Disparity in Depression Treatment Among Racial and Ethnic Minority Populations in the United States

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Objective: **Prior research on racial and ethnic disparities in depression treatment has been limited by the scarcity of national samples that include an array of diagnostic and quality indicators and substantial numbers of non–English-speaking individuals from minority groups. Using nationally representative data for 8,762 persons, the authors evaluated differences in access to and quality of depression treatments between patients in racial-ethnic minority groups and non-Latino white patients.** ***Methods:*** **Access to mental health care was assessed by past-year receipt of any mental health treatment. Adequate treatment for acute depression was defined as four or more specialty or general health provider visits in the past year plus antidepressant use for 30 days or more or eight or more specialty mental health provider visits lasting at least 30 minutes, with no antidepressant use.** ***Results:*** **For persons with past-year depressive disorder, 63.7% of Latinos, 68.7% of Asians, and 58.8% of African Americans, compared with 40.2% of non-Latino whites, did not access any past-year mental health treatment (significantly different at $p<.001$). Disparities in the likelihood of both having access to and receiving adequate care for depression were significantly different for Asians and African Americans in contrast to non-Latino whites.** ***Conclusions:*** **Simply relying on present health care systems without consideration of the unique barriers to quality care that ethnic and racial minority populations face is unlikely to affect the pattern of disparities observed. Populations reluctant to visit a clinic for depression care may have correctly anticipated the limited quality of usual care. (*Psychiatric Services* 59:1264–1272, 2008)**

To respond to the Public Health Service's Healthy People 2010 initiative for minority populations, investigators must first ascertain at a national level the magnitude of disparities in service utilization for depression. Despite recent advances in the treatment of mental illness and considerable efforts to improve quality of and access to treatment (1), there appears to be a significant mismatch between need and treatment in the United States (2). There is controversy about disparities in quality of care (3) at a national level, because on that large overall scale there are few ethnic and racial disparities for some chronic conditions. Yet there is evidence of striking quality disparities across some groups for psychiatric conditions (4–6). Part of the discrepancy comes from differences in the ethnic and racial groups studied, whether studies are regional or national, and whether the assessment of need for depression care used diagnostic interviews versus screeners for depression.

Prior work on racial and ethnic disparities in depression treatment has been limited by the scarcity of national samples that include a rich array of diagnostic and quality indicators and large numbers of non–English-speaking minority respondents. With this study we took advantage of a unique opportunity to estimate disparities in

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access to and quality of depression care by using pooled data from the National Institute of Mental Health Collaborative Psychiatric Epidemiology Surveys (CPES) (7). The three studies that constitute the CPES include the same measures of need and quality, include significant numbers of non–English-speaking persons belonging to racial and ethnic minority groups, and are the most current and comprehensive available to study depression treatment for racial and ethnic minority populations. Using a system cost-effectiveness framework (8, 9), we evaluated whether individuals who could benefit from depression treatment were either not treated or inadequately treated. By this framework, not treating people who could benefit from treatment is a missed opportunity to improve health, and treating people who do not need care increases spending without commensurate health effects.

Methods

The CPES combined sample

The University of Michigan Survey Research Center (SRC) collected data for the National Latino and Asian American Study (NLAAS), collected between 2003 and 2003 (10); the National Comorbidity Survey Replication (NCS-R), collected between 2001 and 2003 (11); and the National Survey of American Life (NSAL), collected between 2001 and 2003 (12). Together, these studies are known as the CPES, and they used an adaptation of a multiple-frame approach to estimation and inference for population characteristics (13,14). This allows integration of design-based analysis weights to combine data sets as though they were a single, nationally representative study (7). Design and methodological information can be found at the CPES Web site (7).

Each study in CPES focused on collection of epidemiological data on mental disorders and service usage of the general population, with special emphasis on minority groups (15). Interviews for the studies were conducted by professional interviewers from the SRC, with 92.5% of interviews in English and 7.5% in other languages (Spanish, Mandarin, Cantonese, Tagalog, and Vietnamese). As described in detail elsewhere (16), the NLAAS is a nationally representative survey of household residents age 18 and older in the noninstitutionalized Latino and Asian populations of the coterminous United States. The final sample included 2,554 Latinos and 2,095 Asian Americans. The weighted response rates were 73.2% for the total sample, 75.5% for Latinos, and 65.6% for Asians (17).

