

# Inadequate Treatment of Black Americans With Bipolar Disorder

Kaja R. Johnson, M.A.  
Sheri L. Johnson, Ph.D.

**Objective:** This study examined disparity in bipolar disorder treatment for black and white Americans. **Methods:** The sample included 167 respondents to the National Comorbidity Survey Replication who had lifetime type I or II bipolar disorder. Treatment adequacy and potential correlates were assessed. **Results:** No black respondent received minimally adequate mood-stabilizing treatment, and blacks were less likely than whites to have taken a mood stabilizer in the prior year. Service use, sociodemographic characteristics, and symptom expression did not explain this disparity. **Conclusions:** There was substantial racial inequality in bipolar disorder treatment. Issues guiding this disparity may be unique to this disorder, and clarification of the source of disparity is needed. (*Psychiatric Services* 65:255–258, 2014; doi: 10.1176/appi.ps.201200590)

Nearly 60% of Americans with a mental illness do not receive treatment in a given year, and persons from racial and ethnic minorities are overrepresented among the untreated (1). In the National Comorbidity Survey Replication (NCS-R), a U.S. study of mental health, black Americans had the greatest unmet need for mental health treatment. This need may be particularly pronounced in bipolar disorder, given the low rate of service use in the bipolar population. Just 55% of all Americans with this serious mental illness receive any treatment for it in

a year, including nonspecialty care (1). Only about one-third of persons with mental illness receive specialty care from a mental health professional.

Generally poor care for bipolar disorder may be accentuated among blacks. They are especially vulnerable to inaccurate assessment of symptoms and receive a misdiagnosis of schizophrenia more than those in other groups (2). Even if an accurate diagnosis is made, blacks tend to receive less intensive treatment than whites (3). Despite the implications of these findings, the research is limited by the use of samples from specialized treatment settings, where individuals tend to receive better care than the general population. These studies likely underestimated treatment disparity.

Few studies of racial disparity in treatment of bipolar disorder have been conducted, and the available studies often have focused only on differences in psychotic symptom expression. Disparity research for other mental disorders, particularly other mood disorders, has focused predominantly on service utilization, sociodemographic characteristics, and symptom expression as key explanatory variables (2). It is unclear whether these factors contribute to racial disparity in bipolar disorder. No studies have examined this in a representative sample.

Using a representative sample, this study aimed to fill these gaps and provide an accurate estimation of the disparity between blacks and whites concerning treatment of bipolar disorder. On the basis of patterns observed in treatment of other mental disorders, we hypothesized that blacks would be less likely to receive adequate treatment and that this disparity might be explained by differences in service use,

sociodemographic factors, and affective symptom expression.

## Methods

The NCS-R is a nationally representative survey of English speakers in the continental United States who are 18 years or older. Between 2001 and 2003, participants were selected from a clustered area probability sample of households. Data were collected in two stages. Part 1 included a face-to-face structured diagnostic interview administered to the total sample (N=9,282). Part 2 assessed clinical correlates and was administered to part 1 respondents who met criteria for a clinical disorder plus a probability subsample of all other respondents (N=5,692). Part 2 data were weighted to adjust for the oversampling, differential non-response, and differences in probabilities of selection. The Human Subjects Committees of Harvard Medical School and the University of Michigan, Ann Arbor, approved all procedures.

This study analyzed responses of 167 part 2 respondents who met criteria for bipolar disorder type I (N=81) or type II (N=86). In this sample, 137 identified themselves as non-Hispanic white (64 bipolar I and 73 bipolar II; 46% female) and 30 as non-Hispanic black (17 bipolar I and 13 bipolar II; 77% female). Groups did not differ in proportion of type I and II diagnoses, although blacks reported a lower age of onset than whites. Psychotic symptoms were rare (reported by 7% of participants) and did not differ between groups. Only three white participants and one black participant with psychotic symptoms reportedly received a diagnosis of schizophrenia.

---

Both authors are with the Department of Psychology, University of California, Berkeley (e-mail: kjohnson@berkeley.edu).

NCS-R diagnoses are based on the fully structured Composite International Diagnostic Interview (CIDI) (4). It is the most widely used survey for national epidemiological studies of psychiatric illness and has shown good concordance with the Structured Clinical Interview for DSM-IV (5).

The CIDI uses *DSM-IV* criteria for mania and hypomania. Mania is a distinct period of abnormally and persistently elevated, expansive, or irritable mood lasting at least a week (or any duration if hospitalization is required) that causes marked functional impairment. It is accompanied by three (or four with irritable mood) of the following symptoms: inflated self-esteem, decreased need for sleep, increased talkativeness, racing thoughts or flight of ideas, distractibility, increased goal-directed activity or psychomotor agitation, and excessive involvement in pleasurable activities with high potential for painful consequences. Hypomania is similar to mania but less enduring and severe, requiring only four days of symptoms and change in functioning but not necessarily marked impairment. A diagnosis of bipolar I requires the presence of one lifetime manic episode. A diagnosis of bipolar II requires the presence of at least one hypomanic episode and one major depressive episode, with no manic episode.

