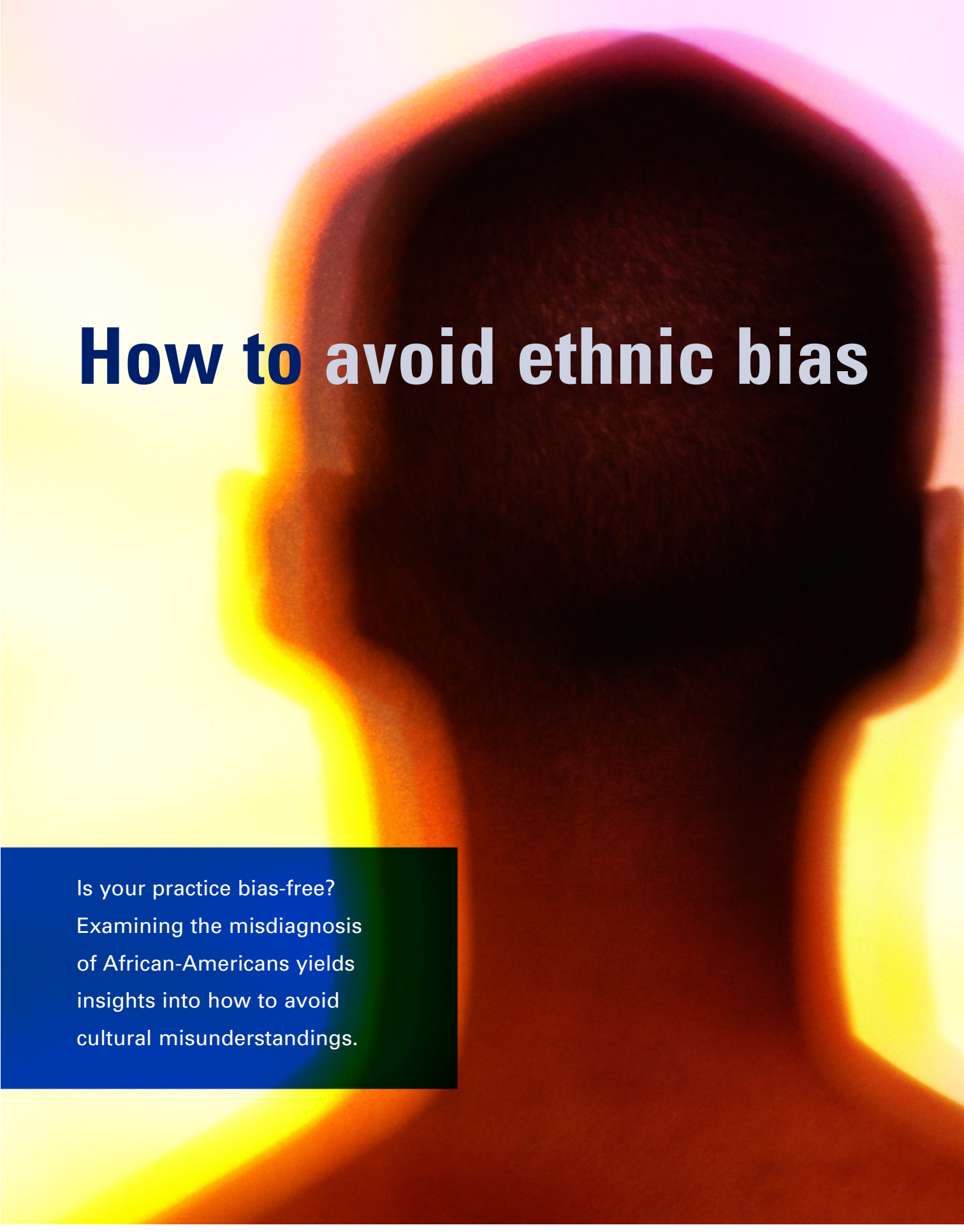

How to avoid ethnic bias

Is your practice bias-free? Examining the misdiagnosis of African-Americans yields insights into how to avoid cultural misunderstandings.

Current PSYCHIATRY

when diagnosing schizophrenia

Stephen M. Strakowski, MD
Professor of psychiatry, psychology, neuroscience and biomedical engineering
Department of psychiatry
University of Cincinnati College of Medicine
Cincinnati, OH

In patients with psychotic symptoms, why are African-Americans more likely than whites to be diagnosed with schizophrenia? After more than 30 years of debate, some answers—and remedies for the problem—are becoming clear.

