

Prevalence of Psychiatric Illnesses in Older Ethnic Minority Adults

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OBJECTIVES: To compare lifetime and 12-month prevalence of psychiatric disorders in a nationally representative sample of older Latino, Asian, African-American, and Afro-Caribbean adults with that of older non-Latino white adults.

DESIGN: Cross-sectional study conducted in 2001 through 2004.

SETTING: Urban and rural households in the contiguous United States.

PARTICIPANTS: Two thousand three hundred seventy-five community-dwelling residents aged 60 and older living in noninstitutional settings. Data are from the National Institutes of Mental Health Collaborative Psychiatric Epidemiological Studies.

METHODS: The World Mental Health Composite International Diagnostic Interview assessed lifetime and 12-month psychiatric disorders. Bayesian estimates compared psychiatric disorder prevalence rates of ethnic and racial groups.

RESULTS: Older non-Latino whites exhibited a greater prevalence on several lifetime diagnoses than older Asian, African-American, and Afro-Caribbean respondents. Older Latinos did not differ from older non-Latino whites on any lifetime diagnosis and had higher 12-month rates of any depressive disorder. No differences were observed in the 12-month diagnoses between older non-Latino whites and the other racial and ethnic minority groups. Older immigrant Latinos had higher lifetime rates of dysthymia and generalized anxiety disorder (GAD) than U.S.-born Latinos. Older immigrant Asians had higher lifetime rates of GAD than U.S.-born Asians. Older immigrant Latinos had higher 12-month rates of dysthymia than older U.S.-born Latinos.

CONCLUSION: Caution should be taken when generalizing the protective effects of ethnicity into old age. Older Asians and African-Americans exhibited lower prevalence

rates of some psychiatric disorders, whereas older Latinos exhibited rates equal to those of older non-Latino whites. Also, the protective effect of nativity seems to vary according to age, psychiatric disorder, and ethnicity. *J Am Geriatr Soc* 58:256–264, 2010.

Key words: ethnicity; prevalence; psychiatric illness; older adults

Ethnic minority persons constitute the fastest-growing segment of the elderly population, becoming a larger and more-important component of the aging of America.¹ The racial and ethnic composition of elderly immigrants has shifted, with most immigrants aged 65 and older being of Latino and Asian ancestry rather than of European descent.² Empirical investigations of ethnic and racial minorities have consistently found striking differences in how different ethnic and racial groups vary in their rates of psychiatric illness, although prior work has focused on younger populations and thus cannot shed light on the psychiatric profile of older ethnic and racial minorities.

Lifetime prevalence estimates of geriatric depression, anxiety, and substance abuse vary widely. Lifetime prevalence estimates of geriatric depression range from 2.3% to 15.8%.^{3,4} The lifetime prevalence of geriatric anxiety disorders ranges between 0.7% and 7.1%.⁵ The prevalence of lifetime geriatric alcohol abuse ranges from 2% to 16%.^{6,7} Such variability in the rates of psychiatric illness in older adults is partly attributable to the conceptual and methodological inconsistencies that characterize epidemiological research.^{8–11}

Because diverse studies used different measures to assess mental illness, comparisons become problematic when trying to contrast psychiatric diagnoses across elderly ethnic and racial groups. Some epidemiological studies that included older Latino and African-American adults used symptom checklists (e.g., Center for Epidemiologic Studies of Depression Scale) to assess psychological distress,^{12–14} whereas other studies of non-Latino whites, African Americans, and Chinese Americans used standardized

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diagnostic tools to diagnose in regional and a few national samples.^{4,15,16}

An important factor to consider with ethnic minorities is nativity. There is substantial evidence to indicate that immigrants are at lower risk of mental illness than their U.S.-born counterparts,^{17–19} although these results vary according to subethnicity.^{20,21} Although the reasons for this inconsistency are unknown, some researchers argue that residing in the United States for a longer period of time may increase the risk of illness in some ethnic and racial immigrants because acculturation can increase the risk of health and mental health problems.^{22,23} These results are based on younger adults. The effect of nativity with respect to risk of developing a mental illness in older adults is unknown.