Guidelines from the American Psychiatric Association define minimally adequate treatment for bipolar disorder as the use of a mood stabilizer (such as lithium or an anticonvulsant) alone or in combination with an antipsychotic (6). Inappropriate treatment is defined as prescription of an antidepressant in the absence of a mood stabilizer. Respondents were given a list of psychiatric medications and asked to select those they took at least once "under the supervision of a doctor for your emotions or nerves or your use of alcohol or drugs" in the prior 12 months.

Respondents were asked whether they had ever seen any treatment provider in four health sectors for "problems with your emotions, nerves, or your use of alcohol or drugs." Health sectors were categorized into general medical health services (general physicians, family physicians, nurses, occupational therapists, and other health care professionals), psychiatrist, nonpsychiatrist

professionals (psychologists, any counselors, and any social workers, other mental health care professionals, and mental health hotlines), and non-health services (religious and spiritual advisors and complementary and alternative medicine, which included herbalists, chiropractors, spiritualists, self-help groups, and Internet support groups). Respondents then reported when they last saw the provider (responses included past month, two to six months ago, seven to 12 months ago, or >12 months ago).

Sociodemographic correlates included gender, age (18–29, 30–44, 45–59, and  $\geq 60$  years), marital status (married or cohabiting, previously married, or never married), employment (yes or no), household income (<\$18 000, \$18,000–\$31,999, \$32,000–\$54,999, or  $\geq$ \$55,000), highest education attained (<12, 12, 13–15, or  $\geq 16$  years), and health insurance (yes or no).

A subset of respondents who had experienced a manic or depressive episode in the prior year were asked to rate the severity of their symptoms during the worst episode in the prior year. Mania ratings were on a 1–5 scale (with higher numbers representing greater severity). The following items were included from the Young Mania Rating Scale (7): changes in mood, physical arousal, sexual interest, quantity of sleep, irritability, talkativeness, racing thoughts or disorganized thinking, unrealistic thinking, disruptive behavior, appearance, and insight. Similarly for depression, respondents rated symptoms on a 1–4 scale (with higher numbers representing greater severity) for the following: waking up too early, amount of sleep, problems falling asleep, waking up at night, feeling sad, lowered concentration and indecisiveness, low self-esteem, lowered interest in activities, and low energy. For both mania and depression, respondents reported the number of episodes they had in the past year and rated interference across four domains of functioning: home management, ability to work, forming and maintaining close relationships, and social life.

Receipt of mood stabilizers was tested for differences between races by using chi square analyses. Chi square testing was also used to examine whether

there were differences in service use and sociodemographic characteristics that would explain differences in receipt of mood stabilizers. For affective symptom expression, multivariate analyses of variance (MANOVAs) were used to compare racial groups across manic and depressive symptom severity and functional interference variables. Univariate F tests were used for post hoc analyses of significant MANOVAs. Wald F tests were used to examine differences in frequency of mania and depression episodes. Any service use, sociodemographic, and affective symptom variables on which groups differed were entered as independent variables into a regression with race to assess whether effects helped explain racial disparities in receipt of mood stabilizers.

Analyses were conducted with Stata/IC statistical software, version 12.1. The Taylor series linearization method was used to estimate standard errors. For all analyses, alpha was set to .05, and two-tailed tests were used.

## Results

No blacks and 17%  $\pm$  4% (mean  $\pm$  SE) of whites received minimally adequate treatment in the prior year. These rates were significantly different ( $\chi^2=174.2$ ,  $df=1$ ,  $p<.05$ ). Among whites, 14%  $\pm$  4% were on mood stabilizer monotherapy, and 2%  $\pm$  1% received combination therapy of a mood stabilizer with an antipsychotic. Blacks (32%  $\pm$  8%) and whites (35%  $\pm$  4%) did not differ on receipt of inappropriate antidepressant treatment.

Of all respondents, 60% (N=101) used services in the prior year. Rates did not differ between bipolar diagnostic groups. Among service users, 36%  $\pm$  5% of services occurred in the non-psychiatrist professionals sector, and 35%  $\pm$  4% occurred in the non-health services sector. No sector showed significant differences between blacks and whites in rates of service use.

