

Psychiatric Treatment Needs Among the Medically Underserved: A Study of Black and White Primary Care Patients Residing in a Racial Minority Neighborhood

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Objective: Racial disparities in psychiatric treatment are well documented. A growing body of research demonstrates that residing in a racial minority neighborhood adversely affects access to health care and may in part account for psychiatric treatment disparities. The study objective is to determine the role of race in psychiatric treatment disparities among blacks and whites residing in a racial minority neighborhood.

Method: A systematic sample of black (n = 345) and white (n = 57) patients from a primary care clinic in a racial minority neighborhood in northern Manhattan, New York, was analyzed. Logistic regression models were utilized to assess the effect of race on psychiatric treatment. The study was conducted during 1998–1999 and 2001–2003.

Results: Blacks were less likely than whites to have a lifetime psychiatric disorder (OR = 0.17; 95% CI, 0.06–0.53). Among patients with a current psychiatric disorder, there were no significant black-white differences in psychiatric treatment (OR = 0.72; 95% CI, 0.21–2.49). Yet, there were significant and substantial differences among patients without a current psychiatric disorder, with blacks less likely to receive psychiatric treatment than whites (OR = 0.09; 95% CI, 0.04–0.21).

Conclusions: The study findings suggest that neighborhood residence moderates the relationship between race and psychiatric treatment. Black and white primary care patients with a current disorder residing in this racial minority neighborhood had similar rates of psychiatric treatment. Yet, whites, who were the minority in the clinic and the neighborhood from which the clinic draws patients, appear to have more chronic psychiatric problems for which they are receiving treatment. Primary care clinics can serve as a vital tool in addressing the persistent disparities in psychiatric treatment and the psychiatric conditions among whites residing in racial minority neighborhoods.

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In 2001, the US Surgeon General published a detailed account of the persistently lower rate of detection and treatment of psychiatric disorders among racial minority groups compared to whites.¹ A growing body of research suggests that neighborhood environment plays a vital role in these types of disparate health outcomes.^{2,3} Historically, racial discrimination in the United States has led many racial minority groups to live in neighborhoods segregated from whites; these neighborhoods differ in ways that can negatively affect health.^{3,4} For example, racial minority neighborhoods are likely to be high-poverty areas that suffer from a historical lack of health care investment.^{3,5–10} Moreover, these communities have a relatively high rate of residents who are uninsured.³ The lower rate of detection and psychiatric treatment among racial minority groups compared to whites might be due in part to residence in neighborhoods with inadequate access to medical care, including health services to detect and treat psychiatric disorders.

The disparate health outcomes associated with residing in a racial minority neighborhood are not limited to racial minority residents; whites who reside in racial minority neighborhoods experience adverse health outcomes as well. In general, whites residing in racial minority neighborhoods have higher rates of mortality than whites who reside in predominantly white neighborhoods, and, in some cases, higher than their black residential counterparts.^{4,11} For example, Fang et al¹¹ examined racial segregation and mortality rates in New York City and found that white people living in black areas had higher mortality rates than those living in white areas. Moreover, white women in black areas had mortality rates higher than black women.¹¹ Poor health outcomes among whites in primarily black areas may also be due in part to residence in neighborhoods with inadequate access to health care and to other factors related to their minority status in the community.²

Over the past couple of decades, a growing number of individuals have received treatment for their psychiatric problems within primary care practices. Moreover, a relatively higher proportion of low socioeconomic and racial minority groups receive treatment in these settings.^{12,13} Few studies have examined patterns of psychiatric disorders and treatment among blacks

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CLINICAL POINTS

- ◆ Screening for psychiatric disorders in primary care should include inquiry about past history and not focus only on the patient's current state.
- ◆ Community health center physicians should be aware of demographic shifts in the community and pay particular attention to the psychiatric needs of patients who are "aging in place."

and whites who access medical care in a racial minority neighborhood. An understanding of psychiatric needs and patterns of treatment within this setting can aid in the development of services that correspond to the diverse needs of all residents of medically underserved neighborhoods. The purpose of this article is to describe the rates of psychiatric disorders and treatment among black and white low-income patients attending a general medical practice serving a racial minority neighborhood. Within this neighborhood, whites represent a racial minority group. The aims of this study are to determine black and white (1) rates of current and lifetime psychiatric disorders, (2) levels of mental health–related functional impairment, and (3) treatment received for psychiatric disorders.

