

Effects of Primary Care Depression Treatment on Minority Patients' Clinical Status and Employment

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Background: The response of ethnic minorities to mental health care is largely unstudied.

Objective: To determine the effect of appropriate care for depression on ethnic minorities.

Design: Observational analysis of the effects of evidence-based depression care over 6 months on clinical outcomes and employment status is examined for ethnic minorities and nonminorities. Selection into treatment is accounted for using instrumental variables techniques, with randomized assignment to the quality improvement intervention as the identifying instrument.

Setting: Six managed care organizations across the United States.

Patients: One thousand three hundred fifty-six depressed adults, including 601 white, 258 Latino, 56 African American, and 24 Asian or Native American patients.

Intervention: Quality improvement interventions aimed at increasing guideline-concordant depression care.

Results: At 6 months, minority patients who received appropriate care, compared with those who did not receive it, had lower rates of probable depressive disorder (20.5% vs 70.5%); the findings were similar for nonminority patients (24.3% vs 71.2%). Nonminority patients who received appropriate care were found to have higher rates of employment than were those who did not receive appropriate care (71.4% vs 52.4%). This was not true of minority patients (68.2% vs 56.5%).

Conclusions: Evidence-based care for depression is equally effective in reducing depressive disorders for minority and nonminority patients. However, functional outcomes of care, such as continued employment, may be more limited for minority than nonminority patients. Because minority members are less likely to get appropriate care, efforts should be made to engage minority members in effective care for depression.

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ETHNIC MINORITIES COMPOSE an increasingly large portion of the US population, roughly 30% in 2000, with projections nearing 40% by 2050.¹ Meeting the medical needs of this growing population is an important priority for our health care system, yet often data on outcomes for ethnic minority populations are unavailable. Because cultural differences may be particularly important to mental health, determining outcomes of mental health care for these large minority populations is crucial.

Little is known about outcomes of mental health interventions for ethnic minorities. The Surgeon General's Report on Mental Health² describes a range of well-established, efficacious treatments for most mental disorders, but ethnic minorities have largely been missing from the scien-

tific inquiry that defines appropriate mental health care. For example, the efficacy studies used by the American Psychiatric Association and the American Psychological Association to establish guidelines for care for depression included only 27 identified African American, 2 Asian/Pacific Islanders, and no Latino or Native American/Native Alaskans.^{3(p35)} Only a few studies of depression care for minorities have been published, but none are controlled and the sample sizes are far too small to establish the response of minorities to care.³

Some evidence suggests ethnic minorities may respond differently to mental health interventions.⁴ For example, Sue et al⁵ analyzed changes in Global Assessment Scale scores in patients in the Los Angeles County Mental Health System and found that African Americans had lower positive treatment outcomes than did all

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other ethnic groups. Brown et al⁶ found equal clinical but poorer functional outcomes for treated depressed African Americans compared with white participants. Very little data are available to explain such differences in outcomes. Historically, race was considered a biological category based on common inborn biological traits such as skin color and eye shape; these biological differences were assumed to underlie racial differences. However, there are no biological underpinnings for dividing people into distinct racial categories.^{7,8} No consistent racial groupings emerge when people are sorted by physical and biological characteristics. Despite this finding, a small body of literature suggests that environmental and genetic differences may result in African Americans, Asians, and Latinos metabolizing depression medications, on average, differently from those who are not minorities.⁹

Apart from biological differences, these groups might differ as a result of shared history. Because of unique histories (ie, slavery, legal status in the United States), minorities tend to be poorer, on average, than those who are not minorities,¹ experience immigrant backgrounds more frequently than do nonminorities (Latinos, Asians), and are more likely to perceive discrimination in their lives.¹⁰ Cultural differences potentially could make psychotherapeutic interventions differently effective for minorities. For example, if Latino culture encourages low levels of assertiveness, outcomes of psychotherapy aimed at increasing assertiveness may differ for those from Latino culture compared with those from cultures encouraging assertiveness. In this study, we attempt to identify whether depression interventions have universal applicability or work well only with the majority population.⁴

Understanding outcomes of care for ethnic minorities requires examining the context for this care. Minorities are particularly unlikely to receive care in psychiatric settings in which most efficacy trials occur. For example, less than 16% of the African Americans diagnosed as having a mood disorder see a mental health specialist³ and less than 9% percent of the Mexican Americans with a mental disorder seek care from mental health specialists.¹¹ Minorities who have depression are more likely to be seen in primary health care settings than in psychiatric settings.^{3,9} Documenting the effect of care for depression among minorities would provide a scientific basis for improving rates of detection and treatment.