There were no differences between blacks and whites in age, education, insurance, employment, and income. Compared with whites, black respondents were less likely to be married ( $\chi^2=335.6$ ,  $df=2$ ,  $p<.01$ ) and more likely to be female ( $\chi^2=133.1$ ,  $df=1$ ,  $p<.05$ ). However, neither marital status nor gender was related to receipt of

**Table 1**

Unweighted means for manic and depressive symptom severity and functional interference for persons with bipolar disorder, by race<sup>a</sup>

Variable	Overall (N=167)		Blacks (N=30)		Whites (N=137)		N	p
	M	SE	M	SE	M	SE		
Manic symptom severity							69	.03
Mood	3.13	.14	3.00	.35	3.15	.15	72	.69
Physical arousal	2.94	.14	2.33	.36	3.07	.15	72	.05
Sexual interest	2.26	.17	1.67	.31	2.38	.19	72	.12
Quantity of sleep	3.31	.13	2.92	.26	3.39	.14	71	.16
Irritability	2.79	.12	3.42	.36	2.67	.12	72	.02
Talkativeness	2.79	.13	2.67	.38	2.82	.14	72	.67
Racing thoughts or disorganized thinking	3.19	.13	3.08	.38	3.22	.13	72	.70
Unrealistic thinking	2.79	.15	3.25	.37	2.69	.16	70	.15
Disruptive behavior	2.30	.16	2.67	.47	2.22	.16	72	.28
Appearance	1.83	.12	2.08	.40	1.78	.13	72	.36
Insight	2.96	.17	2.75	.45	3.00	.19	72	.59
Interference by manic symptoms <sup>b</sup>							77	.33
Home management	5.45	.33	6.73	.91	5.16	.35	82	
Ability to work	4.51	.41	5.79	1.11	4.23	.43	79	
Forming and maintaining close relationships	5.56	.31	6.93	.84	5.25	.32	82	
Social life	5.61	.37	6.64	.92	5.39	.40	80	
Depressive symptom severity							75	.63
Waking up too early	2.70	.12	2.82	.24	2.67	.13	77	
Amount of sleep	1.57	.09	1.36	.17	1.62	.11	77	
Problems falling asleep	3.27	.10	3.18	.26	3.30	.11	78	
Waking up at night	3.48	.08	3.45	.17	3.48	.09	78	
Feeling sad	3.25	.08	3.33	.20	3.24	.09	75	
Lowered concentration and indecisiveness	2.83	.08	3.09	.20	2.76	.09	76	
Feel down on oneself	3.80	.10	2.73	.22	2.82	.12	76	
Lowered interest in daily activities	3.03	.09	2.95	.21	3.05	.10	76	
Low energy	2.96	.08	2.86	.15	2.99	.09	76	
Interference by depressive symptoms <sup>b</sup>							84	.96
Home management	6.63	.24	7.00	.40	6.53	.28	87	
Ability to work	6.37	.28	6.46	.59	6.34	.32	85	
Forming and maintaining close relationships	6.77	.22	6.64	.48	6.81	.25	87	
Social life	7.26	.21	7.36	.43	7.23	.25	86	

<sup>a</sup> Possible scores range from 1 to 5 for each manic symptom and 1 to 4 for each depressive symptom, with higher scores indicating greater severity. Analyses included only the National Comorbidity Survey Replication respondents who had experienced a manic (N=82) or depressive (N=90) episode in the prior year.

<sup>b</sup> Possible scores range from 1 to 10, with higher values indicating greater interference of symptoms.

a mood stabilizer over the prior year. Therefore, these differences could not explain the effect of race on mood stabilizer receipt.

The MANOVA for testing racial differences on 11 manic symptoms was significant (Hotelling's trace statistic=.42,  $F=2.15$ ,  $df=11$  and  $57$ ,  $p<.05$ ). As shown in Table 1, post hoc tests indicated that blacks reported more severe irritability ( $F=6.13$ ,  $df=1$  and  $70$ ,  $p<.05$ ). The difference in physical arousal reached only borderline significance ( $p=.05$ ). There were no differences in functional interference by manic symptoms across four domains. Black and white respondents reported, respectively, a mean  $\pm$  SE of  $8.75 \pm 3.1$  and  $6.36 \pm 2.4$  manic episodes

in the prior year, but these rates did not differ significantly.

Because no black respondent received mood stabilizer treatment, we could not examine race and receipt of mood stabilizers through regression analyses controlling for irritability. An examination in the white sample revealed no correlation between irritability and mood stabilizer receipt.

Groups did not differ in depressive symptom severity or on functional interference resulting from depression. Black respondents reported on average  $6.39 \pm 1.90$  depressive episodes in the prior year, compared with  $8.91 \pm 2.60$  depressive episodes reported by whites, but these differences were not statistically significant.

