

Research Article

ANTIDEPRESSANT USE IN A NATIONALLY REPRESENTATIVE SAMPLE OF COMMUNITY-DWELLING US LATINOS WITH AND WITHOUT DEPRESSIVE AND ANXIETY DISORDERS

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Background: *Antidepressant drugs are among the most widely prescribed drugs in the United States; however, little is known about their use among major ethnic minority groups. Method:* Collaborative Psychiatric Epidemiology Surveys (CPES) data were analyzed to calculate nationally representative estimates of Latino and non-Latino White adults antidepressant use. **Setting:** The 48 coterminous United States was the setting. **Participants:** Household residents aged 18 years and older (N = 9,250). **Main outcome:** Past year antidepressant use. **Results:** Compared to non-Latino Whites, few Latinos, primarily Mexican Americans, with 12-month depressive and/or anxiety disorders reported past year antidepressant use. Mexican Americans (OR = 0.48; 95%CI = 0.30–0.77) had significantly lower odds of use compared to non-Latino Whites, which were largely unaffected by factors associated with access to care. Over half of antidepressant use was by respondents not meeting 12-month criteria for depressive or anxiety disorders. Lifetime depressive and anxiety disorders explained another 21% of past year antidepressant use, leaving another 31% of drug use unexplained. **Discussion:** We found a disparity in antidepressant use for Mexican Americans compared to non-Latino Whites that was not accounted for by differences in need and factors associated with access to care. About one third of antidepressant use was by respondents not meeting criteria for depressive or anxiety disorders. Our findings underscore the

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importance of disaggregating Latino ethnic groups. Additional work is needed to understand the medical and economic value of antidepressant use beyond their primary clinical targets. Depression and Anxiety 26:674–681, 2009.

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Key words: *Latinos; Hispanics; Cubans; Mexicans; Puerto Ricans; major depressive disorder; depression; anxiety disorders; antidepressive agents*

INTRODUCTION

Psychiatric epidemiological studies have consistently demonstrated a significant gap between the need for and availability of mental health services in the United States.^[1] Despite improvements in the available psychosocial and medication treatments, this gap remains discouragingly wide, especially among many vulnerable populations including ethnic minorities.^[2,3] Currently, Latinos represent over 14% of the US population and are projected to represent nearly one third of the US population by 2050.^[4] Understanding their mental health service use is thus increasingly important as part of an overall strategy to address the nation's mental health needs.

Antidepressant drugs are among the most prescribed medications in the US and are by far the most common form of psychiatric treatment for most Americans with depressive and anxiety disorders (National Prescription Drug Audit, 2006). An emerging literature shows that Latinos face particular challenges, such as limited English language proficiency, somatization of psychiatric symptoms, and unique cultural values that result in missed or inaccurate diagnosis of mental disorders, refusal to engage in traditional psychotherapy, and other barriers to mental health care.^[5,6] Furthermore, surveys have shown that as many as half of adults receiving mental health treatments, particularly psychotropic medications, often do not fulfill criteria for mental disorders.^[2,7,8] Other reported reasons for antidepressant use include subsyndromal depressive conditions and nonpsychiatric medical conditions.^[9,10]

The purpose of our study was to examine psychiatric and nonpsychiatric factors associated with 12-month antidepressant use in a nationally representative sample of community-dwelling Latinos. We examined depressive and anxiety disorders because antidepressants are FDA approved for these conditions and the two disorders frequently coexist in patients seen in clinical practice. In addition, most depressive disorders occur with anxiety.^[11] We used the Andersen model of health-care access to evaluate factors associated with antidepressant use.^[12] Our results provide a baseline from which policy makers and researchers can further understand and track patterns of antidepressant use among Latinos and assess ways to improve the matching of need and antidepressant use.