Because minority populations generally have not participated in efficacy trials, data on outcomes of usual care practice could provide evidence on the effectiveness of depression care for this population. However, observational studies are subject to strong selection bias, such that patients with more severe illnesses are much more likely to get care than are those with less severe illness. Furthermore, sources of selection bias may differ between minority and nonminority populations. This study examines naturalistic outcomes of care for minority and nonminority populations but relies on instrumental variables analysis, a technique that allows causal inference when selection bias is present.¹²⁻¹⁶ Specifically, the instrumental variables approach uses a popular technique in economic studies that controls for bias in selection without requiring a knowledge of the source of bias. Regression approaches can control for known biases through covariates, but not all sources

of bias are identifiable in naturalistic studies. However, instrumental variables analyses can account for unknown biases when a variable can be identified that is related to outcomes only through its effect on treatment. This variable must not have an independent effect on outcomes. By using such an instrument in this study, we determine the effect of appropriate care for minority and nonminority participants, removing the bias associated with selection.

We use data from a randomized trial of quality improvement (QI) interventions for depression in which naturalistic practice conditions were preserved, that is, usual providers, patients, payment mechanisms, and patient and provider choice of treatment. The QI interventions were conducted by a cross-national sample of managed care organizations and were designed to improve the quality of care they provided for depression within their organization. The participating health care practices, using materials developed by our research team, educated their providers about depression care, used physician extenders (depression nurse specialists) to educate and guide patients into depression care, and worked in teams to improve the quality of their depression care. These QI interventions improved quality of care as well as clinical, quality of life, and employment outcomes for depressed patients over 12 months.¹⁷ Furthermore, increases in quality of care were similar across ethnic groups; however, differences emerged in the effect of QI on outcomes.¹⁸ Ethnic minorities had stronger clinical responses to QI; whereas, employment improved more for nonminority participants. These earlier results examine the differential effect of the overall QI interventions but do not provide an estimate of differential effect of appropriate depression treatments. In this article, we focus on the outcomes of appropriate depression care (which many patients did not receive even under the interventions) as reported at a 6-month follow-up assessment and provide data separately for Latino, African American, and nonminority patients whenever possible.

METHODS

Partners in Care, a Patient Outcomes Research Team study sponsored by Agency for Health Research and Quality, is a group-level, randomized, controlled trial of practice-initiated QI programs for depression.¹⁵

ORGANIZATIONS, CLINICS, AND PROVIDERS

Six managed care organizations, selected to be diverse in geography and organization, as well as to oversample Mexican Americans, participated in this study. Grouped practice clusters formed matched blocks for randomization. The groups were matched on patient demographics, clinical specialty, and distance to mental health providers. Nine blocks, 1 for each of 6 regions and 3 for the seventh (stratified by low, intermediate, or high percentage of Mexican American patients) were created. The clinics clusters were randomized by blocks to usual care or 1 of 2 QI conditions.

Primary care clinicians were recruited before learning the assignment their clinic would receive; 97% (n=181) agreed to participate. The clinicians were 87% internists or family practice physicians and 13% nurse practitioners; 32% were members of a minority group, including 2% African American, 18% Latino, and 12% other minorities.

PATIENTS

Study staff screened 27332 consecutive patients over 5 to 7 months between June 1996 and March 1997. Patients were eligible if they intended to use the clinic as a source of care for the next year, were older than 17 years, did not have an acute medical emergency, spoke English or Spanish, and had either insurance or a public-pay arrangement that covered the intervention care. Eligible patients were screened for depression using the "stem" items for major depressive and dysthymic disorder from the 12-month *Composite International Diagnostic Interview, Core Version 2.1*,¹⁹ and items assessing depressed symptoms in the past month. Patients learned of their intervention status following enrollment.

Of those completing the screening, 3918 were potentially eligible. Of these, 2417 confirmed insurance eligibility; 241 were found ineligible. Of those who read the informed consent, 1356 (79%) enrolled: 443 in usual care, 424 in QI medications (QI-meds), and 489 in QI therapy (QI-therapy). Herein, we examine 938 participants with probable major depression or symptoms of depression with a history of major depression. We do not examine those with symptoms only so that we focus on a sample in need of depression treatment. Ethnic breakdown of participants was: 601 white, 257 Latinos, 56 African American, and 24 Asian or Native American. The enrolled patients completed the *Composite International Diagnostic Interview* to determine depression diagnoses and the presence of comorbid anxiety and a telephone interview to determine income, wealth, and employment. Self-administered mail surveys were obtained at baseline and every 6 months for 2 years. Survey response rates were 95% for the telephone interview, 88% for the baseline survey, and 83% for 6- and 12-month surveys.

