Prevalence of Mood Disorders and Service Use Among US Mothers by Race and Ethnicity: Results From the National Survey of American Life

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ABSTRACT

Objective: To describe the rates of mood disorders, the social and demographic correlates of mood disorders, and mental health services utilization among African American, Caribbean black, and non-Hispanic white mothers.

Method: Study data were collected between February 2001 and June 2003 as part of the National Survey of American Life: Coping With Stress in the 21st Century. National household probability samples of African Americans and Caribbean blacks were surveyed using a slightly modified World Mental Health version of the World Health Organization Composite International Diagnostic Interview. Participants included 2,019 African American, 799 Caribbean black, and 400 non-Hispanic white mothers 18 years and older (N = 3,218). The main outcomes measured were lifetime and 12-month diagnoses of *DSM-IV* mood disorders (major depressive episode, dysthymic disorder, bipolar I and II disorders) and mental health services utilization.

Results: The lifetime prevalence estimate of mood disorders is higher for white mothers (21.67%) than for African American mothers (16.77%) and Caribbean black mothers (16.42%); however, 12-month mood disorder estimates are similar across groups. African American mothers have higher 12-month prevalence estimates of bipolar disorder (2.48%) than white mothers (0.59%) and Caribbean black mothers (1.16%). African American mothers with higher education levels and white mothers who became parents as teenagers are more likely to have a lifetime mood disorder. Less than half (45.8%) of black mothers with a past 12-month mood disorder diagnosis utilized mental health services. Among black mothers with a 12-month diagnosis of bipolar disorder, Caribbean blacks utilized mental health services at higher rates than African Americans.

Conclusions: Demographic correlates for mood disorders varied by race and ethnicity. The findings illustrated underutilization of treatment by black mothers, especially African American mothers with bipolar disorder.

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Motherhood is a period that warrants psychiatric and epidemiologic research and clinical focus because mothers are a population that may be at risk for mood disorders.[1] Giving birth is a life transition that has been associated with enhanced risk for the development or reoccurrence of depressive and manic episodes.[2,3] For example, mothers who have experienced postpartum depression are at increased risk for future depressive episodes,[4,5] and mothers with a history of bipolar disorder have increased risk of being readmitted to a psychiatric hospital during the postpartum period.[6] Moreover, mothers of young children have been shown to have high levels of depressive symptoms.[7,8] Some explanations given for increased maternal depressive symptoms and episodes include biological and hormonal changes, obstetric and birth complications, stressful life events, poor marital relationship, lack of social support, economic strain, and child-related stress, such as child care problems, multiparity, and having a child with a difficult temperament.[9–12]

Although there is extensive research literature on maternal depression, very little is known about other types of maternal mood disorders, such as bipolar disorder. Moreover, there is a paucity of research focusing on black mothers with clinical diagnoses of a mood disorder in the United States. The research on African American mothers has focused mainly on self-reported symptoms of depression and not psychiatric diagnoses. While there is not clear evidence that African American mothers experience mood disorders at higher rates than other ethnic groups, the available research suggests that African American mothers exhibit higher levels of depressive symptoms than white mothers.[13,14]

Despite the substantial risk for elevated mood symptoms, mothers are likely to underutilize mental health services. A recent study showed that 69% of mothers of diverse ethnicities with major depressive disorder (MDD) did not seek treatment within the last 12 months.[15] A national survey of women who gave birth within the previous 2 years revealed that 57% of mothers with moderate to severe postpartum depression symptoms did not seek help from health or mental health providers; however, this study assessed only depressive symptoms and not psychiatric diagnoses.[16] Racial disparities have been found in mental health service utilization for mothers with depression; African American mothers are less likely than white mothers to utilize mental health services.[1,17] Similarly, racial disparities in mental health underutilization have been documented for blacks in general.[18,19]

To our knowledge, there is no national study of the prevalence of various mood disorders among mothers, especially ethnic minority mothers. As a result, it is unclear whether ethnic/racial disparities exist in the prevalence of mood disorders among mothers. For instance, we do not know if the burden of depressive or bipolar disorders is similar for mothers across racial groups compared to the general population. This study addresses this gap in knowledge by describing the rates of mood disorders (including MDD, dysthymic disorder, and bipolar disorder) among African American, Caribbean black, and white mothers and examines the social and demographic correlates and mental health service utilization among these mothers.