In psychiatry, where interpersonal interactions are key to eliciting diagnostic symptoms and signs, there is an intrinsic risk of misinterpretation when clinician and patient are of different cultural, ethnic, or socioeconomic backgrounds. This article analyzes four factors that contribute to misinterpretation and to ethnic misdiagnosis of schizophrenia. Culturally sensitive strategies are offered to avoid diagnostic bias in clinical practice.

SCHIZOPHRENIA MISDIAGNOSIS

Large epidemiologic studies report similar rates of schizophrenia and bipolar disorder in African-American and white populations.[1] Although patients of both races have been wrongly diagnosed with schizophrenia, the pattern is stronger and more persistent in African-Americans.

continued

Box 1

Diagnostic criteria for schizophrenia: Characteristic symptoms (Criterion A)

Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated):

- Delusions
- Hallucinations
- Disorganized speech (eg, frequent derailment or incoherence)
- Grossly disorganized or catatonic behavior
- Negative symptoms (ie, affective flattening, alogia, or avolition)

Note: Only one Criterion A symptom is required if delusions are bizarre or hallucinations consist of a voice keeping up a running commentary on the person's behavior or thoughts, or two or more voices conversing with each other.

295.30 Paranoid type

A type of schizophrenia in which the following criteria are met:

A. Preoccupation with one or more delusions or frequent auditory hallucinations

B. None of the following is prominent: disorganized speech, disorganized or catatonic behavior, or flat or inappropriate affect.

Source: DSM-IV-TR

In the 1970s, Simon et al[2] studied 192 hospitalized patients, of whom all African-Americans and 85% of whites had been identified clinically as having schizophrenia. Using a structured interview, the researchers found that only 40% of the African Americans and 50% of the whites met diagnostic criteria for schizophrenia. African-Americans with mood disorders were found to be at particular risk of schizophrenia misdiagnosis.

In the 1980s, among 76 patients with a clinical diagnosis of schizophrenia, Mukherjee et al[3] diagnosed one-half (52%) with bipolar disorder using a structured clinical interview. Schizophrenia misdiagnoses were more common in African-Americans (86%) and Hispanics (83%) than in whites (51%). In particular, African-Americans were most likely to be misdiagnosed with paranoid schizophrenia. African-Americans complained more commonly than whites of auditory hallucinations, which may represent an ethnic difference in symptomatic presentation of psychotic mood disorders.

In the 1990s, colleagues and I conducted two studies—one of 173 patients in a Tennessee psychiatric hospital[4] and the other of 490 patients in an Ohio psychiatric emergency service[5]—and found yet again that African-Americans were more likely than whites to be diagnosed with schizophrenia. In the hospital study, higher rates of schizophrenia diagnosis were associated with lower rates of mood disorder diagnosis. This inverse relationship implied that African-Americans with mood disorders were being misdiagnosed with schizophrenia.

Men were more likely than women to be diagnosed with schizophrenia, suggesting that African-American men were most likely to be misdiagnosed. When adjustments were made for gender, black women were found to be at higher risk for misdiagnosis than white women.

African-Americans with mood disorders were being misdiagnosed with schizophrenia

Lawson et al[6] extended this research in a population-based study of African-Americans living in Tennessee. They found that African-Americans constituted 16% of the state's population but 48% of psychiatric inpatients diagnosed with schizophrenia and 37% of psychiatric outpatients.

CONSEQUENCES OF INACCURATE DIAGNOSIS

Differentiating between schizophrenia (*Box 1*) and a psychotic mood disorder (*Box 2*) is more than a semantic exercise. Schizophrenia implies a chronic, unremitting, debilitating illness that worsens over time. Though this perception of schizophrenia is not entirely accurate, in clinical practice its diagnosis imparts a bleak prognosis that may lower the clinician's expectations for the patient.[7]

Schizophrenia misdiagnosis also may lead the psychiatrist to rely excessively on antipsychotics, rather than attempting thymoleptic and psychotherapy trials. Studies suggest that African-American patients are more likely than similar white patients to receive antipsychotics[4,8,9] and less likely to receive psychotherapy.[5,10]

Reasons why African-Americans are often misdiagnosed with schizophrenia remain unclear but probably include four contributing factors:

- differences in symptom presentation compared with whites
- failure by clinicians to identify affective symptoms in African-Americans
- minority patients' wariness when dealing with health services
- and racial stereotyping.