INTERVENTIONS

All QI materials are available from RAND. (Available at: www.rand.org/organization/health/pic.products/order.html.) The implementation involved resources from the practices. The practices committed to involving existing staff in implementing the QI procedures. In addition, the study provided a payment of up to half of the estimated practice participation costs (\$35000-\$70000). The investigative team provided practices with training and resources to initiate and monitor the QI programs according to local practice goals and resources. In essence, the practices were trained to help themselves improve care under naturalistic practice conditions. Patients and clinicians retained choice of treatment, and their use of intervention resources was optional. The study served as an external disease management firm, designing the materials, hosting initial training, and offering limited support during implementation.

The QI interventions were designed to increase access and adherence with some form of appropriate care for depression, either medication or psychotherapy. Care as usual involved mailing practice guidelines for depression to the clinics.

SPECIFIC INTERVENTIONS

For both QI-meds and QI-therapy, local practice teams were trained in a 2-day workshop to provide clinician education through lectures, academic detailing, or audit and feedback, and to supervise the QI interventions, as well as conduct QI team oversight. Designated practice nurses were trained as depression specialists, including assisting in initial patient assessment, education, and motivation for treatment. Practices were provided with patient education pamphlets and videotapes, patient tracking forms, and clinician manuals and pocket reminder cards and were encouraged to distribute them. The materials described guideline concordant care for depression and

presented psychotherapy and antidepressant medication as equally effective.

In the QI-meds group, trained nurses were available to provide follow-up assessments and support for adherence to care for 6 months (with half the patients randomized to 12 months). In the QI-therapy group, the study trained local psychotherapists to provide individual and group cognitive behavioral therapy for 8 to 12 sessions and provided them with patient and therapist manuals.^{20,21} The organizations reduced co-pay for psychotherapy to the primary care amount (ie, \$0-\$10 vs \$20-\$30). In usual care, no study resources were available. Patients who received QI-therapy could also receive antidepressants but did not have access to the QI-meds group's study resources. Patients who received QI-meds did not have access to the study-sponsored cognitive behavioral therapy therapists but could use other local therapists.

ADAPTATION OF THE QI INTERVENTIONS FOR MINORITIES

Within the overall aim of improving rates of appropriate care, the interventions had a secondary aim of ensuring inclusion of minorities in opportunities for care. Accordingly, experts in mental health interventions for minorities participated in designing the QI educational materials. All QI intervention materials were available in English and Spanish; Latino and African American providers were included in videotaped materials for patients. Information regarding cultural beliefs and ways of overcoming barriers to care for Latino and African American patients were included in provider training materials (see "Culture Training for Providers" box). Furthermore, materials provided to improve psychotherapy for depression were developed for ethnically diverse (English-language materials¹⁸) and Latino (Spanish-language materials¹⁷) patients.

MEASURES

Appropriate treatment in the first 6-months of follow-up was measured by survey items that assessed whether the respondent had 4 specialty counseling visits or more or used antidepressants for at least 2 months at or above the minimum dosage recommended in the Agency for Healthcare Policy Research practice guidelines,²² adapted to include newer antidepressants. We note that most patients either had appropriate care or almost no mental health care. In particular, 90% of those using appropriate medication for 2 months used it for 6 months; similarly, the mean (SD) number of visits among patients with at least 4 therapy visits was 12.5 (0.8).

Health outcomes at 6 months include probable depressive disorder, based on a repeat of the screener items, and the global mental health scale of the Medical Outcomes Study 12-item Short Form.²³ In addition, we analyzed patients' self-reported employment status at 6 months.

Covariates collected at baseline include age, sex, marital status, educational attainment, household wealth, employment status, medical comorbidity, depressive disorders status, health-related quality of life, practice site, and the presence of comorbid anxiety disorder (**Table 1**). We also controlled for the number of days between enrollment and the follow-up survey.

DATA ANALYSIS

We used univariate and bivariate analyses to describe the sample and compare patients who did or did not receive appropriate care in the first 6 months. We used multivariate regression models to examine the effects of appropriate care on outcomes. We expected that unobserved differences by treatment status would remain even after controlling for baseline patient characteristics.