METHODS

SAMPLE

The National Institute of Mental Health's Collaborative Psychiatric Epidemiology Surveys (CPES) initiative combines three nationally representative studies: the National Survey of American Life (NSAL), the National Comorbidity Survey-Replication (NCS-R), and the National Latino and Asian American Study (NLAAS). Data from the NLAAS and NCS-R studies were used for this article. Data were collected between May 2002 and November 2003. Sampling weights were created by the CPES staff at the University of Michigan to allow studies pairing while accounting for unequal probability of selection into the combined samples and nonresponse rates. The weighted data provide a nationally representative sample of Latinos and Whites (aged 18 and older) in the noninstitutionalized population of the coterminous US. These weights were incorporated in all analyses presented in this study, allowing for the generation of population estimates by analyzing data specific to populations of interest.

MEASURES

Past year antidepressant use was determined by a response to the question "Did you take any type of prescription medicine in the past 12 months for problems with your emotions, substance use, energy, concentration, sleep, or ability to cope with stress?" Prescription antidepressant generic and trade names were also recorded from pill bottles during interviews. Two board-certified psychiatrists and a masters-level psychiatric nurse specialist reviewed and verified that the inventoried drugs were antidepressant agents before coding for the analyses.

Mental disorders were assessed using the World Mental Health (WMH) Composite International Diagnostic Interview (CIDI) administered by well-trained, nonclinical interviewers. The reported concordance between the nonclinician administered WMH-CIDI and clinician administered World Mental Health Structured Clinical Interview for *Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition* (DSM-IV) (WMH-SCID)^[13] reappraisals for any mood disorder ($K = .54$) and any anxiety disorder ($K = .42$) were within acceptable ranges.^[14] Specific concordance figures were not available in Haro et al.^[14] study. In this study, we focused on DSM-IV criteria for 12-month major depression, dysthymia, and five specific anxiety disorders (agoraphobia without panic, generalized anxiety, panic, posttraumatic stress disorder, and social phobia). DSM-IV diagnostic algorithms with medical condition exclusionary criteria were used.

VARIABLES

The outcome variable was any past year antidepressant use. Predictor variables were organized into three components of the Andersen model of health-care access. Predisposing factors included

categorical variables for Latino subgroups (Puerto Rican, Cuban, Mexican, and other Latino) and non-Latino Whites. Acculturation and nativity are associated with mental health and health services utilization.^[9,15] Borrowing from Rumbaut's work on immigrant generations,^[16] we operationalized acculturation–nativity, regardless of ethnicity, by using a dichotomous indicator based on respondents' immigration generational membership. Foreign-born respondents with one or no US-born parents and those born in the US to foreign parents were classified as having a lower level of acculturation–nativity. A second category representing a higher level of acculturation–nativity was created by grouping foreign-born respondents with two US-born parents and US-born respondents with one or two US-born parents.

Andersen model need factors included dichotomous indicators of 12-month major depression, dysthymia, and/or anxiety disorders. Additionally, self-reported medical conditions (including high blood pressure, diabetes, stroke, and heart disease) that are associated with antidepressant use were included as need factors.^[7] The enabling factors included household income (less than \$18,000; \$18,000–\$31,999; \$32,000–\$54,999; and \$55,000 or more), years of education (0–11; 12; 13–15; and 16 or more) and health insurance coverage (insured and uninsured). A question assessing respondents' financial difficulty paying monthly bills was included as a factor that could “disable” or complicate access to care. Finally, models were age and gender adjusted (not shown in tables).

ANALYTIC APPROACH

Procedures designed for subpopulation analysis of complex sample survey data in the Stata (Release 10.1; StataCorp, College Station, TX, 2008) software package were used for all analyses. All statistical estimates were weighted, utilizing the combined NLAAS and NCS-R sampling weights to account for individual-level unequal probabilities of selection into the samples, individual nonresponse, and additional poststratification to ensure population representation.