Clinical Points

- Mothers are a group that may be at increased risk for mood disorders.
- It is important to assess for risk factors, identify mood disorders, and adequately treat these disorders in mothers.
- Black mothers with mood disorders are likely to underutilize treatment.

METHOD

Sample

The National Survey of American Life: Coping With Stress in the 21st Century (NSAL) data were collected by the Program for Research on Black Americans at the University of Michigan's Institute for Social Research. The NSAL is the most comprehensive and detailed study of mental disorders and the mental health of Americans of African descent ever completed.[20] The field work for the study was completed by the Institute for Social Research's Survey Research Operations, in cooperation with the Program for Research on Black Americans. A total of 6,082 face-to-face interviews were conducted with persons 18 years or older, including 3,570 African Americans, 891 non-Hispanic whites, and 1,621 blacks of Caribbean descent.

The NSAL includes the first national probability sample of Caribbean blacks. The Caribbean black sample was selected from 2 area probability sample frames: 265 were selected from the households in the core sample, while 1,356 were selected from an area probability sample of housing units from geographic areas with a relatively high density of persons of Caribbean descent (more than 10% of the population). The NSAL analysis weights for the African American and Caribbean black samples were designed to provide population representation for these populations in the 48 coterminous states. The overall response rate was 72.3%. Response rates for individual subgroups were 70.7% for African Americans, 77.7% for Caribbean blacks, and 69.7% for non-Hispanic whites. The weighting class method was used to adjust the data for nonresponse bias. For all race/ethnic samples, additional NSAL weights were designed to correct for disproportionate sampling and for population representation across various sociodemographic characteristics.[19] Descriptive analyses applying these weights yield statistics nationally representative of the populations and subpopulations of interest.

For the purposes of this study, Caribbean blacks are defined as persons who trace their ethnic heritage to a Caribbean country, but who now reside in the United States, racially self-classify as black, and are English-speaking (but may also speak another language). In both the African American and Caribbean black samples, it was necessary for respondents to self-identify their race as black. Those self-identifying as black were included in the Caribbean black sample if they answered affirmatively when asked if they were of West Indian or Caribbean descent; said they were from a country included on a list of Caribbean-area countries presented by the interviewers; or indicated that their parents or grandparents were born in a Caribbean-area country.[21] Respondents were compensated for their time. The data collection was conducted from February 2001 to June 2003. Parental status of mother was defined by female respondents who reported being the biological or social parent of 1 or more children regardless of whether the child lives with the respondent. The term *social parent* includes people who stepparent, adopt, or foster a child or live in a household with a partner's child. The number and characteristics of the parents in the NSAL sample are illustrated in Table 1.

Measures

Mood disorders. The fully structured *Diagnostic and Statistical Manual of Mental Disorders,* Fourth Edition (*DSM-IV*) World Mental Health version of the World Health Organization (WHO) Composite International Diagnostic Interview (WMH-CIDI) was used to assess a wide range of mental disorders. The mental disorders sections used for NSAL, which included mood disorders, are slightly modified versions of those developed for the World Mental Health project initiated in 2000.[22] The WMH-CIDI was modified to comply with *DSM-IV* diagnosis, as well as so that its results can be compared with those of the National Comorbidity Survey Replication (NCS-R),[23,24] National Latino and Asian American Study, and other WHO psychiatric epidemiologic studies. Language in the Mania module was slightly modified, on the basis of results from qualitative and quantitative psychiatric diagnosis research conducted by investigators affiliated with the University of Michigan Institute for Social Research's Program for Research on Black Americans, to facilitate accurate understanding by and diagnosis of African Americans. We present and discuss mood disorders (ie, major depressive episode [MDE], dysthymic disorder, bipolar I and II disorders) assessed in the African American, Caribbean black, and non-Hispanic white samples. The algorithm for MDE is the same as that for MDD except that the presence or absence of a manic episode is not considered (see Williams et al[19]).