Table 1. Patient Characteristics

Variable	Minority Patients Appropriate Care					Nonminority Patients Appropriate Care				
	Total (N = 337)	No (n = 216)	Yes (n = 121)	t or χ^2 Statistic*	P Value	Total (N = 601)	No (n = 282)	Yes (n = 319)	t or χ^2 Statistic*	P Value
Randomization										
Control clinic	0.33	0.40	0.19	4.08	.000	0.32	0.38	0.267	2.87	.004
Medication QI clinic	0.28	0.24	0.36	2.15	.032	0.32	0.28	0.352	1.84	.066
Therapy QI clinic	0.39	0.36	0.45	1.53	.128	0.36	0.34	0.381	1.05	.295
Demographics										
Male	0.25	0.27	0.21	-1.18	.239	0.28	0.33	0.227	-2.54	.011
Mean age, y	40.6	39.5	43.0	2.22	.027	44.9	45.2	44.7	-0.45	.651
Married	0.48	0.50	0.45	-0.85	.397	0.57	0.57	0.568	0.04	.969
Race/ethnicity										
Black	0.16	0.14	0.22	1.79	.074	NA	NA	NA	NA	NA
Hispanic	0.78	0.83	0.69	-2.68	.008	NA	NA	NA	NA	NA
Other	0.06	0.04	0.09	1.89	.059	NA	NA	NA	NA	NA
Educational attainment										
Less than high school graduate	0.34	0.36	0.30	-1.07	.285	0.09	0.11	0.070	-1.50	.134
High school graduate	0.26	0.29	0.20	-1.57	.117	0.31	0.31	0.309	-0.10	.918
Some college	0.32	0.29	0.40	1.98	.049	0.32	0.32	0.315	-0.13	.896
College graduate	0.08	0.07	0.10	1.11	.269	0.28	0.26	0.306	1.36	.174
Wealth percentile rank	0.41	0.42	0.40	-0.55	.583	0.54	0.52	0.548	1.10	.270
Employed at baseline	0.60	0.66	0.47	-3.18	.002	0.70	0.70	0.690	-0.30	.765
Baseline clinical status										
Anxiety at baseline	0.51	0.47	0.60	2.20	.028	0.47	0.38	0.551	3.98	.000
Double depression	0.16	0.16	0.16	0.00	.998	0.15	0.06	0.232	6.01	.000
Single depression	0.51	0.49	0.56	1.31	.191	0.61	0.60	0.617	0.42	.671
Lifetime disorder	0.33	0.36	0.28	-1.39	.17	0.25	0.35	0.15	-5.34	.00
Mean MCS-12 score	35.60	36.10	34.70	-1.11	.27	33.20	35.10	31.50	-4.42	.00
Mean PCS-12 score	44.80	46.10	42.00	-3.14	.002	45.10	45.80	44.50	-1.21	.23
No. of chronic diseases										
None	0.23	0.22	0.24	0.28	.78	0.21	0.21	0.20	-0.13	.89
1	0.25	0.27	0.20	-1.56	.12	0.23	0.23	0.24	0.27	.79
2	0.20	0.22	0.17	-1.03	.30	0.19	0.18	0.20	0.59	.56
3+	0.32	0.28	0.39	1.93	.05	0.37	0.38	0.36	-0.60	.55
Outcomes at 6 mo										
Appropriate treatment	0.33	0	1.00	NA	NA	0.51	0	1.00	NA	NA
Appropriate medication	0.21	0	0.66	14.45	.00	0.43	0	0.83	36.33	.00
Appropriate counseling	0.20	0	0.62	13.13	.00	0.29	0	0.56	18.92	.00
Probable disorder	0.56	0.56	0.54	-0.30	.76	0.45	0.43	0.46	0.75	.46
Employed	0.61	0.67	0.48	-3.25	.001	0.66	0.68	0.64	-0.92	.35
Mean HRQOL (MCS-12) score	39.00	39.60	37.70	-1.31	.19	39.70	40.70	38.60	-2.10	.04

Abbreviations: HRQOL, health-related quality of life; MCS, mental composite score; NA, not applicable; PCS, Priority Counseling Survey; QI, quality improvement.

*Test of difference between treatment and no treatment groups. Data are given as proportions or fractures.

We used the method of instrumental variables to account for these differences.¹⁰⁻¹⁴ This method relies on identification of an instrument that predicts the probability of treatment but that has no independent effect on outcomes except through treatment; this approach helps to separate the effect on outcomes owing to treatment from the effect owing to unobserved characteristics.

We used randomized intervention status (case vs control) as the instrument, which meets the conditions for valid instruments specified by¹⁰: (1) random assignment, (2) the instrument affects treatment rates (“nonzero average casual effects”), (3) the instrument is unlikely to affect outcomes except through treatment (“exclusion restriction”), and (4) patients with positive outcomes in usual care would likely have positive outcomes under the intervention (“monotonicity”). Each assumption seems plausible here.

We estimate a multivariate regression with each outcome as the dependent variable, controlling for whether patients received appropriate care and the covariates mentioned earlier; and we estimated a second regression with appropriate care as the dependent variable, controlling for intervention status and

the covariates. For dichotomous outcomes (probable disorder, employment), these equations were estimated simultaneously using a bivariate probit specification.²⁴ For the continuous global mental health scale, these equations were estimated simultaneously using the 2-stage least squares method.

We report outcomes adjusted for all covariates. We used the parameter estimates from the regression and each individual’s actual value for covariates to generate predicted values under the scenario that the patient received appropriate care and then under the scenario without appropriate care.^{21,25} We then averaged the predictions across individuals under each scenario.