Univariate and bivariate analyses were performed to calculate sample estimates and 95% confidence intervals (CI) describing the prevalence of antidepressant use in specific subgroups. Bivariate logistic regression analyses were performed to examine simple associations between antidepressant use and individual-level characteristics. Multivariate logistic regression models were then fitted to estimate the relationships of the individual diagnoses, demographics, and medical conditions with the odds of antidepressant use when controlling for other covariates. Odds ratios (OR) expressing the relative influences of the covariates on the odds of antidepressant use were calculated based on the estimated multivariate logistic regression models, along with design-based 95% CI for the ORs.

RESULTS

Table 1 shows the demographic characteristics of the study sample by ethnic groups. In general and with the exception of Cubans, the Latino groups were younger, less educated, and had lower household incomes compared to non-Latino Whites. Close to half of all Mexican Americans lacked health insurance coverage, which was nearly five-times higher than non-Latino Whites. Cubans reported the highest number of medical conditions compared to the other ethnic groups. The sample characteristics shown in Table 1 were similar to current Census estimates.^[4]

The prevalence of the 12-month major depression ($\chi^2 = 1.10$, $P = .35$) and dysthymia ($\chi^2 = 0.97$, $P = .41$)

were not significantly different between Latino groups and non-Latino Whites. However, 12-month anxiety disorders were significantly less prevalent among Latinos compared to non-Latino Whites ($\chi^2 = 7.95$, $P < .001$). Notably, Mexicans and the Other Latinos group had the lowest rates of anxiety disorders.

PREVALENCE OF ANTIDEPRESSANT USE

Regardless of mental disorders, 11.5% of Latinos and non-Latino Whites used antidepressants in the past year (Table 2). All of the Latino groups used antidepressants less than non-Latino Whites, however, only Mexicans and the other Latinos group had significantly lower odds of use. Among respondents meeting criteria for any depressive or anxiety disorder examined in this study, Latinos (20.8%) had significantly lower rates ($\chi^2 = 10.23$, $P = .01$) of antidepressant compared to non-Latino Whites (32.4%). The odds of antidepressant use by Mexican Americans with depressive disorders were significantly lower than non-Latino Whites. There was a nonsignificant trend for Mexican Americans with anxiety disorders to have lower odds antidepressant use than non-Latino Whites. The majority of all past year antidepressant users (survey adjusted 52.9%, $SE = 0.02$) did not meet criteria for the 12-month depressive or anxiety disorders we examined.

PREDICTORS OF ANTIDEPRESSANT USE

Because of the frequent co-occurrence of depressive and anxiety disorders in the United States,^[11] we combined these disorders in the models of antidepressant use. The three models shown in Table 3 reflect components of the Andersen model of health-care access. Each of the estimates in the models was age and sex adjusted (not shown).

Of the predisposing factors examined (model 1), Mexicans and the Other Latinos group had significantly lower odds of antidepressant use compared to non-Latino Whites. Respondents in the low acculturation–nativity group also had significantly lower odds of antidepressant use relative to their high acculturation counterparts. In model 2 (need factors), meeting criteria for depressive or anxiety disorders significantly increased the odds of past year antidepressant use. In addition, reporting one or more of the medical conditions was associated with higher odds of antidepressant use. Of the health-care access *enabling* factors included in model 3, both financial difficulty and insurance coverage were significantly associated with increased odds of antidepressant use. Statistically controlling for mental health and health *need* and *enabling* factors, however, did not explain the significant differences in antidepressant use between Mexicans and non-Latino Whites (Table 3).