METHOD

Protocol and Patient Recruitment

The study was conducted in an integrated faculty and resident internal medicine group practice of an urban academic health center. The clinic provides approximately 74,000 medical outpatient visits annually to residents of the Washington Heights and Harlem communities of northern Manhattan, New York. Both neighborhoods are designated as health professional shortage areas. Non-Hispanic whites are a minority of the population within both neighborhoods (2% and 13%, respectively).^{14,15}

The sample was assessed in 2 waves. The first sample was interviewed during 1998–1999, and the second sample was interviewed during 2001–2003. No patient was included twice in the analysis, and there were no significant demographic differences between samples. During both data collection periods, patients were systematically approached on the basis of the position of the seat they freely selected in the waiting room. Starting from the back of the room, every consecutive patient was screened for eligibility. Eligible patients were between 18 and 70 years of age, had made at least 1 prior visit, could speak and understand English or Spanish, and were waiting for scheduled face-to-face contact with their primary care physician.

A total of 3,807 patients were approached, of whom 169 (4.4%) refused to participate. Of the 3,638 who

Table 1. Study Sample Characteristics by Race

Characteristic	All (n = 402), %	Blacks (n = 345), %	Whites (n = 57), %
Female	68.4	69.3	63.2
Age, mean \pm SD, y	52 \pm 12	53 \pm 12	50 \pm 12
Married*	18.0	16.4	28.1
Education***			
< High school	30.6	32.4	19.3
High school graduate	35.3	37.7	21.1
\geq Some college	34.1	29.9	59.6
Annual household income**			
< \$6,000	36.5	37.6	29.1
\$6,000–11,999	40.5	42.1	30.9
\geq \$12,000	23.0	20.3	40.0
Health insurance			
Medicare	28.1	27.9	29.8
Medicaid	74.8	76.4	64.9
Private	8.1	7.5	12.3
Unemployed	18.0	16.7	26.3
Disabled	46.9	47.4	43.9

* $P < .05$.

** $P < .01$.

*** $P < .001$.

were prescreened, 2,291 (63.0%) were not eligible to participate. Common criteria for exclusion were (1) not being scheduled for face-to-face contact with a primary care physician (eg, walk-in visits, scheduled nurse visits, escorting patients with a scheduled visit to the clinic, filling prescriptions) (56.5%), (2) not being between 18 and 70 years of age (33.5%), and (3) not having made a previous visit to the practice (16.7%). Less commonly, patients were excluded because of poor physical health (3.3%) or cognitive impairment (1.6%). Of the 1,347 who met eligibility criteria, 1,157 (85.9%) consented to participate. A total of 1,146 patients (99.0%) completed the survey. The overall sample was of low-income status (51% with annual household income below \$6,000); 29% were non-Hispanic black and 5% were non-Hispanic white. The remainder of the sample identified as Hispanic (ie, black, white, or other). On the basis of the preponderance of literature examining the effects of race on health among blacks and whites, we limited our analysis to these racially classified groups. Therefore, a total of 402 respondents not of Hispanic ancestry and who described their racial background as black or white were included in the sample. The analysis included 345 blacks and 57 whites.

Demographic and Clinical Assessment

All data were collected through a survey read to the patient by a research assistant. A demographic history form assessed sex, age, annual household income, race, ethnicity, marital status, educational achievement, and occupational status. The National Institutes of Health guidelines for classification of race and ethnicity were used.¹⁴ Current psychiatric disorders were assessed with selected modules of the Primary Care Evaluation of Mental Disorders (PRIME-MD) Patient Health Questionnaire.¹⁶ The survey included modules to assess

Table 2. Adjusted Odds Ratios (ORs) for Current and Lifetime Psychiatric Disorders and Current Functional Impairment by Race