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Table 1. Sociodemographic Characteristics of Mothers in the NSAL Sample by Race

Characteristic	Total (N = 3,218)[a]		African American (n = 2,019)[a]		Caribbean Black (n = 799)[a]		White (n = 400)[a]		Test Statistic	*P*
	n (%)	SE	n (%)	SE	n (%)	SE	n (%)	SE		
Age									$\chi^2_2 = 15.71$	.003**
18–34 y	949 (26.99)	1.47	640 (30.14)	1.58	233 (28.11)	4.24	76 (23.14)	2.63		
35–64 y	1,819 (57.00)	1.34	1,107 (56.53)	1.54	485 (59.71)	3.66	227 (57.35)	2.37		
65+ y	450 (16.01)	1.20	272 (13.33)	1.12	81 (12.18)	2.53	97 (19.51)	2.43		
Economic hardship[b]									$\chi^2_4 = 34.65$	< .0001***
Extremely difficult	181 (5.48)	1.00	108 (5.53)	0.65	55 (7.30)	1.83	18 (5.29)	2.14		
Very difficult	264 (7.18)	0.69	160 (7.89)	0.78	77 (7.28)	1.44	27 (6.32)	1.24		
Somewhat difficult	744 (20.98)	1.04	474 (23.46)	1.01	191 (25.42)	3.18	79 (17.69)	1.88		
Slightly difficult	895 (25.07)	1.33	569 (28.09)	1.24	244 (32.76)	3.82	82 (20.91)	2.52		
Not at all	1,089 (41.29)	1.84	681 (35.04)	1.31	220 (27.24)	2.97	188 (49.79)	3.44		
Education status									$\chi^2_3 = 35.40$	< .0001***
Less than high school (≤ 11 y)	794 (22.63)	1.54	556 (26.25)	1.76	156 (24.20)	2.51	82 (18.18)	2.69		
High school graduate (12 y)	1,168 (35.61)	1.41	773 (37.12)	1.50	250 (32.50)	2.78	145 (34.02)	2.64		
Some college (13–15 y)	757 (24.14)	1.01	454 (24.08)	1.19	208 (24.83)	2.65	95 (24.15)	1.79		
College graduate (16+ y)	499 (17.63)	1.76	236 (12.55)	1.23	185 (18.47)	1.76	78 (23.65)	3.67		
Marital status									$\chi^2_2 = 97.27$	< .0001***
Married	1,138 (46.45)	1.70	626 (38.49)	1.34	326 (44.47)	3.95	186 (56.13)	3.23		
Divorced/separated/widowed	1,254 (36.14)	1.76	802 (35.45)	1.10	265 (34.21)	4.92	187 (37.11)	3.77		
Never married	826 (17.41)	1.12	591 (26.06)	1.54	208 (21.32)	2.62	27 (6.76)	1.32		
Age at first birth (teenage mother or not)									$\chi^2_2 = 88.38$	< .0001***
Not teenage mother	1,639 (57.45)	1.76	884 (45.30)	1.67	501 (60.40)	3.47	254 (71.89)	3.10		
Teenage mother	1,409 (42.55)	1.76	1,036 (54.70)	1.67	251 (39.60)	3.47	122 (28.11)	3.10		
	Mean	SE	Mean	SE	Mean	SE	Mean	SE		
Household size	2.84	0.06	3.02	0.06	3.13	0.09	2.61	0.12	$F = 6.64$	.002**
No. of living children	3.54	0.08	3.95	0.11	3.86	0.17	3.04	0.10	$F = 22.28$	< .0001***

[a]All estimates, except sample sizes, are weighted.
[b]Refers to a respondent's answer to the question, "How difficult is it for (you/your family) to meet the monthly payments on your (family's) bills?"
**$P < .01$. ***$P < .001$.
Abbreviation: NSAL = National Survey of American Life: Coping With Stress in the 21st Century.

Social and demographic correlates. We examined the relationships of social and demographic factors to ascertain whether certain subgroups were potentially at elevated risk for mood disorders (Table 1). Social and demographic correlates included ethnicity (African American, non-Hispanic white, and Caribbean black), highest level of education attained (0–11 years, 12 years, 13–15 years, 16+ years), marital status (married, previously married, never married), teenaged parent (respondents report the age at which they had their first child), household size, number of living children, and economic hardship.[25] Economic hardship refers to a respondent's answer to the question, "How difficult is it for (you/your family) to meet the monthly payments on your (family's) bills?"

