

Whaley, A. L. (1997). Ethnicity/race, paranoia, and psychiatric diagnoses: Clinician bias versus sociocultural differences. Journal of Psychopathology and Behavioral Assessment, 19, 1-20.

Whaley, A. L. (1998). Black psychiatric patients' reaction to the Cultural Mistrust Inventory. Journal of the National Medical Association, 90, 676-678. (a)

Whaley, A. L. (1998). Cross-cultural perspective on paranoia: A focus on the black American experience. Psychiatric Quarterly, 69, 325-343. (b)

Whaley, A. L. (1998). Racism in the provision of mental health services: A social-

cognitive analysis. American Journal of Orthopsychiatry, 68, 47-57. (c)

Whaley, A. L. (1999). Multidimensional scaling analysis of paranoid symptoms in the context of depressive and psychotic disorders. British Journal of Medical Psychology, 72, 33-49.

Whaley, A. L. (2001). A note on the psychometric properties of the Cultural Mistrust Inventory. Manuscript under editorial review. (a)

Whaley, A. L. (2001). A two-stage method for the study of cultural bias in the diagnosis of schizophrenia in African Americans. Manuscript under editorial review. (b)

Whaley, A. L. (2001). Confluent paranoia in African American psychiatric patients: Empirical study of Ridley's typology. Manuscript under editorial review. (c)

Whaley, A. L. (2001). Cultural mistrust and mental health services for African Americans: A review and meta-analysis. The Counseling Psychologist, 29, 513-531. (d)

Whaley, A. L. (2001). Cultural mistrust of white mental health clinicians among African Americans with severe mental illness. American Journal of Orthopsychiatry, 71, 252-256. (e)

Whaley, A. L. (2001). Demographic and clinical correlates of homelessness in African Americans with severe mental illness. Manuscript under editorial review. (f)

Whaley, A. L. (2001). Racial self-designation and disorder in African American psychiatric patients. Manuscript in preparation. (g)

Whaley, A. L. (2001). Symptom clusters in the diagnosis of affective disorder, schizoaffective disorder, and schizophrenia in African Americans. Manuscript submitted for publication. (h)

Whaley, A. L. (in press). Cultural mistrust: An important psychological construct for diagnosis and treatment of African Americans. Professional Psychology. (a)

Whaley, A. L. (in press). Cultural mistrust and clinical diagnosis of paranoid schizophrenia in African American patients. Journal of Psychopathology and Behavioral Assessment. (b)

Whaley, A. L. (in press). Psychometric analysis of the Cultural Mistrust Inventory with a black psychiatric inpatient sample. Journal of Clinical Psychology. (c)