The NCS-R is a nationally representative sample with a response rate of 70.9%. Eligible respondents were English-speaking, noninstitutionalized adults age 18 or older living in civilian housing in the coterminous United States. The NCS-R was administered in two parts. Part 1 was administered to all English-speaking respondents and included core diagnostic assessments. A subset of part 1 respondents also completed part 2 of the survey, which included additional batteries of questions addressing service use, consequences, and other correlates of psychiatric illness and additional disorders, with measures identical to those in the NLAAS.

The NSAL is a nationally representative survey of household residents in the noninstitutionalized black population and included 3,570 African Americans and 1,621 black respondents of Caribbean descent. The NSAL response rate was 70.9% for the African-American sample and 77.7% for the black Caribbean sample (18). Interviews were done in English. We used a pooled sample (N=8,762) of data from Asians and Latinos from the NLAAS, non-Latino whites from the NCS-R part 2, and African Americans from the NSAL. Race and ethnicity categories were based on respondents' self-reports to questions based on U.S. census categories. The institutional review boards of all participating institutions approved all study procedures.

Diagnostic assessment

In the CPES, the presence of psychiatric disorders over a person's lifetime and in the past 12 months, and the presence of subthreshold depressive disorder or minor depressive disorder were evaluated via the World Mental Health survey initiative's World Health Organization Composite International Diagnostic Interview (WMH-CIDI) (19). Diagnoses are based on *DSM-IV* diagnostic systems. Findings showed good concordance between *DSM-IV* diagnoses based on the WMH-CIDI and the Structured Clinical Interview for DSM-IV Axis I Disorders (20). Using the WMH-CIDI (19), we classified the pooled sample, who responded to the NLAAS, NCS-R part 2, or NSAL, into five groups: currently depressed respondents, who met criteria for a past-year diagnosis of major depression or dysthymia (N=1,082); respondents with subthreshold symptoms, who did not meet criteria for a past-year diagnosis of major depression or dysthymia (N=158); lifetime depressed respondents, who met criteria for lifetime major depression or dysthymia but who did not meet criteria for past-year depression or dysthymia (N=1,230); respondents who met past-year criteria for disorders other than depression (N=919); and the no-need group, respondents who did not meet past-year criteria for any psychiatric or substance use disorder assessed (N=7,680).

Our main sample for estimating disparities in access included the 8,762 respondents who belonged to the first and fifth groups—those with current depression (N=1,082) and the no-need group (N=7,680). In models of disparities in the quality of depression treatment, our sample was further limited to 880 respondents who used services in the past year. Sensitivity analyses for access to and quality of depression care yielded an additional 158 persons with subthreshold symptoms, whom we considered in the sensitivity analyses as respondents with depression.

Role impairment and chronic medical conditions

Functional impairment was measured by the World Health Organization Psychiatric Disability Assessment Schedule (21). For the domains of cognition, mobility, self-care, and social functioning, we asked the number of days in the past 30 when health-related or mental health–related problems restricted ability to carry out related tasks. We measured the number of chronic medical conditions on the basis of respondents' endorsement of any of the following over their lifetime:

arthritis or rheumatism, an ulcer in the stomach or intestine, cancer, high blood pressure, diabetes or high blood sugar, heart attack, stroke, asthma, tuberculosis, any other chronic lung disease, HIV infection, or AIDS.

Access to and quality of depression treatment

All CPES respondents were asked the same battery of questions about past-year mental health services and use of prescription medication (name of medication, length of use in the past year, and number of days that medication was used in the past month) for problems related to their emotions, nerves, substance use, energy, concentration, sleep, or ability to cope with stress. To define access to mental health care, we assessed whether the respondent received any mental health treatment, defined as at least one visit to a specialty mental health provider or general medical provider for mental health care in the past year. General medical sector providers included general practitioners, family doctors, nurses, occupational therapists, or other health professionals providing care for a mental health problem. Specialty mental health sector providers included psychiatrists, psychologists, counselors, social workers, or other mental health professionals seen in a mental health setting. Although no validity or reliability data are available, these measures were adapted from measures used in the NCS (22,23) and were included as core measures in all of the CPES instruments.