Mental health service use. We also examined mothers' treatment experiences for mental disorders assessed in the NSAL. All respondents were asked if they had contact with anyone from an extensive list of treatment providers for problems with their emotions, nerves, mental health, or use of alcohol or drugs in their lifetime. Health care treatment providers were categorized into a mental health sector (psychiatrists, psychologists, counselors and social workers seen in mental health settings, other mental health professionals, and mental health hotlines) and a general medical sector (general practitioners, family doctors, nurses, occupational therapists, and other health professionals). The non–health care sector included the use of human services (religious and spiritual advisors, counselors, and social workers seen in non–mental health settings). Lifetime service use was defined as making at least 1 visit to a service provider prior to the respondent's interview. There were no ethnic differences in health insurance coverage.

Statistical Analysis

These analyses were conducted with SAS 9.12, which uses the Taylor expansion approximation technique for calculating the complex design–based estimates of variance.[26] Cross-tabulations are presented to show racial and ethnic differences in prevalence of mood disorders and mental health service use. The percentages represent weighted proportions based on the sample's race-adjusted weight measure. Procedures were employed in all of the analyses to properly adjust standard errors, confidence intervals, and significance tests for the complex sample design of the NSAL. The χ^2 and corresponding *P* values from these cross-tabulations are based on the Rao-Scott χ^2 test, a complex design–adjusted version of the Pearson χ^2 test.[26] Logistic regression analysis was used to examine the demographic correlates of the prevalence of mood disorders. Odds ratio estimates and 95% confidence intervals are presented along with design-corrected Wald χ^2 measures. Throughout the analyses, the .05 level on a 2-sided, design-based test of significance represented the cutoff

Table 2. Onset of Mood Disorders in Relation to Birth of First Child

	Child Before Disorder		Child After Disorder		Rao-Scott χ^2 Test	
Disorder	n (%)	SE	n (%)	SE	χ^2	*P*
Major depressive episode						
12 mo	76 (36.91)	4.26	144 (63.09)	4.26	8.85	.003
Lifetime	129 (34.85)	5.14	307 (65.15)	5.14	7.91	.005
Dysthymic disorder						
12 mo	29 (35.14)	5.33	37 (64.85)	5.33	7.20	.007
Lifetime	41 (39.04)	4.41	65 (60.96)	4.41	5.93	.01
Bipolar disorder						
12 mo	50 (80.11)	3.67	15 (19.89)	3.67	43.62	<.0001
Lifetime	78 (80.77)	3.00	21 (19.23)	3.00	65.95	<.0001

Table 3. Prevalence of Disorders Among Mothers in the NSAL Sample by Race[a]

	Any Mood Disorder, % (SE)		Major Depressive Episode, % (SE)		Dysthymic Disorder, % (SE)		Bipolar Disorder, % (SE)	
Group	12 mo	Lifetime*	12 mo	Lifetime*	12 mo	Lifetime	12 mo*	Lifetime*
Total	8.31 (0.70)	18.95 (1.07)	7.40 (0.67)	17.68 (1.07)	2.42 (0.29)	3.97 (0.44)	1.59 (0.30)	2.50 (0.37)
All blacks	9.23 (0.59)	16.75 (1.04)	7.88 (0.52)	14.55 (0.91)	2.50 (0.43)	3.75 (0.50)	2.40 (0.39)	3.77 (0.51)
African Americans	9.36 (0.60)	16.77 (1.08)	7.95 (0.53)	14.51 (0.94)	2.62 (0.45)	3.81 (0.53)	2.48 (0.41)	3.85 (0.54)
Caribbean blacks	7.25 (2.26)	16.42 (2.54)	6.77 (2.26)	15.22 (2.54)	0.52 (0.21)	2.66 (0.86)	1.16 (0.47)	2.39 (1.03)
Whites	7.15 (1.41)	21.67 (1.83)	6.79 (1.36)	21.56 (1.82)	2.32 (0.40)	4.25 (0.76)	0.59 (0.43)	0.93 (0.47)

[a]Design-corrected Rao-Scott χ^2 test was performed for group difference among African Americans, Caribbean blacks, and whites.
*Significant at $P = .05$.
Abbreviation: NSAL = National Survey of American Life: Coping With Stress in the 21st Century.

for assessing statistical significance. The multivariate χ^2 tests and corresponding *P* values associated with these regression models were calculated using the design-based, variance-covariance matrices of the coefficients.