Box 2

Major depressive episode with psychotic features: Characteristic symptoms

MAJOR DEPRESSIVE EPISODE

Five or more of the following symptoms present during the same 2-week period and representing a change from previous functioning; must include either depressed mood or loss of interest or pleasure.

- Depressed mood
- Markedly diminished interest or pleasure
- Significant weight loss
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue
- Feelings of worthlessness or excessive guilt
- Diminished ability to concentrate

SEVERE MAJOR DEPRESSION WITH PSYCHOTIC FEATURES

Mood-congruent

Delusions or hallucinations whose content is entirely consistent with the typical depressive themes of personal inadequacy, guilt, disease, death, nihilism, or deserved punishment

Mood-incongruent

Delusions or hallucinations whose content does not involve typical depressive themes. Includes symptoms such as persecutory delusions, thought insertion, thought broadcasting, and delusions of control

Source: DSM-IV-TR

DIFFERENCES IN SYMPTOM EXPRESSION

African-American patients with mood disorders or schizophrenia are more likely than are similar white patients to complain of auditory hallucinations.[11-13] For example, Strakowski et al[14] examined 330 patients with nonaffective and psychotic diagnoses in a study that was used to develop DSM-IV criteria for schizophrenia. Auditory hallucinations were rated as more severe in African-American than in similar white patients.

African-American patients also are more likely than whites to exhibit so-called Schneiderian first-rank symptoms of schizophrenia,[15] including:

- delusions of thought broadcasting or insertion
- auditory hallucinations of voices conversing about the patient in the third person.

These symptoms were once used to diagnose schizophrenia, but their lack of specificity has been well documented.[2,16] First-rank symptoms of schizophrenia depend on the specific form of the

hallucination or delusion, are likely to be influenced by a patient's culture, and may be misleading in multicultural populations. Though first-rank symptoms now occupy a minor role in U.S. diagnostic systems, they might continue to sway clinicians—even when using structured diagnostic interviews—to inappropriately diagnose schizophrenia in lieu of affective disorders in minority patients.[15]

To extend this finding, our group[16] studied rates and severity of affective and psychotic symptoms—particularly first-rank symptoms—in 100 patients with psychotic mania who met DSM-III-R criteria for bipolar disorder (80%) or schizoaffective disorder, bipolar type (20%) as determined by structured diagnostic interview. No differences in affective symptoms between African-American and white patients were seen. African-Americans were more likely to endorse auditory hallucinations and to report severe auditory hallucinations of voices commenting on their behavior—the only first-rank symptom on which they differed from whites.

Though their affective symptoms were similar, African-Americans were significantly more likely than whites to have been diagnosed with a schizophrenia-spectrum disorder. Because misdiagnosis of African-Americans could not be explained by psychotic symptoms—which were as severe as those of white patients—these findings suggest other mechanisms were at work.

UNIDENTIFIED AFFECTIVE SYMPTOMS

Underidentification of mood disorders in African-American patients may also lead to overdiagnosis of schizophrenia. In a sample of 99 patients, colleagues and I[17] compared clinical diagnoses made in a psychiatric emergency service with those by research investigators using a structured clinical interview. Reasons for diagnostic differences were identified and divided into two categories:

- the same symptoms were recorded but applied differently to diagnostic criteria (criterion variance)
- different information was recorded, which led to diagnostic discrepancies (information variance).

Differences occurred significantly more often in African-American than in white patients, but only information variance was associated with ethnicity. This suggests that clinicians are less likely to elicit appropriate information from African-American than from white psychiatric patients. The fact that researchers obtained this information during diagnostic interviews suggests that the patients could provide it when given appropriate prompts. Specifically, affective symptoms were less likely to be elicited by clinicians than by researchers.

Clinicians have tended not to identify affective symptoms in African-Americans

PATIENT WARINESS

Minority patients, when interacting with clinicians of the majority population, may project "protective wariness."[18] Specific behaviors include hesitancy or reluctance to fully engage with the care provider as a precaution against being exploited or harmed. Cultural misunderstandings[19] and patient concerns about past reports of minorities receiving substandard or unethical health care[20] may contribute to this behavior.