TABLE 1. Demographic characteristics of the Latinos and non-Latino Whites subpopulations of the Collaborative Psychiatric Epidemiology Surveys (N = 9,250)

	Total		Cubans		Puerto Ricans		Mexicans		Other Latinos		Non-Latino Whites	
	<i>n</i>	% (<i>SE</i>)	<i>n</i>	% (<i>SE</i>)	<i>n</i>	% (<i>SE</i>)	<i>n</i>	% (<i>SE</i>)	<i>n</i>	% (<i>SE</i>)	<i>n</i>	% (<i>SE</i>)
Acculturation–nativity												
Low	2,273	14.3 (1.1)	563	97.1 (1.0)	316	65.4 (2.8)	600	70.2 (2.7)	486	73.4 (3.0)	308	6.9 (0.8)
High	5,357	85.7 (1.1)	14	2.9 (1.0)	175	34.6 (2.8)	265	29.8 (2.7)	127	26.6 (3.0)	4,776	93.1 (0.8)
Age												
Young adult (18–34)	3,034	30.1 (1.3)	190	25.8 (2.1)	458	39.5 (2.8)	285	53.1 (2.4)	135	48.6 (2.4)	1,966	27.6 (1.4)
Adult (35–65)	4,738	51.8 (1.5)	264	51.4 (2.7)	368	51.3 (2.2)	297	40.7 (2.2)	326	44.5 (2.2)	3,483	52.9 (1.7)
Older adult (65+)	1,478	18.1 (1.1)	41	22.7 (2.3)	42	9.2 (3.5)	32	6.1 (1.0)	116	6.9 (1.5)	1,247	19.4 (1.2)
Education												
<12	1,818	16.9 (1.0)	177	30.3 (2.3)	172	35.4 (2.9)	441	52.6 (2.3)	204	34.3 (2.2)	824	13.2 (1.0)
12	2,616	30.9 (1.3)	136	24.2 (1.5)	140	27.4 (2.2)	215	24.5 (1.2)	142	24.0 (2.2)	1,983	31.7 (1.4)
13–15	2,534	27.9 (1.0)	121	21.5 (2.2)	123	26.0 (2.2)	147	15.9 (1.8)	176	28.6 (2.2)	1,967	28.9 (1.1)
16+	2,282	24.3 (1.2)	143	24.0 (2.8)	60	11.2 (1.6)	65	13.2 (1.6)	92	13.2 (1.6)	1,922	26.2 (1.4)
Gender												
Female	5,045	51.9 (1.0)	301	47.0 (1.5)	282	51.4 (2.3)	470	45.9 (1.9)	374	52.7 (2.1)	3,618	52.4 (1.1)
Male	4,205	48.1 (1.0)	276	53.0 (1.5)	213	48.6 (2.3)	398	54.1 (1.9)	240	47.3 (2.1)	3,078	47.6 (1.1)
Household income												
\$0–\$17,999	1,472	18.4 (0.9)	194	33.3 (3.8)	156	30.9 (1.9)	312	36.6 (3.9)	173	27.2 (2.0)	637	16.4 (1.0)
\$18,000–\$31,999	1,022	13.7 (0.7)	81	13.8 (1.5)	73	14.5 (2.2)	170	19.3 (2.2)	134	20.1 (2.3)	564	13.1 (0.8)
\$32,000–\$54,999	1,491	22.3 (0.6)	116	20.2 (1.3)	93	19.0 (2.4)	190	21.7 (2.0)	136	23.0 (2.0)	956	22.4 (0.7)
\$55,000+	5,265	45.6 (1.4)	186	32.8 (4.6)	173	35.6 (2.8)	196	22.4 (1.8)	171	29.7 (2.8)	4,539	48.2 (1.6)
Health insurance												
Not insured	1,215	12.9 (0.8)	149	24.9 (3.1)	80	15.9 (2.0)	367	42.7 (3.1)	172	27.4 (2.3)	447	10.0 (0.8)
Insured	5,532	87.1 (0.8)	428	75.1 (3.1)	414	84.1 (2.0)	501	57.3 (3.1)	442	72.6 (2.3)	3,747	90.0 (0.8)
Medical conditions												
Heart disease	388	5.4 (0.5)	58	10.2 (1.4)	40	8.6 (2.4)	20	2.7 (0.8)	29	4.3 (0.8)	241	5.5 (0.6)
Stroke	138	2.6 (0.3)	4	0.7 (0.3)	8	1.3 (0.6)	8	1.2 (0.3)	9	1.4 (0.6)	109	2.7 (0.3)
Hypertension	1,484	23.4 (0.7)	179	31.8 (1.5)	107	23.5 (2.6)	111	13.1 (1.2)	93	15.3 (1.6)	994	24.3 (0.7)
Diabetes	499	7.1 (0.4)	55	8.9 (1.9)	61	12.1 (2.2)	70	8.4 (1.0)	39	7.2 (1.4)	274	6.9 (0.5)
No medical conditions	7,381	71.0 (0.8)	362	62.1 (1.6)	351	70.2 (3.3)	717	82.3 (1.5)	484	78.8 (1.7)	5,467	70.0 (0.8)
Any medical condition	1,869	29.0 (0.8)	215	37.9 (1.6)	144	29.8 (3.3)	151	17.7 (1.5)	130	21.2 (1.7)	1,229	30.0 (0.8)
12-Month mental disorders ^a												
Major depressive disorder	826	8.6 (0.4)	52	8.0 (0.8)	59	11.5 (1.4)	82	8.3 (0.7)	56	8.1 (1.1)	577	8.6 (0.4)
Dysthymia	233	2.4 (0.2)	20	2.8 (0.8)	19	3.5 (0.8)	18	1.8 (0.4)	14	2.3 (0.7)	162	2.4 (0.2)
Anxiety ^b	1,189	13.1 (0.5)	67	11.2 (1.0)	76	15.7 (2.7)	82	9.2 (1.0)	60	7.8 (1.4)	904	13.6 (0.5)
Any of the above	1,592	17.3 (0.6)	92	15.2 (1.1)	105	22.2 (2.3)	130	14.0 (1.2)	87	12.7 (1.6)	1,178	17.6 (0.6)
None of the above	7,658	82.7 (0.6)	485	84.8 (1.1)	390	77.8 (2.3)	738	86.0 (1.2)	527	87.3 (1.6)	5,518	82.4 (0.6)