RESULTS

Onset of Mood Disorders

We examined frequency of mood disorders prior to or after birth of the first child for the entire sample of mothers (Table 2). Mothers were more likely to have their first child after the onset of their first MDE and dysthymic disorder. However, the pattern was the opposite for bipolar disorder; the birth of the first child frequently occurred before the onset of bipolar disorder (which included either MDE or manic episode for mothers with lifetime diagnosis of bipolar disorder).

Prevalence of Mood Disorders

The lifetime prevalence estimate of any CIDI/*DSM-IV* mood disorder is higher for white mothers (21.67%) than for African American mothers (16.77%) and Caribbean black mothers (16.42%) (Table 3). This prevalence pattern was also observed in lifetime estimates of MDE. African American mothers have higher lifetime (3.85%) and 12-month (2.48%) prevalence estimates of bipolar disorder than white mothers (0.93% and 0.59%, respectively) and higher 12-month prevalence estimates than Caribbean black mothers (1.16%).

Social and Demographic Correlates

African American mothers with higher education levels were more likely to have any lifetime mood disorder or MDE (Table 4). Some college education for Caribbean black mothers and white mothers was related to increased rates of lifetime mood disorder or MDE compared to high school graduates. Caribbean black mothers who were never married had increased rates of lifetime mood disorders and MDE; however, this pattern was not found for African American and white mothers. Perception of economic hardship was related to increased rates of lifetime mood disorder and MDE for African American mothers but not for white mothers. Caribbean black mothers who reported no economic hardship had lower rates of lifetime mood disorder or MDE than those reporting extremely difficult economic hardship. Only among white mothers did teenage pregnancy increase rates of any mood disorder and MDE.

Mental Health Services Utilization for Black Mothers

Table 5 displays mental health services utilization rates across service sectors for black mothers with mood disorders. The majority (79.2%) of black mothers with a lifetime mood disorder utilized mental health services of any type. Less than half (45.8%) of black mothers with a mood disorder within the last 12 months utilized mental health services of any type. Across all mood disorders, black mothers with dysthymic disorder utilized services most frequently, while black mothers with bipolar disorder utilized services less frequently. Across all service sectors, black mothers with mood disorders utilized health care settings most frequently.

Ethnicity-specific mental health services utilization rates were examined for African American and Caribbean black mothers with mood disorders, as shown in Table 6. In the NSAL, treatment data were not collected for whites. Utilization rates for African American (52.1%) and Caribbean black