To characterize quality of depression treatment, we conceptually drew on the Institute of Medicine (24) definition of quality of care: "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (25). Assessment of quality of depression care was derived from respondents' reports of past-year service use (26). Quality of treatment for acute depression was defined according to Wang and colleagues' (26) use of a binary variable, with a score of 1, indicating adequate treatment, assigned if a patient had four or more specialty or general health provider visits in the past year plus antidepressant use for 30 days or more or if the patient had eight or more specialty mental health provider visits in the past year lasting at least 30 minutes. This measure of quality has also been used extensively in other studies of health disparities (27–29). In sensitivity analyses, we recognized that some respondents in different stages of the course of their illness may have been appropriately receiving maintenance care, so we considered an alternative, broader quality indicator of four or more mental health visits in the past year with any type of formal provider.

Statistical analyses

We used a two-stage regression model; the first stage estimated correlates of access to any mental health treatment in the past year, and the second estimated correlates of quality depression treatment in the past year for those who had received any mental health care. We estimated a short specification of this model, with adjustments only for need and correlates of need classified in the literature on racial and ethnic disparities. Adjustments were made for age and sex (6,30), number of chronic conditions, and level of impairment. We also estimated an extended specification of the model, which added adjustments for marital status, education, insurance, poverty, and region. The poverty measure was constructed through an income-to-needs ratio according to the definition provided by the U.S. Census Bureau (31). When household income was less than family needs (determined by family size and household income specified in the Census definition), a family was considered to be in poverty. To emphasize the resource allocation issue, we present odds ratios (ORs) that distinguish between ethnic and racial differences among those with depression and ethnic and racial differences among those without depression.

Next, results from the extended specification were used to estimate the total disparity in accessing care and receiving quality care for each minority group compared with non-Latino whites. Using the two-stage model estimates and the distribution of covariates from the white population, we generated predicted probabilities of accessing treatment and receiving quality treatment for each racial-ethnic and depression subgroup. This approach allowed us to answer the hypothetical question: what level of treatment would persons in this minority group receive if they had the same characteristics as non-Latino whites? McGuire and colleagues (30) used a similar approach to compute racial and ethnic disparities in outpatient mental health expenditures. In our study, minority individuals were given the non-Latino white distribution for all covariates. We adjusted for variables associated with social class, such as poverty, insurance coverage, and education, to disentangle the effect of social class variables from those of ethnicity and race.

We used the bootstrap method to obtain 95% confidence intervals (CIs) in predicting probabilities of disparity in depression care between each racial and ethnic group and the non-Latino white group. For example, we predicted the treatment that Latinos with depression would receive if they had the same distribution of covariates as non-Latino whites with depression. (32). All analyses were conducted with Stata 9.2 statistical software (33). Models were adjusted for sampling design through a first-order Taylor series approximation, and significance tests were performed with design-adjusted Wald tests (34–36).

Results

Table 1 shows that there were striking racial and ethnic differences in sample characteristics, including much higher rates of poverty and lower rates of health insurance coverage among all racial and ethnic minority groups compared with non-Latino whites. Latinos and Asians were much more likely than non-Latino whites and African Americans to live in the West, and African Americans were more likely than other groups to live in the South. Current depression was more prevalent among non-Latino whites compared with persons in racial and ethnic minority groups. For example, the prevalence of past-year depressive disorders was 5.4% for Asians and 11.2% for non-Latino whites. Table 2 shows that among those with any depressive disorder in the past 12 months, 63.7% of Latinos,

Table 1

Sample characteristics of 8,762 respondents to surveys in the Collaborative Psychiatric Epidemiology Surveys[a]