^aBased on the World Mental Health Composite International Diagnostic Interview.

^bIncludes agoraphobia with and without panic, generalized anxiety disorder, panic disorder, posttraumatic stress disorder, and social phobia.

PREDICTORS OF ANTIDEPRESSANT USE AMONG RESPONDENTS NOT MEETING 12-MONTH DEPRESSIVE AND ANXIETY DISORDERS CRITERIA

To understand antidepressant use among respondents who did not meet criteria for 12-month depressive or anxiety disorders, we ran an additional model similar to model 3 in Table 3 (above) for the subpopulation of respondents with the 12-month depressive and anxiety disorders (not shown). Of the past year antidepressant users not meeting 12-month depressive or anxiety disorders criteria, 21.9% (*SE* = 0.01) met criteria for a lifetime depressive or anxiety disorder. We estimated that 31% (*SE* = 0.02) of the sample did not meet criteria

for the depressive or anxiety disorders in the past year or lifetime. In the next step, lifetime depressive and anxiety disorders were added to the model to test the hypotheses that past year antidepressant use may have been related to maintenance therapy for conditions that may have occurred before the past year, and other factors of interest. The results of this model indicated that all of the Latino subgroups, save Cubans, had significantly lower odds of antidepressant use compared to non-Latino Whites. Lifetime depressive or anxiety disorders (*OR* = 2.50; 95%*CI* = 1.80–3.47), the medical conditions we examined herein (*OR* = 1.75; 95%*CI* = 1.27–2.43), and financial difficulty (*OR* = 1.60; 95%*CI* = 1.2–2.11) significantly increased the odds of past year antidepressant use.