Table 4. Odds Ratios for Mothers' Mood Disorders in the NSAL Sample by Race

Characteristic	Lifetime Any Mood Disorder			Lifetime Major Depressive Episode		
	African American, OR [95% CI]	Caribbean Black, OR [95% CI]	White, OR [95% CI]	African American, OR [95% CI]	Caribbean Black, OR [95% CI]	White, OR [95% CI]
Education						
≤ 11 y	1.28 [0.93–1.77]	0.90 [0.26–3.10]	0.53 [0.17–1.70]	1.40 [0.97–2.03]	0.88 [0.24–3.23]	0.55 [0.17–1.75]
12 y	1	1	1	1	1	1
13–15 y	1.76 [1.22–2.54]*	2.30 [1.15–4.60]*	3.12 [1.40–6.95]*	1.80 [1.23–2.62]*	2.11 [1.00–4.47]	3.23 [1.46–7.17]*
16+ y	2.19 [1.33–3.59]*	1.93 [0.57–6.53]	1.83 [0.55–6.08]	2.85 [1.73–4.69]*	2.10 [0.58–7.60]	1.92 [0.58–6.33]
Marital status						
Married/partner	1	1	1	1	1	1
Separated/divorced/ widowed	1.06 [0.76–1.47]	1.79 [0.67–4.80]	1.75 [0.61–5.00]	1.14 [0.78–1.64]	1.65 [0.67–4.08]	1.77 [0.61–5.12]
Never married	1.10 [0.76–1.60]	2.64 [1.24–5.64]*	0.65 [0.20–2.14]	1.26 [0.86–1.84]	2.56 [1.22–5.40]*	0.66 [0.20–2.20]
Economic hardship[a]						
Extremely difficult	1	1	1	1	1	1
Very difficult	0.71 [0.39–1.29]	0.51 [0.09–3.00]	1.73 [0.28–10.89]	0.69 [0.37–1.30]	0.48 [0.08–2.73]	2.09 [0.32–13.49]
Somewhat difficult	0.55 [0.31–0.98]*	0.38 [0.08–1.83]	1.60 [0.23–11.25]	0.48 [0.26–0.89]*	0.33 [0.07–1.59]	1.93 [0.24–15.57]
Slightly difficult	0.39 [0.22–0.68]*	0.33 [0.08–1.43]	1.69 [0.16–17.61]	0.35 [0.19–0.65]*	0.26 [0.06–1.05]	2.05 [0.18–23.50]
Not at all	0.23 [0.13–0.41]*	0.15 [0.03–0.83]*	0.82 [0.11–5.94]	0.22 [0.12–0.40]*	0.13 [0.02–0.74]*	1.00 [0.13–7.67]
Household size	1.06 [0.95–1.19]	0.91 [0.76–1.10]	1.03 [0.73–1.45]	1.05 [0.92–1.20]	0.95 [0.79–1.14]	1.04 [0.73–1.46]
No. of living children	1.00 [0.96–1.04]	0.94 [0.82–1.08]	0.92 [0.75–1.14]	1.00 [0.97–1.05]	0.95 [0.83–1.09]	0.92 [0.75–1.14]
Age at first birth (teenage mother or not)						
Not teenage mother	1	1	1	1	1	1
Teenage mother	1.25 [0.92–1.70]	1.51 [0.89–2.56]	1.74 [1.01–2.98]*	1.24 [0.91–1.70]	1.78 [0.92–3.44]	1.78 [1.02–3.10]*

[a]Refers to a respondent's answer to the question, "How difficult is it for (you/your family) to meet the monthly payments on your (family's) bills?"
*Significant at $P = .05$.
Abbreviation: NSAL = National Survey of American Life: Coping With Stress in the 21st Century.

Table 5. Mental Health Service Use of African American and Caribbean Black Mothers in the NSAL Sample by Disorder

Provider of Mental Health Service	Any Mood Disorder, % (SE)	Major Depressive Episode, % (SE)	Dysthymic Disorder, % (SE)	Bipolar Disorder, % (SE)
12 mo	n = 234	n = 198	n = 55	n = 65
Any	45.84 (3.88)	48.80 (3.88)	53.00 (9.30)	39.20 (9.25)
Health care sector	35.31 (4.63)	38.45 (4.75)	40.54 (8.55)	30.30 (9.01)
Specialty mental health[a]	23.96 (3.82)	25.68 (4.07)	22.47 (8.35)	17.30 (5.20)
General medical[b]	22.92 (3.80)	26.09 (4.24)	25.45 (6.53)	19.62 (7.29)
Human services sector[c]	15.91 (2.69)	17.63 (3.04)	11.46 (5.28)	7.95 (5.21)
Lifetime	n = 428	n = 372	n = 88	n = 100
Any	79.21 (2.53)	80.83 (2.56)	91.24 (2.57)	77.12 (5.82)
Health care sector	70.55 (2.97)	71.71 (2.92)	82.39 (4.52)	68.82 (6.45)
Specialty mental health[a]	51.65 (2.65)	52.31 (2.38)	62.43 (5.70)	51.25 (5.90)
General medical[b]	39.24 (3.36)	41.19 (3.45)	51.27 (6.40)	31.54 (6.58)
Human services sector[c]	21.42 (1.81)	22.13 (1.97)	18.19 (5.03)	18.91 (4.15)

[a]Psychiatrists, psychologists, counselors and social workers seen in mental health settings, other mental health professionals, and mental health hotlines.
[b]General practitioners, family doctors, nurses, occupational therapists, and other health professionals.
[c]Religious and spiritual advisors, counselors, and social workers seen in non–mental health settings.
Abbreviation: NSAL = National Survey of American Life: Coping With Stress in the 21st Century.