	Combined sample (N=8,762)		Non-Latino whites (N=2,834)		Latinos (N=1,603)		Asians (N=1,435)		African Americans (N=2,890)		
Characteristic	M	SE	M	SE	M	SE	M	SE	M	SE	p
Age category (%)											<.001
18–34	30.6	1.2	26.6	1.6	50.1	2.1	39.3	1.8	36.4	1.5	
35–49	29.6	1.0	28.8	1.3	28.9	1.4	32.5	2.0	33.3	.9	
50–64	21.0	1.1	22.8	1.5	12.3	1.0	17.6	1.4	18.6	1.0	
≥65	18.8	1.1	21.8	1.5	8.7	1.0	10.6	1.9	11.7	.8	
Sex (%)											<.05
Male	48.7	1.0	48.8	1.4	52.8	1.7	48.7	1.6	45.4	1.0	
Female	51.3	1.0	51.2	1.4	47.2	1.7	51.3	1.6	54.6	1.0	
Marital status (%)											<.001
Married or cohabitating	60.2	1.1	62.2	1.4	64.7	1.6	70.3	2.1	43.0	1.1	
Divorced, separated, or widowed	19.3	.7	19.4	.9	14.5	1.1	8.0	1.0	25.4	.9	
Never married	20.5	1.1	18.4	1.5	20.7	1.4	21.7	1.6	31.6	1.5	
College education (%)											<.001
No	75.9	1.1	73.1	1.5	90.2	1.2	58.3	2.1	85.8	1.2	
Yes	24.1	1.1	26.9	1.5	9.8	1.2	41.7	2.1	14.2	1.2	
Poverty (%)											<.001
No	87.4	.6	91.2	.7	73.9	2.1	83.7	1.4	77.5	1.4	
Yes	12.6	.6	8.8	.7	26.1	2.1	16.3	1.4	22.5	1.4	
Type of insurance (%)											<.001
Not insured	12.7	.8	8.8	.9	34.8	2.9	12.8	1.3	17.5	1.0	
Private through employer	56.0	1.2	58.3	1.5	39.4	2.6	57.4	2.0	55.4	1.3	
Privately purchased	4.3	.4	4.6	.5	2.8	.6	8.9	1.0	2.0	.2	
Medicare	20.3	1.1	23.4	1.5	9.9	1.1	11.0	1.7	13.7	.7	
Medicaid	4.2	.3	2.5	.4	11.3	1.2	5.2	.9	8.2	.8	
Other	2.5	.3	2.3	.5	1.8	.4	4.7	1.0	3.2	.5	
Region (%)											<.001
Northeast	19.6	2.7	20.6	3.6	18.6	2.1	18.3	4.1	15.5	1.1	
Midwest	24.6	1.9	28.8	2.7	9.0	1.9	8.9	2.5	17.1	1.4	
South	34.0	2.4	31.6	3.2	31.0	5.4	7.8	2.1	57.4	2.2	
West	21.7	2.0	19.0	2.6	41.3	4.5	65.1	4.9	9.9	.9	
Number of chronic conditions (%)											<.001
0	48.0	.9	45.3	1.0	66.4	2.1	60.8	1.8	45.6	1.1	
1	25.6	.6	26.0	.8	19.9	1.7	25.5	1.6	27.9	.9	
≥2	26.4	.7	28.8	.9	13.7	1.3	13.7	1.1	26.5	1.0	
WHO-DAS[b]											
Days out of role because of mental problems[c]	.29	.03	.24	.04	.27	.05	.07	.02	.65	.08	<.001
Cognition score[d]	.90	.07	.91	.09	.70	.14	.34	.07	1.18	.13	<.001
Mobility score[d]	4.47	.29	4.96	.38	2.60	.42	1.20	.27	4.07	.28	<.001
Self-care score[d]	.89	.15	.95	.20	.80	.17	.20	.07	.78	.11	<.001
Social functioning score[d]	.55	.06	.55	.08	.32	.12	.14	.05	.79	.12	<.001
Role functioning score[d]	9.56	.39	9.36	.50	7.13	.62	5.32	.57	13.70	.72	<.001
Disorder category (%)											<.001
Any depressive disorder in the past 12 months[e]	10.6	.5	11.2	.6	10.8	.9	5.4	.9	8.0	.6	
No depressive disorder in the past 12 months	89.4	.5	88.8	.6	89.2	.9	94.6	.9	92.0	.6	

[a] Data were from the National Latino and Asian American Study (for Latinos and Asians), the National Comorbidity Survey Replication (part 2 sample), and the National Survey of American Life (NSAL). This analysis focused on the non-Latino-white, Latino, Asian, and African-American samples, dropping Native Americans and persons designating their race and ethnicity as "other." Also excluded were respondents with a 12-month subthreshold depressive disorder, those with a lifetime depressive disorder but no 12-month depressive disorder, those who had a nondepressive diagnosis only, as well as NSAL respondents who did not complete all diagnosis batteries. Observations with any missing values were dropped.