No differences in depression could explain the difference in receipt of mood stabilizers between black respondents and white respondents.

### Discussion and conclusions

Although rates of adequate care were sadly low in the white sample, the absolute absence of adequate care in the black sample illustrated the profound need of this particular group in regard to treatment for bipolar disorder. Surprisingly, there were almost no differences in service use, socio-demographic characteristics, and affective symptom expression that would explain this disparity. Blacks were just as likely as whites to seek out treatment and did so in health sectors

equivalent to where whites sought treatment. Perhaps the substantial impairments associated with bipolar disorder compel treatment seeking more than in other disorders and thus led to similar patterns between groups.

Sociodemographic characteristics were also unrelated to disparity, despite being a well-cited explanation for racial disparities in care and treatment for other disorders. Finally, blacks and whites reported comparable affective profiles, with no significant differences in 19 of 20 specific symptoms, functional interference, or frequency of episodes. Blacks reported more severe irritability, but this symptom was unrelated to adequate treatment receipt in the white sample. In a prior study of a treated bipolar sample, blacks received inadequate treatment while showing no differences from whites in severity of manic symptoms (3), suggesting that irritability is not linked to treatment outcomes. Taken together, the findings suggest that common explanatory factors in other mental disorders fail to explain the racial disparity in treatment adequacy in bipolar disorder.

Future studies should examine more subtle mechanisms that might clarify the barriers to adequate treatment for blacks with bipolar disorder. Providers' diagnostic errors may be exacerbated with black patients and may account for some of the disparity. One concern is that provider biases may play a role, in that there may be unintended racial biases and stereotypes that lead to less intensive treatment of persons with bipolar disorder who are from racial-ethnic minority groups (8). At a system level, blacks with bipolar disorder also may be concentrated in practice settings where

access to good-quality care is low. Finally, given the tendency toward misdiagnosis and poor treatment in this population, blacks with bipolar disorder may experience particularly high stigma and distrust of psychiatric care that would hinder treatment engagement.

Limitations to this study must be noted. First, in our sample the absence of blacks taking mood stabilizers precluded examination of the predictors of adequate treatment receipt among blacks. Also, the small number of white participants receiving adequate treatment limited statistical power. Second, there were few black males in this sample. Bipolar disorder (9) and black men (10) are both independently overrepresented in prison populations, which were excluded in the NCS-R sampling. Hence, institutionalized samples must be assessed to fully understand the implications of race in bipolar disorder. Third, retrospective recall of symptoms may be biased by current mood state.

Despite limitations, this was the first study to examine, using a community sample, multiple factors that may contribute to the racial disparity in bipolar disorder treatment. Findings indicate a pronounced racial disparity in treatment of bipolar disorder and provide the first evidence that the disparity was not explained by the same factors that operate in other disorders. To better understand this particular racial disparity, future study must examine multiple and unique factors that affect the black population with bipolar disorder.

#### **Acknowledgments and disclosures**

The National Comorbidity Survey Replication is part of the Collaborative Psychiatric Epidemiology Surveys data collection, which was

supported by the National Institute of Mental Health.

The authors report no competing interests.

#### **References**

1. Wang PS, Lane M, Olfson M, et al: Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. *Archives of General Psychiatry* 62:629–640, 2005
2. Snowden LR: Barriers to effective mental health services for African Americans. *Mental Health Services Research* 3:181–187, 2001
3. Gonzalez JM, Thompson P, Escamilla M, et al: Treatment characteristics and illness burden among European Americans, African Americans, and Latinos in the first 2,000 patients of the systematic treatment enhancement program for bipolar disorder. *Psychopharmacology Bulletin* 40: 31–46, 2007
4. Kessler RC, Ustün TB: The World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research* 13:93–121, 2004
5. Kessler RC, Akiskal HS, Angst J, et al: Validity of the assessment of bipolar spectrum disorders in the WHO CIDI 3.0. *Journal of Affective Disorders* 96:259–269, 2006
6. American Psychiatric Association: Practice guideline for the treatment of patients with bipolar disorder (revision). *American Journal of Psychiatry* 159(Apr suppl):1–50, 2002
7. Young RC, Biggs JT, Ziegler VE, et al: A rating scale for mania: reliability, validity and sensitivity. *British Journal of Psychiatry* 133:429–435, 1978
8. Chapman EN, Kaatz A, Carnes M: Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities. *Journal of General Internal Medicine* 28:1504–1510, 2013
9. Cuellar AE, Snowden LM, Ewing T: Criminal records of persons served in the public mental health system. *Psychiatric Services* 58:114–120, 2007
10. Pettit B, Western B: Mass imprisonment and the life course: race and class inequality in US incarceration. *American Sociological Review* 69:151–169, 2004