Although patients were clustered within providers and clinics, intraclass correlations are close to zero. For this reason, and because we know of no standard methods to account for clustering in instrumental variables models, we report results unadjusted for cluster effects. We weighted these data for probability of enrollment, attrition, and wave response, using standard logistic regression.²⁶ The nonresponse weights were the inverse of the predicted probability of response from logistic regression analysis. Thus, the final sample was weighted to the

Table 2. Predicted Outcome at Six Months by Appropriate Care Status

Variable	Instrumental Variables Specification							
	Minority Patients				Nonminority Patients			
	Outcome	95% CI	t Statistic	P Value	Outcome	95% CI	t Statistic*	P Value*
Patients with probable disorder, %								
No appropriate care	70.5	37.9 to 103.1	NA	NA	71.2	36.1 to 106.4	NA	NA
Appropriate care	20.5	7.4 to 8.5	-7.20	<.001	24.3	-8.4 to 57.1	-10.74	.00
Patients employed, %								
No appropriate care	56.5	-21.2 to 134.3	NA	NA	52.4	-12.0 to 116.9	NA	NA
Appropriate care	68.2	-3.8 to 140.2	0.61	-.55	71.4	6.7 to 136.1	1.93	.06
Global Mental HRQOL (MCS-12) score								
No appropriate care	35.3	24.7 to 45.9	NA	NA	32.5	19.3 to 45.7	NA	NA
Appropriate care	46.6	35.9 to 57.3	1.22	-.22	46.2	33.0 to 59.4	1.35	.18

Abbreviations: CI, confidence interval; HRQOL, health-related quality of life; MCS, mental composite score; NA, not applicable.

*Tests difference vs "no appropriate care" based on treatment coefficient.

population eligible to take the screener. We used multiple imputation for missing data at the item level.^{27,28} We used 2-tailed tests with $\alpha = .05$. Although we have 2 clinical outcomes, findings are in a consistent direction, so formal correction for multiple comparisons is too conservative.

RESULTS

Initial results are given in Table 1. As reported previously, patients in usual care practices were less likely than those in QI intervention practices to receive appropriate care during the first 6 months after the intervention.¹⁵ Minorities were receiving lower rates of appropriate care prior to the introduction of QI interventions, and the QI interventions significantly improved the rates of those receiving appropriate care by 9 to 20 percentage points for all patients (minorities and nonminorities) at 6 months.¹⁶ As can be seen in Table 1, approximately 32.8% of the minority patients and 51.4% of white patients were getting appropriate care by 6 months.

Patients getting appropriate care at 6 months differed from those not getting appropriate care (Table 1). Minorities getting appropriate care were older, had attended college, and were more likely to be unemployed than were those not receiving appropriate care. Nonminorities receiving appropriate care were more likely to be female than those not getting appropriate care. Similarly, predicted clinical characteristics differed among those receiving and not receiving appropriate care. Minorities receiving appropriate care were more likely to have an anxiety disorder, poorer quality of life attributable to physical illness, and 3 or more chronic illnesses than were those not receiving appropriate care. Nonminority patients receiving appropriate care were more likely to have an anxiety disorder, presence of both chronic and acute depression, a lifetime diagnosis of major depression, and a poorer perceived quality of life related to psychological problems compared with those not receiving appropriate care. These analyses suggest that different factors influence minority and nonminority patients' access to appropriate care.

Table 1 also lists a simple bivariate comparison of outcomes at 6 months by treatment status. For minori-

ties, those receiving appropriate care were more likely to be unemployed, but other outcomes did not vary by treatment status. For nonminorities, those receiving appropriate care reported a poorer quality of life. These findings indicate that there was substantial selection into care; those patients who were fairing worse at baseline were more likely to receive appropriate care.

Table 2 summarizes the results after accounting for patient covariates and selection into treatment through the instrumental variables method. According to these findings, approximately 20% of minorities receiving appropriate care were likely to meet criteria for probable depressive disorder at 6 months compared with nearly 70% of those not receiving appropriate care. The percentages were similar for the nonminorities. Neither global mental health functioning nor employment was significantly changed as a result of appropriate care, although there was a trend ($P = .06$) for nonminorities to be employed more if receiving appropriate care (71% vs 52%).