[b] Wald tests were conducted for disability assessment variables from the World Health Organization Psychiatric Disability Assessment Schedule

[c] Based on number of days within the past 30 days. Possible scores range from 0 to 30, with higher scores indicating maximum disability.

[d] Possible scores range from 0 to 100, with higher scores indicating maximum disability.

[e] Includes *DSM-IV*–defined dysthymia and major depressive episode

68.7% of Asians, and 58.8% of African Americans, compared with 40.2% of non-Latino whites, did not access any mental health treatment in the past year (p<.001). Among respondents with depression, those in minority groups also were significantly less likely than non-Latino whites to have received adequate care in the past year (p<.001) (Table 2). Although, as would be expected, most individuals without depression received no treatment, 3.2% of non-Latino whites without past-year depression (or lifetime or subthreshold depression) made four or more provider visits and received 30 days or more of antidepressant treatment, which compares with .7% of Latinos, 1.2% of Asians, and 1.3% of African Americans (p<.001) (Table 2).

All minority groups with 12-month depressive disorder were significantly less likely than non-Latino whites to receive any mental health care, after analyses adjusted for other factors (Table 3). Similarly, after adjustment for other factors, racial or ethnic minority individuals without depression were less likely than non-Latino whites without depression to receive any treatment. In sensitivity analyses, in which we included the subthreshold depression data and classified these respondents as having depression, the findings were very similar to those discussed here (results not shown).

Among those with depression who accessed any care, we found that although there were statistically significant racial and ethnic differences in the quality of care as a whole, only the difference between African Americans and non-Latino whites was statistically significant (Table 3). That is, African Americans who used services in the prior year had appreciably lower odds of receiving adequate depression care compared with whites (OR=.24, 95% CI= 14–.42). In two alternative sensitivity analyses, these models were reestimated independent of antidepressant medication with the inclusion of the subthreshold cases and with the looser definition of quality of depression care—the indicator of whether respondents received at least four visits with any formal mental health provider in the past year. The findings were similar to the others. Estimates based on analyses of specific racial and ethnic subsamples rather than a pooled sample yielded similar findings (not shown).

Table 4 shows racial and ethnic differences in predicted probabilities of accessing treatment and receiving adequate treatment for depression based on the extended model for each racial-ethnic subgroup and depression subgroup, if every minority group had the same distribution of covariates as the non-Latino whites. Among non-Latino whites with depression, 33.4% were predicted to access treatment and receive adequate depression care, compared with 25.0% of Latinos, 18.9% of Asians, and 10.4% of African Americans (significantly different for Asians and African Americans at p<.05 and marginally significant for Latinos at p<.07). Among those without depression, 3.1% of non-Latino whites were predicted to access treatment and receive adequate treatment for acute depression; the predicted rates were much lower among racial and ethnic minority groups (Table 4). Latinos, Asians, and African Americans with depression were on average nine to 23 percentage points less likely to access mental health treatment and receive adequate depression treatment than non-Latino whites with similar observed characteristics.

Discussion

The results of these analyses highlight that disparities in access to and quality of care for ethnic and racial minority populations remain a critical issue in mental health care. All racial and ethnic minority groups were significantly less likely than non-Latino whites to receive access to any mental health treatment. The observed findings reflect that ethnicity and race, even after adjustment for social class–related variables, such as poverty, insurance coverage, and education, still had an independent effect on access to depression treatment. Several factors could account for the problem in access for persons with minority status. First, there was significant underdetection of depression

Table 2

Quality of treatment for respondents with or without a depressive disorder in the past 12 months[a]

Disorder status and racial or ethnic group	N	No treatment %	No treatment SE	Inadequate treatment %	Inadequate treatment SE	Adequate treatment %	Adequate treatment SE
Any depressive disorder[b]	1,082						
Non-Latino white	581	40.2	3.1	26.8	2.8	33.0	1.9
Latino	192	63.7	4.5	13.9	2.5	22.3	4.9
Asian	78	68.7	6.8	18.1	5.0	13.1	4.6
African American	231	58.8	3.2	29.0	3.1	12.1	2.5
No depressive disorder	7,680						
Non-Latino white	2,253	89.9	.6	7.0	.6	3.2	.3
Latino	1,411	96.2	.6	3.1	.5	.7	.3
Asian	1,357	96.2	.7	2.6	.6	1.2	.5
African American	2,659	94.9	.5	3.8	.4	1.3	.3

[a] A treatment provider could be from the general medical sector or specialty mental health sector or could be a counselor or social worker in a non–mental health setting. Wald tests to identify differences in each of the treatment types across the racial and ethnic groups were significant at p<.001. F tests to identify racial and ethnic differences for any of the treatment types were significant at p<.001.