Whaley[21] compared nonpathologic distrust and paranoia in 404 community-living African-Americans and whites. Some were healthy, and some had diagnoses of schizophrenia or depression. African-Americans—particularly those with psychiatric disorders—showed higher levels of distrust than whites. Distrust was also associated with depression in African-Americans but not in whites. Whaley concluded that:

- depressed African-Americans may exhib-

Table

Remedial actions to avoid ethnic bias in diagnosing schizophrenia

Problem	Remedies
Failure to recognize differences in symptom expression	Become familiar with ethnic differences in how patients describe symptoms Incorporate structured interviews or rating scales into the clinical assessment
Failure to elicit affective symptoms	Incorporate structured interviews or rating scales into the clinical assessment Maintain a high index of suspicion for affective symptoms (see *Box* 2)
Misinterpreted protective wariness	Clarify the patient's degree of suspicion; consider this in the historical context of abuses toward minorities by majority populations Become familiar with ethnic differences in how symptoms are described
Covert and overt stereotyping and cultural insensitivity	Review practice patterns Consult with culturally sensitive clinicians as necessary

it more distrust toward clinicians than do whites

- this distrust puts African-Americans at risk of being perceived as paranoid and being misdiagnosed with paranoid schizophrenia.

Though Whaley did not report differences in distrust between African-American men and women, others have noted that distrust of health providers may be more common in minority men.[18]

RACIAL STEREOTYPING

Compared with similar white men, African-American men with mental disorders are more likely to be:

- referred for mental health care through social and legal—rather than medical—systems and to be involuntarily committed
- perceived as violent—even though controlled research suggests they are not. This misperception can lead to excessive medication and restraints.[22]

Differential treatment of African-American men may create a cycle of distrust, hostility, and additional inappropriate treatment. Together, these factors may increase the risk that African-American men will be misdiagnosed with schizophrenia.

Past racism in biomedical and psychiatric practice and research has been documented[23,24] and more recently reviewed by Lawson.[19] Historically, African-Americans were perceived to have a "primitive psychic" nature that was thought to be more susceptible to schizophrenia than depression.[19] Whether these or similar racist stereotypes continue to inject ethnic bias into clinical assessment requires further study.

WHERE DO WE GO FROM HERE?

Although research into methods to eliminate ethnicity bias is sparse, the work reviewed in this article suggests ways that psychiatrists can minimize this problem (*Table*).

continued on page 81

continued from page 77

Obtain comprehensive information. Use structured interviews, such as the Structured Clinical Interview for DSM-IV (SCID), and rating scales, such as the Hamilton Depression Scale, which require clinicians to ask about all types of symptoms, particularly affective symptoms.

Review treatment records. Review your practice patterns for evidence of schizophrenia overdiagnosis in African-Americans or other ethnic groups. Examine ethnic differences in legal referrals or use of restraints or seclusion, which may indicate an ethnic bias in how threats are perceived. Only by being aware of bias can one correct it.

Become familiar with cultural and ethnic differences in idioms of distress. Specifically, review research in cultural psychiatry to identify potential differences among cultural groups in how they describe psychiatric symptoms. Talk with colleagues or friends from other cultural groups, and read literature from different ethnic perspectives to increase your cultural sensitivity.

Consult with psychiatrists with expertise in cultural variability of clinical presentation when the diagnosis or threat assessment seems unclear. Consultation is recommended if a patient's diagnosis is uncertain or if you detect bias in your practice.

These interventions require clinicians to become familiar with psychosocial differences in how patients of various cultural and ethnic groups express psychiatric symptoms. With this understanding, we can better engage wary patients, obtain valid information, and improve clinical practice and patient outcomes.

Finally, psychiatry's diagnostic systems need to continually address how patient assessment is influenced by ethnicity, culture, gender, and other socio-demographic factors. Studies are needed to examine the contributions of multiple factors—such as symptom differences and stereotyping—that contribute to ethnic-related diagnostic disparities.