Variable	Blacks (n = 345), % ^a	Whites (n = 57), % ^b	Blacks vs Whites, OR (95% CI) ^c
Current psychiatric disorders			
Major depressive disorder	10.5	14.3	0.65 (0.26–1.59)
Generalized anxiety disorder	9.3	8.8	0.84 (0.30–2.32)
Panic disorder	4.9	3.5	1.09 (0.24–5.00)
Alcohol/drug use disorder	10.7	17.5	0.49 (0.22–1.08)
At least 1 of the above	22.8	33.9	0.49 (0.25–0.94)*
Lifetime psychiatric disorders			
Depression	28.0	58.3	0.23 (0.09–0.59)**
Bipolar disorder/manic depression	4.6	21.7	0.14 (0.04–0.57)**
Anxiety/nervous breakdown	18.6	50.0	0.23 (0.08–0.63)**
Alcohol/drug use problem	19.2	20.8	0.59 (0.18–1.92)
At least 1 of the above	41.5	75.0	0.17 (0.06–0.53)**
Functional impairment			
Any disability ^d	35.6	56.6	0.40 (0.21–0.76)**
Poor/fair ^e emotional health	30.4	43.9	0.44 (0.23–0.82)*

^aFor current psychiatric disorders and functional impairment, actual *n*'s ranged from 337 to 345; for lifetime psychiatric disorders, actual *n*'s ranged from 129 to 132.

^bFor current psychiatric disorders and functional impairment, actual *n*'s ranged from 53 to 57; for lifetime psychiatric disorders, actual *n*'s ranged from 23 to 24.

^cAdjusted for education, income, and marital status.

^dAt least mildly disabled on the social life and/or family life/home responsibilities subscales of the Sheehan Disability Scale.

^eVersus good, very good, or excellent.

**P* < .05.

***P* < .01.

current symptoms of major depressive disorder, panic disorder, generalized anxiety disorder, and alcohol use disorder.¹⁵ A drug use disorder module patterned after the PRIME-MD alcohol use module was developed by the study team. Patients who entered the study after 2001 were also assessed for lifetime psychiatric disorders by completing a checklist of specific psychiatric disorders that had ever been diagnosed by a health care provider. The psychiatric conditions included anxiety, bipolar disorder, depression, and alcohol or drug use problems.

Impairment in mental functioning was assessed with the 10-point self-rated social life and family life/home responsibilities subscales of the Sheehan Disability Scale¹⁷ (0, none; 1–3, mild; 4–6, moderate; 7–9, marked; 10, extreme) and a measure of self-perceived emotional health that asked respondents to rate their emotional health on a 5-point Likert scale (excellent, very good, good, fair, and poor). Mental health treatment was assessed by a self-report measure that asked about the presence or absence of past-year and past-month treatment by a health care provider for an emotional problem. The questionnaire also included 2 items asking if the respondent had ever been prescribed a medication by a health care provider for an emotional problem (past year and past month) or had ever been hospitalized for an emotional problem.

Statistical Methods

Self-reported race (non-Hispanic black or non-Hispanic white) was the independent variable. The dependent variables were (1) presence of a current or past psychiatric disorder, (2) mental health–related

functional impairment, and (3) receipt of treatment for a psychiatric disorder. Chi-square tests were used for racial group comparisons of categorical variables such as sex and marital status, and a Student *t* test was used to compare groups on age. Logistic regression models were used to examine the independent association between race and having any psychiatric disorder, any mental health–related functional impairment, and any psychiatric treatment, after controlling for income, education, and marital status. Odds ratios (ORs) adjusted for covariates and the corresponding 95% confidence intervals (CIs) are reported.