[b] Includes *DSM-IV*–defined dysthymia and major depressive episode

Table 3

Logistic regression results for prediction of any depression treatment and adequate depression treatment conditional on receiving any treatment[a]

	Any depression treatment (N=994)						Adequate depression treatment (N=491)					
	Standard model[b]			Extended model[c]			Standard model[b]			Extended model[c]		
Variable	OR	95% CI	Wald[d]	OR	95% CI	Wald[d]	OR	95% CI	Wald[d]	OR	95% CI	Wald[d]
Race or ethnicity comparison												
With depression[e]												
Latino and non-Latino white	.52	.31–.89*	<.001	.47	.25–.88*	<.001	1.26	.45–3.55	<.001	1.21	.40–3.69	<.001
Asian and non-Latino white	.40	.18–.87*		.33	.14–.78*		.89	.29–2.69		.80	.24–2.74	
African American and non-Latino white	.34	.22–.52***		.33	.20–.55***		.22	.12–.41***		.24	.14–.42***	
Without depression[e]												
Latino and non-Latino white	.30	.19–.49***	<.001	.27	.15–.47***	<.001	.52	.17–1.63		.51	.17–1.55	
Asian and non-Latino white	.41	.27–.64***		.34	.21–.55***		.85	.26–2.75		.76	.24–2.40	
African American and non-Latino white	.37	.28–.50***		.33	.23–.46***		.52	.27–1.01		.56	.28–1.13	
Age (reference: 18–34)												
35–49	1.16	.94–1.43		1.18	.90–1.54		1.15	.70–1.89		1.14	.65–2.01	
50–64	1.10	.81–1.50		1.08	.73–1.61		1.02	.57–1.82		1.01	.50–2.06	
≥65	.55	.34–.88*		.20	.09–.45***		.45	.22–.95*		.49	.18–1.27	
Female (reference: male)	1.54	1.22–1.94***		1.48	1.17–1.88**		1.27	.76–2.12		1.29	.79–2.12	
Number of chronic conditions (reference: 0)												
1	1.46	1.04–2.03*		1.43	1.03–2.01*		.96	.61–1.50		.94	.61–1.44	
≥2	1.43	1.07–1.92*		1.31	.97–1.77		1.27	.81–2.02		1.30	.81–2.09	
WHO–Disability Assessment Schedule												
Days out of role >0	2.53	1.64–3.90***		2.32	1.43–3.75**		1.99	1.14–3.49*		2.04	1.20–3.48**	
Cognition >0	2.19	1.52–3.14***		2.17	1.61–2.91***		1.24	.83–1.86		1.28	.84–1.93	
Mobility >0	1.35	.92–1.99		1.28	.88–1.85		1.44	.93–2.24		1.51	.94–2.40	
Self-care >0	.98	.54–1.76		.84	.45–1.57		.66	.35–1.23		.65	.35–1.19	
Social functioning >0	1.08	.73–1.58		1.10	.76–1.59		.93	.57–1.51		.85	.53–1.37	
Role functioning >0	1.31	1.02–1.68*		1.33	1.02–1.74*		.94	.62–1.42		.99	.66–1.48	
Marital status (reference: married)												
Divorced, separated, or widowed				1.53	1.13–2.08**					1.16	.69–1.97	
Never married				1.27	.93–1.74					.95	.54–1.70	
College education (reference: no)				1.33	.99–1.77					1.41	.85–2.34	
Poverty below poverty threshold (reference: above threshold)				.86	.57–1.30					.79	.37–1.68	
Type of insurance (reference: not insured)												
Private insurance through employer				1.39	.90–2.13					1.25	.70–2.24	
Privately purchased insurance				1.40	.74–2.65					1.92	.66–5.59	
Medicare				4.22	1.96–9.09***					1.23	.46–3.33	
Medicaid				3.89	2.22–6.83***					1.79	.95–3.38	
Other				2.92	1.28–6.68*					2.38	.70–8.13	
Region (reference: Northeast)												
Midwest				.78	.56–1.10					.77	.46–1.29	
South				.95	.66–1.37					.82	.54–1.26	
West				1.13	.82–1.57					.99	.53–1.86	

[a] Regressions for any depression treatment were based on 8,762 observations, and regressions for adequate depression treatment were based on 880 observations.

