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Absence of bias in clinician ratings of everyday functioning among African American, Hispanic and Caucasian patients with schizophrenia

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ABSTRACT

A substantial research literature implicates potential racial/ethnic bias in the diagnosis of schizophrenia and in clinical ratings of psychosis. There is no similar information regarding bias effects on ratings of everyday functioning. Our aims were to determine if Caucasian raters vary in their ratings of the everyday functioning of schizophrenia patients of different ethnicities, to find out which factors determine accurate self-report of everyday functioning in different ethnic groups, and to know if depression has similar effects on the way people of different ethnicities self-report their current functionality. We analyzed data on 295 patients with schizophrenia who provided their self-report of their everyday functioning and also had a Caucasian clinician rating their functionality. Three racial/ethnic groups (African American (AA), Hispanic and Caucasian) were studied and analyzed on the basis of neurocognition, functional capacity, depression and real-world functional outcomes. No differences based on racial/ethnic status in clinician assessments of patients' functionality were found. Differences between racial groups were found in personal and maternal levels of education. Severity of depression was significantly correlated with accuracy of self-assessment of functioning in Caucasians, but not in AAs. Higher scores on neurocognition and functional capacity scales correlated with reduced overestimation of functioning in AAs, but not in Hispanics. This data might indicate that measurement of everyday functionality is less subject to rater bias than measurement of symptoms of schizophrenia.

1. Introduction

Schizophrenia is a severe psychiatric disorder that affects more than 24 million adults worldwide and has an enormous personal, social and economic burden on those affected (Goldner et al., 2002). Being a condition that occurs around the world and is prevalent in all races, the relationship between ethnicity and schizophrenia has been the subject of multiple studies in recent years (Kessler et al., 2005; Hampton, 2007; Chrishon et al., 2012). Despite the United States National Comorbidity Survey Replication (NCS-R) study reporting the prevalence of schizophrenia among African Americans (AAs) and Hispanics being similar to that for Caucasian non-Hispanics (Kessler et al., 2005), various studies have documented how AAs and Hispanics are diagnosed with schizophrenia spectrum disorders more often than Caucasians (Hampton, 2007; Chrishon et al., 2012). Hampton found the increased rates for AAs being diagnosed with schizophrenia compared to Caucasians ranged from 9% to 32% (Hampton, 2007). This finding has been replicated in multiple other studies, which report differences in rates of previously identified schizophrenia among the different ethnic groups (e.g., Harvey et al., 2014). In contrast, it was found that Caucasians were more likely than AAs to being diagnosed with major depressive disorder (MDD) and bipolar disorder (BD), at increased rates ranging from 7% to 33% (Hampton, 2007; Harvey et al., 2014).

Different theories have been proposed to explain the variable prevalence of diagnoses of schizophrenia across the different ethnic groups. These range from genetic and biological grounds, to psychological, socio-economic (Rajji et al., 2009) and educational reasons (Harvey et al., 2004). Lower education, failure of marriage, homelessness and low quality of insurance coverage were factors found to be significantly associated with being diagnosed with schizophrenia spectrum disorders in ethnic minority patients (Choi et al., 2012).

Clinician bias has been held responsible of this disparity as well. Trierweiler and colleagues found that clinicians appear to perceive AA patients as more paranoid and suspicious,

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contributing to increased rates of psychotic diagnoses (Trierweiler et al., 2000). Adebimpe (1981) attributed the increased diagnosis of schizophrenia in AAs to the cultural distance between patient and provider, stereotypes of AA psychopathology, false positive symptoms, and biased diagnostic instruments, stating that one or more of these factors may take part in the misdiagnosis. In fact, being unfamiliar with the cultural norms of AA's behavior seems to leave clinicians vulnerable to increased bias (Lawson, 1986). Using semi-structured diagnostic instruments does not completely eliminate the racial differences in prevalence of diagnoses. A study using these methods showed that the process clinicians used to link symptom observations to diagnostic constructs was different between AA and Caucasians, particularly for schizophrenia (Neighbors et al., 2003).

The diagnosis and assessment of schizophrenia becomes complex by the fact that patients demonstrate poor insight-a lack of awareness of their illness. Several areas are affected, including awareness of symptoms (Amador et al., 1994; Gould et al., 2013), cognitive abilities (Medalia and Thysen, 2008; Durand et al., 2015), and functional skills and readiness to work (Bowie et al., 2007; Sabbag et al., 2011; Harvey and Strassnig, 2012). Patients tend, on average, to underestimate the severity of their symptoms and to overestimate their everyday functioning. Recently, our group found that higher levels of depressive symptoms in people with schizophrenia were associated with less overestimation of everyday functioning and negative symptoms associated with greater overestimation of everyday functioning compared to clinician ratings (Sabbag et al., 2012).