Because the combined ethnic minority group contains diverse Latinos, African Americans, and others, we attempted to determine whether the results would hold for specific minority groups, recognizing the limitations imposed by our sample size. **Table 3** replicates Table 1, separately for Latino, African American, and other minority patients, respectively. For the instrumental variables models examining the influence of appropriate care on probable disorder, we were able to replicate the analyses using the combined Latino and African American samples and excluding the other ethnic groups. Results were substantively similar to those reported for minority patients in Table 2. For the continuous variable, global mental health quality of life, we were able to replicate the analyses for Latino patients and for African American patients, respectively. Results were also similar to those reported for minority patients in Table 2. The estimated mean score was 36.8 for Latinos with appropriate care, compared with 46.4 for Latinos without, while the corresponding results were 38.6 vs 48.0 for African American patients. Because of limited sample sizes, these estimates may be unreliable; however, the similarity in the findings for Latinos and African Americans may suggest these groups respond similarly to depression care.

Table 3. Minority Patient Characteristics*

Variable	Latino Patients Appropriate Care					African American Patients Appropriate Care					Other Minority Patients Appropriate Care				
	Total (N = 257)†	No (n = 171)	Yes (n = 85)	Statistic‡	P Value	Total (N = 56)	No (n = 31)	Yes (n = 25)	Statistic‡	P Value	Total (N = 24)	No (n = 11)	Yes (n = 13)	Statistic‡	P Value
Randomization															
Control clinic	0.32	0.37	0.17	3.19	.002	0.41	0.54	0.26	2.15	.04	0.30	0.40	0.21	0.98	.34
Medication QI clinic	0.27	0.24	0.35	-1.82	.07	0.29	0.21	0.39	-1.52	.14	0.31	0.26	0.35	-0.50	.63
Therapy QI clinic	0.41	0.38	0.47	-1.32	.19	0.30	0.26	0.35	-0.74	.46	0.40	0.35	0.44	-0.43	.67
Demographics															
Male	0.25	0.28	0.19	1.48	.14	0.27	0.28	0.27	0.04	.97	0.23	0.17	0.29	-0.71	.48
Mean age, y	40.3	39.3	42.9	-2.02	.045	42.6	41.0	44.4	-0.99	.33	38.6	37.0	40.0	-0.68	.51
Married	0.49	0.50	0.46	0.55	.59	0.41	0.46	0.34	0.94	.35	0.60	0.56	0.64	-0.37	.72
Educational attainment															
Less than high school graduate	0.40	0.41	0.37	0.63	.53	0.138	0.14	0.14	-0.02	.99	0.04	0	0.08	-0.91	.37
High school graduate	0.26	0.28	0.19	1.56	.12	0.252	0.27	0.23	0.29	.77	0.32	0.22	0.40	-0.93	.36
Some college	0.28	0.25	0.35	-1.59	.11	0.491	0.49	0.50	-0.09	.93	0.41	0.42	0.40	0.07	.95
College graduate	0.06	0.05	0.09	-1.16	.25	0.119	0.11	0.13	-0.24	.82	0.24	0.37	0.12	1.39	.18
Wealth percentile rank	0.40	0.41	0.38	0.88	.38	0.469	0.47	0.47	0.06	.95	0.41	0.43	0.39	0.41	.68
Employed at baseline	0.61	0.67	0.46	3.24	.001	0.674	0.66	0.69	-0.27	.79	0.69	0.82	0.58	1.27	.22
Baseline clinical status															
Anxiety at baseline	0.52	0.47	0.64	-2.38	.02	0.465	0.37	0.58	-1.57	.12	0.55	0.64	0.48	0.80	.43
Double depression	0.16	0.16	0.17	-0.17	.87	0.135	0.15	0.12	0.26	.80	0.21	0.26	0.16	0.63	.53
Single depression	0.51	0.48	0.50	-1.09	.28	0.543	0.49	0.61	-0.88	.39	0.46	0.43	0.48	-0.26	.80
Lifetime disorder	0.33	0.36	0.27	1.29	.20	0.321	0.37	0.27	0.74	.46	0.34	0.31	0.36	-0.27	.79
Mean MCS-12 score	35.42	36.17	33.67	1.70	.09	37.35	36.74	38.08	-0.48	.64	33.91	35.15	32.86	0.47	.64
Mean PCS-12 score	44.31	45.84	40.58	3.41	.001	46.81	48.02	45.40	1.01	.32	44.94	44.03	45.72	-0.33	.75
No. of chronic diseases															
None	0.23	0.23	0.25	-0.41	.68	0.19	0.25	0.12	1.17	.25	0.28	0.16	0.39	-1.20	.24
1	0.25	0.28	0.19	1.50	.14	0.24	0.27	0.20	0.59	.56	0.28	0.35	0.22	0.70	.49
2	0.19	0.19	0.15	0.77	.44	0.27	0.24	0.37	-0.55	.59	0.27	0.41	0.16	1.36	.19
3+	0.34	0.31	0.41	-1.63	.10	0.30	0.25	0.37	-1.01	.32	0.17	0.08	0.24	-1.01	.33
Outcomes at 6 mo															
Appropriate treatment	0.29	0	0.99	-112.24	<.001	0.44	0	0.96	-26.13	<.001	0.54	0	1.00	∞	<.001
Appropriate medication	0.19	0	0.63	-17.48	<.001	0.26	0	0.57	-6.26	<.001	0.50	0	0.92	-11.03	<.001
Appropriate counseling	0.18	0	0.62	-17.18	<.001	0.29	0	0.63	-7.03	<.001	0.22	0	0.42	-2.69	.01
Probable disorder	0.58	0.54	0.64	-1.48	.14	0.41	0.57	0.23	2.65	.01	0.70	0.75	0.65	0.49	.63
Employed	0.60	0.67	0.42	3.77	<.001	0.69	0.64	0.74	-0.81	.42	0.55	0.73	0.40	1.66	.11
Mean HRQOL (MCS-12) score	38.87	39.60	37.27	1.45	.15	41.87	41.93	41.80	0.04	.97	32.76	36.62	29.45	1.77	.09