Table 6. Mental Health Service Use by Ethnicity Among Mothers in the NSAL Sample

Disorder	African Americans		Caribbean Blacks	
	12 mo, %	Lifetime, %	12 mo, %	Lifetime, %
Any mood disorder	24.24	52.08	18.17	44.31
Major depressive episode	26.09	52.63	17.70	47.32
Dysthymic disorder	22.48	61.54*	21.04	84.11
Bipolar disorder	16.06*	51.09	60.35	55.40

*Significant at $P = .05$.
Abbreviation: NSAL = National Survey of American Life: Coping With Stress in the 21st Century.

(44.3%) mothers with lifetime mood disorders did not differ between groups. Among African American and Caribbean black mothers with any mood disorder within the last 12 months, 24.2% and 18.2%, respectively, utilized mental health services. Among black mothers with a lifetime diagnosis of dysthymic disorder, Caribbean black mothers (84.1%) were more likely to utilize mental health services than African Americans (61.5%, $P < .05$). There were no ethnic differences in mental health utilization for mothers with MDE. For black mothers with 12-month diagnosis of bipolar disorder, Caribbean blacks (60.4%) utilized mental health services at higher rates than African Americans (16.1%, $P < .05$).

DISCUSSION

This study revealed racial and ethnic group differences in lifetime and 12-month prevalence rates for mood disorders among mothers. White mothers had higher rates of lifetime mood disorders and MDE than African American and Caribbean black mothers.

Similar racial and ethnic group differences were found for lifetime MDD prevalence rates in the full NSAL sample.[19] Lower rates of lifetime MDE for African Americans compared to whites have also been demonstrated with data from the NCS-R study.[27,28] However, 12-month prevalence rates for MDE were equivalent across the racial/ethnic groups, a pattern that had been observed in the NSAL and NCS-R samples.[19,28] Consistent with other epidemiologic studies, lifetime MDE rates are higher than 12-month rates across ethnic groups.[29] Within the NSAL, mothers had slightly higher rates of lifetime MDE than the full sample and the females.[19] Nevertheless, mothers in our sample had a similar rate of 12-month MDD as mothers in a recent Canadian epidemiologic study (6.2%).[30]

Given our findings with MDD, it was surprising that African American mothers had higher rates of bipolar disorder than white and Caribbean black mothers. Nonetheless, racial and ethnic examination of the NCS-R study similarly demonstrated that African Americans in general experienced higher lifetime rates of bipolar disorder than whites.[27] On the other hand, another investigation of the NCS-R data did not find race to be associated with bipolar I and II.[31] However, the NCS-R study did not identify Caribbean blacks separately from African Americans; this lack of differentiation may be the source of this difference. As the current study examined only mothers, an explanation for the racial difference is that African Americans with bipolar disorder may be more likely to be parents than whites with bipolar disorder. A report from a bipolar disorder registry showed that African Americans with bipolar disorder had a significantly greater number of children than whites with bipolar disorder.[32] Future studies will need to explore whether there are differences in being a parent among individuals with bipolar disorder.

The patterns of onset of mood disorders and birth of the first child differed according to the type of mood disorder. The onset of MDD and dysthymic disorder more commonly occurred prior to having children. On the other hand, the onset of bipolar disorder occurred more often after the mothers had their first child. Contrary to our findings, empirical evidence shows that onset of MDD occurs later than bipolar disorder in the general population.[33,34] It is not clear if childbirth may have been a precipitating factor in the development of bipolar disorder. The onset of bipolar disorder after childbirth may be indicative of later onset, which has been associated with lesser severity of the disorder.[35] There is emerging evidence that women may not receive accurate bipolar disorder diagnosis until after they give birth, suggesting the complexity in diagnosing bipolar disorder.[36,37]