RESULTS

Demographic Characteristics of the Study Sample

The distribution of demographic characteristics in the total sample, and among the black and white subgroups, is shown in Table 1. The combined sample was composed primarily of women (68%), and the mean age was 52 years (SD = 12). Three-quarters of the patients were on Medicaid and nearly half were disabled. Whites were more likely than blacks to report being married/cohabiting (28% vs 16%, *P* < .05) and having attended college (60% vs 30%, *P* < .001). Although blacks were more likely to have an annual household income below \$12,000 (80% vs 60%, *P* < .01), more than 75% of the entire sample was living below or near the 2003 Federal Poverty Level for a household of 1 person, which is \$8,980.¹⁶ In order to control for possible confounding,

Table 3. Adjusted Odds Ratios (ORs) for Lifetime Psychiatric Disorder, Impairment, and Treatment Among Patients With a Current Psychiatric Disorder^a by Race

Variable	Blacks, % (n) ^b	Whites, % (n) ^c	Blacks vs Whites, OR (95% CI) ^d
Lifetime psychiatric disorder (at least 1) ^e	77.8 (21)	88.9 (8)	0.92 (0–11.26) ^f
Current impairment			
Any disability ^g	60.0 (45)	76.5 (13)	0.65 (0.16–2.56)
Poor/fair emotional health ^h	57.1 (44)	63.2 (12)	0.60 (0.18–2.07)
Treatment history			
Psychiatric hospitalization	22.1 (17)	21.1 (4)	1.08 (0.27–4.32)
Any mental health treatment			
Past year	29.9 (23)	47.4 (9)	0.72 (0.21–2.49)
Past month	23.4 (18)	42.1 (8)	0.78 (0.22–2.81)
Any psychiatric medication			
Past year	27.6 (21)	50.0 (9)	0.59 (0.17–2.03)
Past month	22.4 (17)	44.4 (8)	0.71 (0.19–2.57)

^aDefined as a positive screen on 1 or more of the following disorders based on the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire: major depressive disorder, generalized anxiety disorder, panic disorder, alcohol use problem, or drug use problem.

^bActual *n*'s ranged from 75 to 77.

^cActual *n*'s ranged from 17 to 19.

^dAdjusted for education, income, and marital status.

^eBased on sample size of 27 blacks and 9 whites.

^fUsing exact logistic regression.

^gAt least mildly disabled on the social life and/or family life/home responsibilities subscales of the Sheehan Disability Scale.

^hVersus good, very good, or excellent.

racial comparisons on psychiatric-related outcomes were adjusted for education, income, and marital status.

Overall Rates of Current and Lifetime Psychiatric Disorders and Impairment

Blacks were significantly less likely than whites to reach the criteria for a current psychiatric disorder when screened (22.8% vs 33.9%; OR = 0.49; 95% CI, 0.25–0.94) (Table 2). These differences were also reflected in lifetime rates (41.5% among blacks vs 75.0% among whites; OR = 0.17; 95% CI, 0.06–0.53). Blacks had significantly less lifetime anxiety (18.6% vs 50.0%; OR = 0.23; 95% CI, 0.08–0.63), bipolar disorder (4.6% vs 21.7%; OR = 0.14; 95% CI, 0.04–0.57), and depression (28.0% vs 58.3%; OR = 0.23; 95% CI, 0.09–0.59). Blacks were also less likely than whites to report any disability on the Sheehan Disability Scale or to report fair/poor emotional health (Table 2).

Psychiatric History and Treatment Utilization

Analyses showed that the effects of race on the receipt of psychiatric treatment depended on the presence rather than the absence of a current psychiatric disorder. The interaction of race and presence of a current psychiatric disorder was statistically significant in the prediction of lifetime psychiatric hospitalization ($P = .03$), past-year mental health treatment ($P = .009$), receipt of medication ($P = .04$), and past-month mental health treatment ($P = .02$) as well as receipt of medication ($P = .03$). Therefore, we stratified our race comparisons of treatment by the presence of a psychiatric disorder at screening, while also examining psychiatric history.