TABLE 2. Prevalence of past year antidepressant drug use in a nationally representative samples of Latinos and non-Latino Whites (N = 9,250) in the United States

	n Using antidepressant	Estimated prevalence (%)	SE	Bivariate statistics	
				OR	95% CI
<i>All ethnic groups</i>	998	11.5	0.5		
Puerto Ricans	50	8.7	1.8	0.68 [‡]	(0.43–1.07)
Cubans	55	8.6	1.4	0.67 [†]	(0.46–0.97)
Mexicans	42	4.2	0.9	0.31 [*]	(0.20–0.48)
Other Latinos	35	5.1	0.9	0.38 [*]	(0.27–0.55)
Whites	816	12.3	0.6	1.00	
<i>12-Month mental disorders^a</i>					
<i>Major depressive disorder</i>	307	39.3	2.0		
Puerto Ricans	20	31.4	7.8	0.65	(0.31–1.36)
Cubans	19	36.6	6.2	0.83	(0.47–1.43)
Mexicans	17	19.5	5.5	0.34 [*]	(0.17–0.70)
Other Latinos	14	29.0	5.9	0.58 [‡]	(0.32–1.05)
Whites	237	41.3	2.1	1.00	
<i>Dysthymia</i>	110	50.5	4.3		
Puerto Ricans	7	39.1	11.9	0.57	(0.20–1.66)
Cubans	9	43.5	10.8	0.69	(0.26–1.79)
Mexicans	4	22.9	7.4	0.27 [*]	(0.11–0.66)
Other Latinos	5	35.5	13.3	0.49	(0.15–1.66)
Whites	85	52.8	4.7	1.00	
<i>Anxiety^b</i>	378	31.6	1.6		
Puerto Ricans	29	31.9	7.3	0.98	(0.50–1.95)
Cubans	25	36.2	7.5	1.19	(0.61–2.31)
Mexicans	18	19.8	5.5	0.52 [‡]	(0.26–1.04)
Other Latinos	13	24.1	6.1	0.66	(0.34–1.31)
Whites	293	32.3	1.7	1.00	
<i>Any mental disorder</i>	488	31.3	1.5		
Puerto Ricans	32	26.2	5.9	0.74	(0.40–1.38)
Cubans	31	31.9	4.9	0.97	(0.61–1.56)
Mexicans	25	17.5	4.3	0.44 [*]	(0.24–0.82)
Other Latinos	18	22.4	4.6	0.60 [‡]	(0.35–1.04)
Whites	382	32.4	1.6	1.00	
<i>No mental disorders</i>	510	7.3	0.5		
Puerto Ricans	18	3.8	0.8	0.45 [*]	(0.28–0.73)
Cubans	24	4.4	1.1	0.53 [†]	(0.30–0.92)
Mexicans	17	2.0	0.7	0.24 [*]	(0.12–0.47)
Other Latinos	17	2.6	0.7	0.31 [*]	(0.17–0.55)
Whites	434	8.0	0.6	1.00	

^aBased on the World Mental Health Composite International Diagnostic Interview.

^bIncludes agoraphobia with and without panic, generalized anxiety disorder, panic disorder, posttraumatic stress disorder, and social phobia.

* $P < .01$, [†] $P < .05$, [‡] $P < .10$.

DISCUSSION

Most Americans with depressive and anxiety disorders do not receive mental health care in the form of antidepressant treatment according to our findings. Above and beyond the lack of care for depressive and anxiety disorders facing Americans, we found marked differences in antidepressant use between Latinos and non-Latino Whites. Specifically, Mexican Americans, who represent over two thirds of Latinos in the United States,^[4] are also the most likely to encounter differences in antidepressant use. Nationally, fewer than one-in-four Latinos or about 1.3 million of the estimated 6.4 million with depressive or anxiety

disorders have received antidepressant treatment. Our findings highlight the importance of disaggregating Latinos by ethnic subgroups for pinpointing where treatment inequalities exist within the diversity of Latinos in the US. Ignoring the different experiences of Latino subgroups with mental health-care access masks important treatment use differences between major Latino subgroups, namely Mexican Americans and non-Latino Whites.^[3,17] Our approach provides evidence for improving mental health care to those Latinos facing the most problems with treatment availability.