References

1. Robins LN, Regier DA (eds). *Psychiatric disorders in America: the Epidemiologic Catchment Area study*. New York: The Free Press. 1991.
2. Simon RJ, Fleiss JL, Gurland BJ, et al. Depression and schizophrenia in hospitalized black and white mental patients. *Arch Gen Psychiatry* 1973;28:509-12.
3. Mukherjee S, Shukla S, Woodle J, et al. Misdiagnosis of schizophrenia in bipolar patients: a multiethnic comparison. *Am J Psychiatry* 1983;140:1571-4.
4. Strakowski SM, Shelton RC, Kolbrener ML.The effects of race and comorbidity on clinical diagnosis in patients with psychosis. *J Clin Psychiatry* 1993;54:96-102.
5. Strakowski SM, Lonczak HS, Sax KW, et al. The effects of race on diagnosis and disposition from a psychiatric emergency service. *J Clin Psychiatry* 1995;56:101-7.
6. Lawson WB, Hepler N, Holladay J, Cuffel B. Race as a factor in inpatient and outpatient admissions and diagnosis. *Hosp Comm Psychiatry* 1994;45:72-4.
7. Hoffman H, Kupper Z, Kunz B. Hopelessness and its impact on rehabilitation outcome in schizophrenia—an exploratory study. *Schizophr Res* 2000;43:147-58.
8. Walkup JT, McAlpine DD, Olfson M, et al. Patients with schizophrenia at risk for excessive antipsychotic dosing. *J Clin Psychiatry* 2000;61:344-8.
9. Segal SP, Bola JR, Watson MA. Race, quality of care, and antipsychotic prescribing practices in psychiatric emergency services. *Psychiatr Serv* 1996;47:282-6.
10. Flaskerud JH, Hu L. Racial/ethnic identity and amount and type of psychiatric treatment. *Am J Psychiatry* 1992;149:379-84.
11. Adebimpe VR, Klein HE, Fried J. Hallucinations and delusions in black psychiatric patients. *J Natl Med Assoc* 1981;73:517-20.
12. Adebimpe VR, Chu CC, Klein HE, Lange MH. Racial and geographic differences in the psychopathology of schizophrenia. *Am J Psychiatry* 1982;139:888-91.
13. Fabrega H Jr., Mezzich J, Ulrich RF. Black-white differences in psychopathology in an urban psychiatric population. *Compr Psychiatry* 1988; 29:285-97.
14. Strakowski SM, Flaum M, Amador X, et al. Racial differences in the diagnosis of psychosis. *Schizophr Res* 1996;21:117-24.

continued on page 82

Bottom Line

In psychiatry, misinterpretation is a risk when clinician and patient are of different backgrounds. Affective disorders in African-Americans may be mistaken for schizophrenia. Racial stereotyping and patient wariness also contribute to diagnostic errors.

Ethnic bias

continued from page 81

Related resources

- Paul AM. Painting insanity black: Why are there more black schizophrenics? *Salon.com* Dec. 1, 1999. http://www.salon.com/books/it/1999/12/01/schizo/index.html
- Alarcon RD, Westermeyer J, Foulks EF, Ruiz P. Clinical relevance of contemporary cultural psychiatry. *J Nerv Ment Dis* 1999;187: 465-71.
- Williams DR, Neighbors HW, Jackson JS. Racial/ethnic discrimination and health: findings from community studies. *Am J Public Health* 2003;93:200-8.
- Lin KM, Smith MW, Ortiz V. Culture and psychopharmacology. *Psychiatr Clin North Am* 2001; 24:523-38.

ACKNOWLEDGMENT

Preparation of this manuscript was supported in part by National Institutes of Health grant MH56352.

15. Schneider K. *Clinical psychopathology* (translated by Hamilton MW). New York: Grune and Stratton, 1959.
16. Strakowski SM, McElroy SL, Keck PE, Jr., West SA. Racial influence on diagnosis in psychotic mania. *J Aff Disord.* 1996;39:157-62.
17. Strakowski SM, Hawkins JM, Keck PE, Jr., et al. The effects of race and information variance on disagreement between psychiatric emergency service and research diagnoses in first-episode psychosis. *J Clin Psychiatry* 1997;58:457-63.
18. Jones BE, Gray BA. Problems in diagnosing schizophrenia and affective disorders among blacks. *Hosp Comm Psychiatry* 1986;37:61-5.
19. Neighbors HW, Jackson JS, Campbell L, Williams D. The influence of racial factors on psychiatric diagnosis: A review and suggestions for research. *Comm Ment Health J* 1989;25:301-11.
20. Lawson WB. Racial and ethnic factors in psychiatric research. *Hosp Comm Psychiatry* 1986;37:50-4.
21. Whaley AL. Ethnicity/race, paranoia, and psychiatric diagnoses: Clinician bias versus sociocultural differences. *J Psychopathol Behav Assess* 1997;19:1-20.
22. Lawson WB, Yesavage JA, Werner RD. Race, violence, and psychopathology. *J Clin Psychiatry* 1984; 45:294-7.
23. Spurlock J. Psychiatric states. In: Williams RA (ed). *Textbook of black-related diseases.* New York: McGraw-Hill, 1975.
24. Thomas A, Sillen S. *Racism and psychiatry.* New York: Brunner/Mazel, 1972.