African American mothers with at least a college degree had a higher risk of lifetime mood disorder and MDE than African American mothers with less education. This association was not observed for white and Caribbean black mothers. The NCS-R study found that individuals who did not complete high school were at greater risk for lifetime MDD,[28] which was contrary to our findings. Our results suggest that there are particular risks for depression among educated African American mothers. However, there is a paucity of research that contributes to understanding the psychological experiences of this group of women. Specifically, there are health disparities in birth outcomes, as college-educated African American women have higher rates of low birth weight and preterm births compared with similarly educated white women.[38–40] Similar underlying processes may account for both greater depression and more problematic birth outcomes for the more educated African American women. Higher education for blacks may not represent economic advantages similar to those gained by whites who pursue higher education. This is consistent with a diminishing returns hypothesis suggesting that economic and educational gains for African Americans do not reap the same health benefits as they do for whites.[41] Another explanation is that higher educated African American mothers may be exposed to greater levels of racism, as they could live and work in more integrated environments compared to lower educated African American mothers, thereby leading to greater depression. Additionally, higher educated African American women may be more willing to acknowledge their depressive symptoms.

Teenage motherhood was associated with increased risk of lifetime mood disorders and MDE, but only for whites. In a 4-year longitudinal study of adolescent mothers, African Americans had the lowest prevalence of moderate to severe depressive symptoms in comparison to whites and Mexican Americans.[42] Similarly, in the National Early Head Start Research and Evaluation Project, younger adolescent mothers reported more depressive symptoms than older adolescent and adult mothers only among whites.[43] Eshbaugh[43] stated that white adolescent mothers interpret early motherhood as missing opportunities and being less normative than other racial and ethnic groups. Together, these findings suggest a particular risk of mood disorders for white mothers who experience early teen childbearing.

Access to the mental health care system is important for treating psychiatric disorders. However, our findings illustrated treatment underutilization, especially for past 12-month mood disorders and bipolar disorder diagnoses. For 12-month MDE, African American and Caribbean black mothers' treatment rate was similar to that found in pooled data from the National Institute of Mental Health Collaborative Psychiatric Epidemiology Survey; 51.9% of African Americans with past-year MDD or dysthymic disorder received treatment.[44] Weissman and colleagues[45] found that 75% of depressed mothers had received treatment in their lifetime while 49% of the depressed mothers had received treatment in the past month within an urban general medicine practice. Contrary to the examination of the NSAL dataset by Woodward et al,[46] which found no overall ethnic differences in services utilization, we found that Caribbean black mothers with dysthymic and bipolar disorders utilized services more often than African American mothers with similar disorders. The present study showed

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that approximately 50% of mothers with lifetime mood disorder diagnoses and 25% of mothers with past-year diagnoses used specialty mental health care.

There are several limitations to the results, many of which affect all social surveys. The data are cross-sectional, and it is not possible to identify causal associations among the factors examined. It is also not possible to distinguish the association of factors related to the onset of mood disorders from those related to the duration of the disorder. The assessment of the presence of symptoms was based on self-reports. We do not know the extent to which cultural factors could affect the willingness of our respondents to either admit or recall the presence of symptoms over their lifetime. Additionally, there is the more generic problem of impaired memory recall that could affect subgroups (based on age or education, for example) of our sample differentially. Our sample of Caribbean blacks includes immigrants who have had varying lengths of stay in the United States and persons of Caribbean ancestry who were born in the United States and have no strong knowledge of or identification with Caribbean culture. This study does not take into account comorbidity of mood disorders with other psychiatric diagnoses, which could impact clinical presentation of disorders as well as utilization of mental health services. Finally, the results may be impacted by the small samples, as comparisons are made of diagnoses, ethnicity, and treatment among mothers.

In conclusion, engaging and adequately treating mothers with mood disorders is critical. There may be large intergenerational benefits, since there is some evidence that treating mood disorder in mothers can influence child psychiatric outcomes.[47] A fundamental implication of this study is that more attention should be paid to African American mothers with bipolar disorder. The higher prevalence rate among the mothers, coupled with their reduced use of services, demonstrates a significant need.

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