[b] The standard model included covariates for race and ethnicity, age, sex, number of chronic conditions, and World Health Organization Disability Assessment Schedule scores.

[c] The extended model included covariates for race and ethnicity, age, sex, number of chronic conditions, and World Health Organization Disability Assessment Schedule scores, plus covariates for marital status, college education, poverty, insurance status, and region.

[d] Wald tests for joint significance were conducted to test for any differences across each characteristic for each of the treatment types.

[e] Includes *DSM-IV*–defined dysthymia and major depressive episode

*p<.05

**p<.01

***p<.001

Table 4

Access to and receipt of adequate treatment by depression status and racial and ethnic group[a]

Depression status and racial and ethnic group	Sample estimate (%)	Bootstrapped calculations (%)[b]		
		M	SE	95% CI
With depression				
Non-Latino white	33.4	33.3	2.3	28.9 to 37.9
Latino	25.0	24.6	4.1	16.7 to 32.7
Difference: Latino and non-Latino white	–8.5	–8.8	–4.7	.3 to –18.1
Asian	18.9	18.8	6.1	7.9 to 31.5
Difference: Asian and non-Latino white	–14.6	–14.5	–6.4	–1.3 to –26.1
African American	10.4	10.4	2.4	6.4 to 15.7
Difference: African American and non-Latino white	–23.0	–23.0	–3.2	–16.4 to –29.0
Without depression				
Non-Latino white	3.1	3.1	.4	2.3 to 3.9
Latino	.6	.6	.2	.3 to 1.2
Difference: Latino and non-Latino white	–2.5	–2.4	–.4	–1.6 to –3.3
Asian	1.0	1.0	.4	.4 to 2.0
Difference: Asian and non-Latino white	–2.1	–2.1	–.5	–1.0 to –3.0
African American	.8	.8	.2	.4 to 1.2
Difference: African American and non-Latino white	–2.3	–2.3	–.4	–1.4 to –3.2

[a] Includes *DSM-IV*–defined dysthymia and major depressive episode. Estimates of accessing care and receiving adequate treatment were calculated by each racial or ethnic group and by depression status. These estimates were generated from the extended-model regression specifications shown in Table 3.

[b] One thousand iterations were done in bootstrap. The 95% confidence intervals were obtained with a 2.5 percentile and 97.5 percentile of bootstrapped values of predicted probability.

among the less acculturated ethnic and racial minority groups (21). Current approaches that rely on providers to detect depression to facilitate its care may have limited effectiveness, given that most respondents (85%–90%) belonging to ethnic and racial minority groups had recent contact with the health care system in the past year but a majority still did not receive treatment for depression.

Helping clinicians identify depression for groups with these particular characteristics might be challenging. Data indicate that symptom presentation for mental health disorders varies across racial and ethnic groups and can differ from what most clinicians are trained to expect, resulting in clinical misdiagnoses (37). For example, Latinos are more likely to somatize psychiatric distress or to express psychiatric illness through cultural idioms of distress such as *ataques de nervios* (38). Second, losing pay from work (39) or the stigma that surrounds mental illness (40) may constrain service utilization in racial and ethnic minority communities that are subject to unstable and temporary employment and that are overrepresented in low-wage jobs (41). For example, people of ethnic and racial minority groups have reported delays in seeking services because of inability to leave work or take time off from work because of lack of benefits (29). Third, an important factor discouraging minority members from accessing mental health services was their experience of mistreatment by mental health professionals (42– 45). For African Americans, Asians, and Latinos, mistrust of health care professionals and concerns about provider competence with their ethnic-racial group may decrease their sense of comfort in talking to professionals (31–33). Fourth, minority families appear less likely to recognize depression (46) or may feel that they can adequately provide care without formal providers (47). An individual with a mental illness and in a racial or ethnic minority group may be referred into mental health care only when the burden to the family creates undue stress and disruption. Patterns of differences in referral and treatment by providers have also been posited as a potential mechanism for such access disparities (48). Fifth, a limited workforce and insufficient funds result in inadequate support for mental health services in safety net settings (49). The Institute of Medicine committee defines the health care safety net as "those providers that organize and deliver a significant level of health care and other related services to uninsured, Medicaid, and other vulnerable patients." (50).