Latinos face many barriers to adequate mental health care.^[18] We found evidence that suggests immigrants

TABLE 3. Predictors of pastyear antidepressant use in a nationally representative sample of Latinos and non-Latino Whites (N = 9,250)

	Model 1 ^a		Model 2 ^a		Model 3 ^a	
	OR	95% CI	OR	95% CI	OR	95% CI
<i>Predisposing</i>						
Ethnic groups						
Whites	1.00		1.00		1.00	
Puerto Ricans	0.93	(0.58–1.49)	0.76	(0.47–1.22)	0.66	(0.40–1.10)
Cubans	1.18	(0.72–1.95)	1.02	(0.60–1.71)	0.93	(0.52–1.65)
Mexicans	0.48*	(0.30–0.77)	0.47*	(0.29–0.77)	0.46*	(0.26–0.80)
Other Latinos	0.56*	(0.37–0.85)	0.59†	(0.39–0.89)	0.48*	(0.30–0.78)
Acculturation/nativity						
Low	1.00		1.00		1.00	
High	1.82*	(1.28–2.58)	1.59†	(1.11–2.27)	1.47†	(1.01–2.14)
<i>Need</i>						
12-Month mental disorders ^b						
No disorders			1.00		1.00	
Major depression, dysthymia, anxiety ^c			5.03*	(3.98–6.36)	4.43*	(3.39–5.77)
Medical conditions ^d						
No medical conditions			1.00		1.00	
One or more condition			1.63*	(1.29–2.07)	1.63*	(1.23–2.16)
<i>Enabling</i>						
Education groups (years)						
<12					0.88	(0.60–1.29)
12					1.00	
13–15					1.11	(0.81–1.53)
16 or more					0.97	(0.70–1.35)
Household income groups						
\$0–\$17,999					1.40	(0.86–2.27)
\$18,000–\$31,999					1.13	(0.74–1.71)
\$32,000–\$54,999					1.00	
\$55,000 or more					1.00	(0.75–1.34)
Health insurance coverage						
No					1.00	
Yes					1.95†	(1.13–3.37)
Financial stress						
Not difficult					1.00	
Difficult					1.45*	(1.24–1.69)

^aModel results are age and sex adjusted.

^bBased on the World Mental Health Composite International Diagnostic Interview.

^cIncludes agoraphobia with and without panic, generalized anxiety disorder, panic disorder, posttraumatic stress disorder, and social phobia.

^dIncludes heart disease, stroke, hypertension, and diabetes.

* $P < .01$, † $P < .05$, ‡ $P < .10$.

with less acculturation were less apt to use antidepressants more than their acculturated counterparts. Furthermore, the differences in antidepressant use were not accounted for by other important factors related to better access to care. Outpatient primary care has become the de facto mental health system for most Americans where recognition and treatment of depressive and anxiety disorders are often challenging for busy clinicians working with any racial and ethnic groups. As reported for Black Americans,^[19] it is possible that primary-care physicians serving Latinos may have less training and access to additional clinical resources and psychiatric specialists as do physicians serving White patients. Another explanation for the findings in this study could reflect lower acceptability

of antidepressants by Mexican Americans.^[20] Additionally, cultural differences between White clinicians and Latino patients may affect symptom communication, recognition, and subsequent treatment, and could explain the low prevalence of antidepressant use by specific Latino groups.^[21] Cultural differences may account for the frequency of antidepressant use among respondents without depressive or anxiety disorders. Factors contributing to the treatment inequalities for Mexican Americans, we found, will require additional in-depth study to understand and achieve parity.