For patients with at least 1 current psychiatric disorder at the time of screening, there were no significant racial differences in rates of past history of a psychiatric disorder, current impairment, lifetime psychiatric hospitalization, and history of mental health treatment or medication use (Table 3). However, significant racial differences emerged among patients with no current psychiatric disorders (Table 4). Blacks in comparison to whites with no current psychiatric disorder less often reported a past history of psychiatric disorder or impairment, and, consistent with their less serious history of psychiatric disorders, also received less psychiatric treatment. Blacks additionally had less lifetime psychiatric hospitalization (8.9% vs 32.4%; OR = 0.17; 95% CI, 0.07–0.41), less past-year mental health treatment (7.7% vs 50.0%; OR = 0.09; 95% CI, 0.04–0.21) and past-month mental health treatment (5.8% vs 41.7%; OR = 0.08; 95% CI, 0.03–0.19), and less often received medication for a mental health problem in the past year (6.6% vs 43.2%, OR = 0.09; 95% CI, 0.04–0.22) and the past month (5.4% vs 43.2%; OR = 0.07; 95% CI, 0.03–0.18) (Table 4). These findings suggest that the past chronic history of psychiatric disorders among whites as compared to blacks was likely to account for whites' greater use of mental health services in the absence of a current psychiatric disorder.

DISCUSSION

Our findings highlight the complexity of racial disparities in psychiatric treatment. Black and white primary care patients residing in racial minority

Table 4. Adjusted Odd Ratios (ORs) for Lifetime Psychiatric Disorder, Impairment, and Treatment Among Patients With No Current Psychiatric Disorder^a by Race

Variable	Blacks, % (n) ^b	Whites, % (n) ^c	Blacks vs Whites, OR (95% CI) ^d
Lifetime psychiatric disorder (at least 1) ^e	34.0 (32)	71.4 (10)	0.19 (0.05–0.74)*
Current impairment			
Any disability ^f	29.2 (75)	47.2 (17)	0.43 (0.20–0.91)*
Poor/fair emotional health ^g	22.7 (59)	35.1 (13)	0.47 (0.21–1.04)
Treatment history			
Psychiatric hospitalization	8.9 (23)	32.4 (12)	0.17 (0.07–0.41)**
Any mental health treatment			
Past year	7.7 (20)	50.0 (18)	0.09 (0.04–0.21)**
Past month	5.8 (15)	41.7 (15)	0.08 (0.03–0.19)**
Any psychiatric medication			
Past year	6.6 (17)	43.2 (16)	0.09 (0.04–0.22)**
Past month	5.4 (14)	43.2 (16)	0.07 (0.03–0.18)**

^aDefined as a positive screen on 1 or more of the following disorders based on the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire: major depressive disorder, generalized anxiety disorder, panic disorder, alcohol use problem, or drug use problem.

^bActual *n*'s ranged from 257 to 260.

^cActual *n*'s ranged from 36 to 37.

^dAdjusted for education, income, and marital status.

^eBased on sample size of 94 blacks and 14 whites.

^fAt least mildly disabled on the modified Sheehan Disability Scale.

^gVersus good, very good, or excellent.

**P* < .05.

***P* < .001.

neighborhoods present unique psychiatric profiles that reflect a variation in treatment needs. In a systematic sample from a primary care clinic whose patient population is drawn from a racial minority neighborhood, we found that whites as compared to blacks (1) had higher rates of any current and lifetime psychiatric disorder, (2) more often reported disability, and (3) more often reported poor/fair emotional health. Among patients with current disorders, there were no racial differences in psychiatric history, functional impairment, psychiatric hospitalization, mental health treatment, or medication received. However, there were significant and substantial racial differences in treatment among patients with no current disorder. Whites with no current disorder at screening were more likely to have a psychiatric history, to be more disabled, and to be receiving psychiatric treatment.

Whites more than blacks in our sample seemed to have more chronic psychiatric conditions for which they were receiving treatment. While blacks had a rate of lifetime disorders only 3% higher than those among a national sample of blacks, rates of lifetime disorders among whites were nearly 30% higher than those found among a national sample of whites.^{18,19} The findings on rates of psychiatric disorders among whites are consistent with previous research showing that whites who reside in racial minority neighborhoods have poorer health outcomes than whites residing in majority white neighborhoods and blacks residing in majority black neighborhoods.^{11,20}