Abbreviations: HRQOL, health-related quality of life; MCS, mental composite score; PCS, Priority Counseling Survey; QI, quality improvement.

*Data are given as proportions or fractions.

†One person: missing information.

‡Test of difference between treatment and no treatment groups.

COMMENT

In this article, we are able to examine the effect of depression care on ethnic minorities who have been poorly represented in efficacy studies. Using an instrumental variables approach, we control for selection bias to determine the relative effectiveness of such care in common clinical settings. This study finds that appropriate care reduces the likelihood of probable major depression from approximately 70% to 20% for minority and nonminority patients. This suggests that care for depression in naturalistic settings will dramatically reduce depression for multiethnic patients.

The effect of appropriate care for depression on employment status may differ for minorities compared with nonminorities. Appropriate care seems to increase the likelihood of being employed for nonminority participants but not for minorities. This may be because appropriate depression care improves the functioning of minorities more than that of nonminorities. On the other hand, both may improve equally, but minority individuals may be less likely to capitalize on improvements in functioning by obtaining jobs because of educational and occupational pre-

paredness differences. Further study is needed to understand these work findings and their implications for the effect of depression care on functioning of minorities.

The results of this article suggest that despite differences among minority and nonminority patients, including potential social-historical-metabolic differences, depression interventions appear effective across groups. Unlike earlier studies focusing on single-item outcomes judged by clinicians,⁵ this study with independent assessment of disorder status finds that minority individuals respond well to care. Unfortunately, minority individuals are much less likely to be receiving appropriate care than are nonminority patients.³ These findings suggest that cultural differences may play a major role in access to care, but a much less prominent role in response to care. Efforts to educate medical staff about talking with ethnic minority patients regarding depression care and encouraging them to engage in care will be important in reducing disparities.

Our findings also show differences in prediction of care by ethnic group. For nonminority participants, females and those with more severe depression are most likely to get care. For minority populations, those who are older, more

LATINOS

Several aspects of Latino culture affect the willingness of Latino patients to engage in treatment. By attending to these cultural aspects, you will find that Latinos are more likely to agree to treatment for depression. The first cultural factor to consider is that of *respecto*, that is, the expectation that males and older Latinos will be treated with respect, particularly by younger persons. This cultural characteristic suggests that it is particularly important to use titles of respect when speaking with Latinos in general, but with older Latinos in particular. Using the formal *usted* to connote respect is particularly useful if a younger interviewer is working with a patient.

Latinos are also generally taught to respect powerful others, such as physicians and nurses. As a result, it may be necessary to work particularly hard with Latino patients to make sure that they have indicated any concerns that they may have about getting treatment for depression. They are more likely than nonminority patients to say “Yes, Doctor” without clearly stating reservations unless they are given clear permission by the physician or nurse to state any concerns. If these concerns are not elicited, the patient has a much higher likelihood for failing to show up for treatment.

Latinos, particularly those who are less acculturated, may be influenced by the cultural concepts of *machismo* and *marianismo*. *Machismo* refers to the general dominance of the male in the family, with both the responsibility for providing for and protecting others in the family. When dealing with more traditional Latino families, it may be necessary to obtain the consent of the male head of the household for a Latina to obtain treatment. If this is the case, bringing the husband-father in to discuss treatment options and planning may facilitate getting the wife or daughter in for treatment. The cultural concept of *marianismo* refers to the belief that suffering for women is directly related to spirituality, such that the “long-suffering” woman may be revered. Because of this concept, traditional Latinas may need extra encouragement that they should not be suffering and do not deserve to feel so bad. Often they are not as motivated to help themselves as they might be to help others. Therefore, reminding a traditional Latina that she needs to take care of herself to take care of others may be particularly useful.