Although the research on ethnic and racial differences has suggested variations in interpretations of symptom presentation, there has been little research on clinician impressions of everyday functioning. In other words, are clinicians more likely to view racial or ethnic minorities as more disabled, in addition to more paranoid or otherwise symptomatic? Such ratings could lead to patients being seen as overestimating their potential, while in fact their potential is being underestimated by clinician raters of racial and ethnic backgrounds that are different from the patients.

We analyzed data collected in the Validation of Everyday Real-World Outcomes (VALERO) study parts 1 and 2 (Harvey et al., 2011; Leifker et al., 2011; Durand et al., 2015), a set of studies aimed at understanding self-assessment in people with schizophrenia using clinician raters as a reference point. A significant number of patients with schizophrenia of different ethnic backgrounds, including AAs, Hispanics, and non-Hispanic Caucasians participated in these two studies. All clinicians and raters who provided impressions of everyday functioning were Caucasian. We capitalized on this opportunity and decided to build on previous findings in order to answer the following questions: (a) Are there any differences in the ratings of everyday functioning that Caucasian raters give to patients with schizophrenia who vary in their ethnic backgrounds? (b) Which factors determine accurate self-report in the different ethnic groups, in terms of their life history, educational attainment and academic capability? (c) Would depression differentially affect the way people of different ethnicities self-report their functionality? As we had objective performance-based information about cognition and functional capacity, we were able to relate both self-reports and clinician ratings to these reference points. It was our hypothesis that racial and ethnic minorities might be rated as more disabled compared to performance-based indices of their actual ability, in line with previous research in symptomatic ratings of these patient populations.

2. Methods

2.1. Participants

The data are part of two study cohorts collected in three different geographical areas, aimed at identifying the correlates of functional status as well as the optimal method for rating everyday functioning among schizophrenia outpatients. The methods used to collect these samples were described in previous papers (Harvey et al., 2011; Durand et al., 2015). The study participants were outpatients with schizophrenia or schizoaffective disorder receiving treatment at one of several service delivery systems in Atlanta, Miami, and San Diego. Atlanta patients were either recruited via a private psychiatric rehabilitation program (Skyland Trail) or from the outpatient population at the Atlanta Veterans Affairs (VA) Medical Center. San Diego patients were recruited from the University of California at San Diego (UCSD) Outpatient Psychiatric Services clinic, a large public mental health clinic, from other local community clinics or by self-referral. Miami patients were recruited from the outpatient services at the University of Miami, Miller School of Medicine. All research participants provided signed informed consent according to standards approved by the responsible local Institutional Review Boards.

Patients were participants in one of two phases of the VALERO study parts 1 or 2. These data were collected between July 2007 and July 2012. All subjects completed a structured diagnostic interview for diagnostic verification, administered by a trained interviewer. The Structured Clinical Interview for the DSM ([SCID]; First et al., 1996) was used at the Atlanta sites and the Mini International Neuropsychiatric Interview, 6th Edition ([MINI]; Sheehan et al., 1998) in San Diego and Miami. All diagnoses were verified in local consensus procedures. Screening also included global cognitive impairments and premorbid functioning measured with the Mini-Mental State Examination ([MMSE]; Folstein et al., 1975) and the Wide Range Achievement Test, 3rd Edition ([WRAT-III]; Jastak and Wilkinson, 1984) Recognition Reading subtest. Patients were excluded for a history of traumatic brain injury, brain disease such as seizure disorder or neurodegenerative condition, an MMSE score below 18, or the presence of another DSM-IV-TR diagnosis that would exclude the diagnosis of schizophrenia. To capture a comprehensive array of participants reflective of real-world realities, comorbid substance use disorders were not an exclusion criterion. Rather, patients who appeared intoxicated were rescheduled. No inpatients were recruited, but patients who resided in a variety of residential facilities including unsupported, supported or supervised facilities were eligible. Informants were not screened for psychopathology or substance abuse.

We also collected demographic information, participants were asked to self-report their racial and ethnic backgrounds and also informed us about personal and maternal educational attainment. After screening, the test battery was completed in a fixed order, namely, functional skills assessment followed by a cognitive test battery and a symptom interview. All raters received extensive training in performing all of the assessments, and every three months their performance was re-evaluated. In VALERO 1, high contact clinicians and relatives or friends of the patients provided information to a clinical rater who generated ratings of everyday functioning. In VALERO 2, the data from a high contact clinician was the source of information. Clinicians simply completed the questionnaire rating scale with no interview and no instructions about how to generate ratings.