We also found that regardless of race or ethnicity, most people who accessed depression treatment received inadequate care, with African Americans being particularly unlikely to receive adequate care. This finding can be explained by qualitative analyses of responses of black community members that revealed that their experience of mistreatment and social exclusion by health professionals reverberated on future utilization and on community sentiments toward the mental health system (42). Disparities resulting from barriers to effective communication between racially mismatched patients and providers, particularly for African Americans, may be leading to greater discordance regarding a shared understanding of disease causation and effectiveness of treatments

(51) and consequently substantial concerns about pharmacological treatments, thereby exacerbating unmet need among African Americans.

There are certain limitations of this study. The cross-sectional nature of the design does not permit us to identify possible causal directions of the findings. The diagnostic and service utilization data are based on self-reports, which may be subject to incomplete information, particularly if patients did not know whether they were being prescribed an antidepressant. Persons from ethnic and racial minority populations, because they are less likely to discuss their treatment with their provider, may be unaware that they are being treated for depression (24). A further limitation is that no psychometric data are available for the access or quality measures used in this study. However, as mentioned above, these measures were adopted from the NCS (22,23) and have been widely used in mental health services research. As a result, they were included as core measures in the CPES instruments. Regardless, studies assessing the psychometric properties of these measures are needed. Another limitation of this study is that the data in the racial category "other" could not be disaggregated by ethnic subgroup or by geographic location of cities because of small samples. Only certain minority groups were included in the study, but these were better defined and were represented by larger samples than is the case in most national studies. Finally, after we adjusted the characteristics of the minority groups to be the same as those of the non-Latino white population, the disparity estimates were strongly model based, and therefore a different model might lead to a different estimate. Future studies will permit more fine-grained analyses of the factors linked to these disparities. Regardless of these limitations, the findings paint a stark, recent picture of care for depression among racial and ethnic minority populations in the United States and clearly point to areas in need of further sustained attention.

An important area for further research includes understanding what "depression treatments" represent when received by non-Latino whites without apparent depression or other measured mental disorders. This pattern could represent treatment for social problems or general psychological distress, overuse of depression treatments, or appropriate use of antidepressant medications for other medical conditions, such as fibromyalgia, painful diabetic neuropathy, migraines, and chronic back pain (52–54). To the extent that the supply of depression treatments is limited, it may be important to consider how to best distribute those resources across populations that differ in access to quality services, especially for sicker individuals. Future research could evaluate whether use of mental health services by those with no assessed need for care competes with access to treatment for patients in minority groups, possibly limiting their access to mental health providers.

Conclusions

Our findings shift the debate to developing policy, practice, and community solutions to address the barriers that generate these disparities. Simply relying on current systems, without considering the unique barriers to high-quality care that apply for underserved ethnic and racial minority populations, is unlikely to affect the pattern of disparities we observed. For example, populations that have been reluctant to come to the clinic for depression care may have correctly anticipated the limited benefits of usual care. One possible point of intervention is the use of quality improvement programs to increase quality of care among minority groups. Results from a randomized clinical trial demonstrated that a practice-initiated quality improvement intervention for primary care patients with depression improved the rate of appropriate care for depression for whites and underserved minorities alike (28,55). Programs such as this one provide plausible strategies for combating disparities in depression care. Policy changes might include increased resources for mental health services in safety net clinics. Practice changes might include training nurses in motivational interviewing or in routinely implementing evidence-based quality improvement programs for depression. Community strategies might include home visits by peer counselors to engage patients in understanding the importance of treatment or ancillary services (such as transportation, child care, and patient advocacy) that facilitate access to care. Future research should focus on developing and evaluating the promise of such strategies.

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