Research on processes of neighborhood demographic change reveals insights into the characteristics of whites in our sample that would seem to increase their risk for

poor psychiatric outcomes. Notably, the primary care clinic examined in this study is located in a neighborhood that has experienced significant shifts in its ethnic and racial demographics. Since the 1980s, the neighborhood began a shift from predominantly white and middle class to nonwhite and low income.^{21–23} Whites who remain in racially and ethnically shifting neighborhoods are usually poorer and older than whites who leave. Sampson and Sharkey's work²⁴ on neighborhood out-migration showed that whites who remain are more likely to be poor than whites who move. Moreover, whites in the current study may be aging-in-place, a preference among the elderly to remain living in their homes for as long as they are physically able.²⁵ The elderly who age-in-place also likely outlive or become estranged from their social networks.²⁶

Research suggests that the integration of socially isolated groups might improve health outcomes.² For example, significant efforts have been made to insure integration into the community among persons with psychiatric disabilities transitioning from institutionalized to community settings.²⁷ Similar efforts may be effective in addressing psychiatric conditions among whites residing in racial minority neighborhoods.

Our findings on psychiatric treatment rates also reveal important insights into the psychiatric conditions of blacks and whites residing in neighborhoods with a high proportion of racial minorities. Foremost, our finding of no significant racial difference in psychiatric treatment rates among patients with a current psychiatric disorder suggests the potential role of primary care in the reduction of racial disparities in psychiatric treatment.²⁰ Yet, our findings on treatment rates among whites

without a current disorder highlight the importance of continued outreach to socially marginalized groups regardless of race. Among patients without a current psychiatric disorder, whites were significantly more likely than blacks to receive treatment and to report a psychiatric disorder in their lifetime. Notably, treatment rates among whites in our sample without a current disorder were more than twice as high as a national sample of individuals without current disorders.²⁸

This finding suggests that treatment is being sought to address past psychiatric conditions. After their initial diagnosis, whites in our sample might be receiving care that is effective in treating their symptoms so that they no longer screen positive for a current disorder.

The implication of this finding suggests that studies looking at racial/ethnic differences in treatment utilization need to take into account psychiatric severity, inclusive of ascertaining both current and past history of psychiatric disorders. Psychiatric screening instruments in primary care settings, for the most part, focus only on current status. A previous psychiatric history among currently asymptomatic patients can have an impact on current disability and treatment needs, which may account for the relatively higher rates of treatment among whites.

A few limitations should be noted. Although the study found lower rates of psychiatric disorders in blacks as compared to whites, research suggests that this may be due to racial differences in reporting psychiatric symptoms. Some cultural groups find it more appropriate to report mental health problems to a family member, elder, spiritual or community leader, or someone familiar with their social ties.²⁹ Whites may be more likely than blacks to report their emotional problems to their physician and thus be diagnosed and referred to treatment. Another possible limitation is the assessment of psychiatric disorders. The PRIME-MD has been validated primarily in white middle-class populations. The sample used to validate the PRIME-MD included 79% whites and 13% blacks¹⁶; however, these screening tools may not be sensitive enough to detect psychiatric disorders effectively among blacks, particularly when considering the potential for racial differences in reporting of psychiatric symptoms.

Although there was a relatively large sample of blacks within this primary care clinic, the sample of whites was small and the statistical power for our comparisons, particularly the analysis of treatment among patients with a current disorder, was limited. For this reason, some of the racial differences in treatment observed in our study did not meet the criterion for statistical significance. Although we conclude that there are no differences in treatment among black and white patients with a current disorder, we cannot make this conclusion with confidence because of the limited power. However, the treatment

findings were highly significant for patients with no current disorder in which the sample size was also limited.

Despite these limitations, our findings suggest that access to psychiatric treatment can be improved through primary care service provision in resource-poor settings. The primary care clinic described in this study was created to provide services for the medically underserved in impoverished communities. Findings suggest that these services may be effective in reducing disparities in treatment between blacks and whites. Results further indicate that whites living in a racial minority neighborhood have a higher rate of chronic psychiatric conditions relative to blacks and appear to be receiving treatment for those conditions through primary care services. Yet, given the high burden of chronic psychiatric conditions among this group, further outreach efforts may be needed to ensure that these individuals receive appropriate psychiatric treatment and become better integrated into their neighborhood community.

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