Latinos may be used to “warmer” interactions with others than are non-Latinos. In this regard, the concept of *simpatia* is particularly important. That is, traditional Latinos tend to like warm relationships, where others are showing clear concern for them and their family members. To best help Latinos enter treatment, several important steps should be undertaken. An effort to remember the names of important family members of the patients can be helpful. Remembering to ask about the patient and others in his or her family is helpful. Making sure that you ask the patient if he or she is comfortable or needs anything can be useful, as can providing a beverage during a long interview.

Finally, Latinos may have more barriers to overcome to come to treatment. For example, many Latinas may not have access to babysitting to come to treatment, or others may be unable to ask for time away from work to come to treatment. Working with patients to help them overcome these barriers is an essential component to offering culturally sensitive treatment.

AFRICAN AMERICANS

The key to understanding how to evaluate African Americans is to understand that they are a diverse and heterogeneous group. Stereotypes are inaccurate and harmful. There are vast socioeconomic, regional, and subgroup ethnic identity differences (Creole, Cajun, Caribbean, and others). Although it is unnecessary for a provider to have knowledge of specific differences among these groups, it is important that the provider make an effort to understand his or her patient’s particular cultural beliefs about illness and treatment.

Because of the unique history of African Americans and long-standing struggles with prejudice and discrimination, it is also important for providers to realize that many come to the medical encounter with fears about mistreatment and/or poor treatment. These fears have been exacerbated by recent media reports of substandard care for African American patients with renal and cardiac disease.

Surveys of African American patients reveal a preference for providers who are open, engaging, and direct in style. They are less likely to trust clinicians who appear to be distant or indifferent. They also prefer providers who are careful to elicit personal values and preferences for both diagnosis and treatment.

Studies of help-seeking behavior have shown that many African Americans are more likely to seek help from spiritual advisors (ministers or religious counselors) for emotional problems. Queries about emotional health should, therefore, include questions about history and experience with spiritual counseling. Because a higher percentage of African American patients have low socioeconomic status, it is also essential that providers remember to elicit information about financial barriers to recommend care.

educated, unemployed, and have worse health are more likely to get care. These differences may reflect cultural values, such that minority individuals who are physically ill feel more comfortable accepting depression care than those who are less ill. On the other hand, employed minorities may have more difficulty obtaining time off work for care than do others. Further understanding of factors influencing access to care for minority populations is needed.

Lack of information on the mental health needs and responsiveness of ethnic minority populations is a critical disparity. Too often, the best available research on ethnic

minorities consists of small studies that cannot be generalized to today’s increasingly diverse communities. This article provides evidence that standard depression care is effective for improving depression among diverse ethnic minorities when provided in Spanish and with some sensitivity to the needs of minority populations. The accommodations for minorities in this study included minimal cultural training (see “Culture Training for Providers” box) for providers as well as attention to including minorities in videotaped materials. Importantly, all materials were available in Spanish. This minimal attention to cultural factors

led to substantial increases in care for ethnic minorities and our subsequent demonstration that clinical response to care is similar to that for nonminority patients.

Several limitations should be noted in this study. First, a diverse group of ethnic minorities are considered together and may mask differences in response to appropriate care by subpopulations. Analyses do confirm that the major findings seem to hold for Latinos and African Americans, but the sample of other minority populations is too small to assess. Second, technically the instrumental variables analyses method identifies the effects of treatment for patients who are likely to receive care under the QI intervention but not under usual care; effectiveness may be different for patients who are likely to be treated under practice conditions. Third, we were unable to adjust for clustering of patients within clinics in these analyses because of limitations in the statistical procedures. Fourth, although we studied a range of managed care practices, different findings could apply in other settings. Fifth, appropriate care as defined in this study is slightly below full guideline recommendations.

This study provides evidence that guideline-concordant care for depression is clinically effective for ethnic minority patients, even when that care is provided under community-based practice conditions. Our findings provide useful information for policy makers, as well as practices and clinicians, because they support the value of providing conventional depression treatments to minority populations. The findings suggest that efforts to develop "ethnic-specific" treatments for depression may be unnecessary, at least for Latinos and African Americans. However, that does not mean that treatment-providing strategies, such as QI interventions, do not need to be modified for minority populations. Indeed, our Partners in Care study modified our QI intervention approach to facilitate higher rates of use of standard treatments by minority populations. Significant need exists to encourage primary health care providers to detect and treat depression in minority patients. This may include overcoming serious barriers to care, such as inability of minority workers to take time off of work to come to treatment. Our results suggest that using effective treatments for depression in minority patients will result in a similar level of improvement as for nonminority populations. By increasing rates of identification and treatment for depression among ethnic minorities, disparities in care that are due to low rates of treatment could be reduced or eliminated.

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