The majority of Latinos and non-Latino Whites using antidepressants did not meet diagnostic criteria for 12-month depressive and anxiety disorders. Lifetime depressive and anxiety disorders explained an

additional 21% of past year antidepressant use. Our findings are consistent with those of Druss et al. who found that individuals who met criteria for lifetime mental disorders, but not current 12-month disorders, accounted for a considerable proportion of current 12-month mental health services use.^[8] This may be indicative of treatment maintenance to prevent relapse for patients with these mental disorders. Nevertheless, 12-month and lifetime depressive and anxiety disorders did not account for nearly one third of all the antidepressants use in this national sample. Medical conditions associated vascular disease, particularly diabetes and hypertension, increased the odds of antidepressant use independent of lifetime mental disorders. Antidepressants are commonly prescribed for diabetic neuropathy and sleep problems. It may be that antidepressants are being prescribed for mood changes associated with vascular disease.^[9,22] The reasons for the other uses of antidepressant medications may require further in-depth investigation.

The antidepressant prevalence estimates reported herein are unique in that the CPES is a nationally representative household sample. Respondents were selected into the sample regardless of medical-care access, a feature that is distinct from earlier reports based on clinical records and medical claims data.^[23] This is a particularly important feature of this study in understanding the low use of antidepressants by Latinos. For example, over 40% of Mexican Americans lack medical insurance, which can limit their access to health care.^[4] Estimates of unmet need for antidepressant treatment that are established in community samples, without necessarily requiring that the sample have access to care (as in the case of medical claims samples) are critical to understanding the health needs of this population. Secondly, antidepressant medication use in this study was determined by both self-report and pill bottle inventories. Pill bottle inventories limits underreporting drugs that were not recognized by respondents as psychiatric medications. Because of these two study characteristics, we believe that the prevalence of antidepressant use reported herein are likely to be the most accurate and ethnically specific national estimates to date.

Our results should be interpreted in the context of several limitations. First, the CPES excluded those who were homeless or institutionalized and may not completely define the current need for depressive and anxiety disorders treatment in the US. Second, systematic survey nonresponse and nonreporting could lead to underestimates of the degree of unmet need.^[10] Third, as a diagnostic instrument for Latinos, the WMH-CIDI has modest test characteristics for detecting psychiatric disorders (e.g., major depression), but was highly accurate for excluding cases without psychiatric conditions. Thus, it is possible that some cases with "true" psychiatric disorders were missed, which could have inflated the proportion of Latinos without psychiatric disorders using antidepressants.

Additionally, antidepressant users may have had a depressive or anxiety disorder that was in remission, and thus may have overlooked or underreported their symptoms. This potentially could have increased our estimates of antidepressant users who did not meet 12-month criteria for disorders (i.e., false negatives). Nevertheless, our findings that the mental health needs of Latinos are mostly unmet and that many Latinos without psychiatric disorders utilize antidepressants are consistent with previous clinic-based research.^[23,24] Given the magnitude of unmet need that we observed, the main inferences of our work would be unlikely to change dramatically.

This research suggests several directions for future research and policy to improve delivery of mental health care for all Americans, but especially for Mexican Americans who are the largest and most underserved group of Latinos. First, increased availability and initiation of treatment with mental health needs will require new evidence-based outreach efforts. One clear example of a cost-effective approach for improving mental health care is the collaborative primary care of depression model.^[25,26] Because mental disorders can be difficult to detect in the limited time available to most primary-care physicians, such a model may provide the specialists needed for detecting and treating common psychiatric disorders, particularly in the presence of comorbid medical conditions. Second, continued attempts to lower cross-cultural communication barriers between patients and care-providers may improve diagnoses and ensure the delivery of appropriate treatments.^[27] Although new financing and treatment resources will undoubtedly be required, monitoring those costs in relation to possible savings will be important to evaluate for effectiveness. Third, better interventions are required to ensure treatment to those most in need. Revised performance indicators that include structured diagnostic assessments represent one possible mechanism. If successful, these types of interventions may indirectly remove barriers to care.^[25] Finally, new research is required that explores the potential value of antidepressant treatment in medical conditions other than depressive and anxiety disorders.

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