The goals of this article are twofold: First, national lifetime and 12-month prevalence estimates of psychiatric disorders according to the *Diagnostic and Statistical Manual, Fourth Edition* (DSM-IV) in older (aged ≥ 60) Latino, Asian, African-American, and Afro-Caribbean respondents were compared with those of non-Latino whites. Second, the prevalence rates of psychiatric illness of older immigrant respondents and U.S.-born respondents were compared within each ethnicity and racial group. In this analysis, the non-Latino whites were the comparison group, because they are the largest ethnic and racial group and have been shown to have the highest rates of mental illness and to be at greater risk for developing mental illness than other ethnic groups.^{21,24,25}

Recent research has consistently shown that non-Latino whites have higher rates of mental illness than their ethnic minority counterparts. It has been found that older African Americans have lower rates of psychiatric illness than non-Latino whites.¹⁵ Similarly, another study showed that non-Latino whites (young and older adults) had a higher risk of developing a psychiatric illness than ethnic minority groups.²⁴ Latinos and Asians have been found to have lower prevalence rates of mental illness than non-Latino whites.^{21,25} Based on this prior work, it was hypothesized that the non-Latino whites in this older adult sample would have higher rates of psychiatric diagnoses than the other ethnic minority groups. It was also hypothesized that the U.S.-born participants would have higher rates of psychiatric diagnoses than their immigrant counterparts.

METHODS

Study Population

The combined pooled data from the three epidemiological studies included as part of the National Institute of Mental Health Collaborative Psychiatric Epidemiological Studies (CPES)²⁶ were used: the National Latino and Asian American Study (NLAAS),²⁷ the National Study of American Life (NSAL),²⁸ and the National Comorbidity Study Replication (NCS-R).²⁹ These studies collected epidemiological information on mental health and substance use disorders, along with information concerning service use in the general population. These three studies shared a primary objective: to collect data on the prevalence of psychiatric illness, impairments associated with these disorders, and treatment seeking for these disorders in a representative sample of adults in the United States.³⁰

The response rates for the NCS-R were 70.9% for the main respondent and 80.4% for the interviews conducted with a second adult in the household. For NSAL, the overall response rate for the core sample was 71.5%. The Caribbean supplement sample yielded a response rate of 76.4%. For the NLAAS, main respondent response rates were 75.7%, and second respondent rates were 80.3%.³⁰ A complete discussion of final sample outcomes and response rates is available elsewhere.^{31,32}

The principal investigators from NLAAS took responsibility for translating and adapting the questionnaire from English to the various non-English languages used in the study.^{27,28} Several approaches were used to attain cultural relevance; semantic, content and technical equivalence; and internal consistency of the measures across languages and ethnic groups. The equivalence of the translation was tested. See Shrout and colleagues³³ regarding language and cultural adaptations.

In response to the lack of epidemiological data and the vast heterogeneity of the Asian population, aggregating the various Asian groups has been suggested to make broad comparisons and establish baseline information.³⁴ Given the small sample size of the current study, this suggestion was heeded, and the subethnic groups in the Asian, Latino, and Afro-Caribbean sample were combined to present data for each of these groups in the aggregate.

Although each of these studies was conducted independently, they all used an adaptation of a multiple-frame approach to estimation and inference for population characteristics.^{35,36} This multiple-frame approach required a four-step sampling process. The primary stage samples U.S. Metropolitan Statistical Areas and counties. The second stage sampled area segments, which were formed by linking geographically contiguous census blocks to form units with a minimum number of occupied housing units. The third stage selected housing units within the area segment. The fourth stage was a random selection of eligible respondents from the sampling housing unit. All three studies (NCS-R, NLAAS, NSAL) used this approach.³² This approach allowed for the integration of design-based analysis weights to combine data sets as though they were a single, nationally representative study.²⁶ The weighted response rates were 75.5% for Latinos, 65.6% for Asians,²⁷ 70.9% in NCS-R, and 70.9% for the African-American and Afro-Caribbean sample.³⁷ Design and methodological information can be found at the CPES Web site (<http://www.icpsr.umich.edu/CPES/index.html>).²⁶

The NCS-R is a nationally representative sample of English-speaking, noninstitutionalized adults aged 18 and older living in civilian housing in the contiguous United States. The NCS-R was a national sample, so it had respondents who self-identified as non-Latino white, African American, Latino, and Asian. The NLAAS is a nationally representative survey of household residents (aged ≥ 18) in the noninstitutionalized Latino and Asian populations residing in the contiguous United States. The NLAAS sample included Latinos, Asians, and a subsample of non-Latino, non-Asian whites. The NSAL is a nationally representative survey of household residents in the noninstitutionalized black population. The sample included African Americans, those of African descent who come from the various nations of the Caribbean, and a subsample of non-Latino whites.

For the purposes of this study, only respondents aged 60 and older were included in the analyses. Two thousand three hundred seventy-five respondents were used in this analysis (831 non-Latino whites, 420 Latinos, 260 Asians, 671 African Americans, 193 Afro-Caribbeans). Racial and ethnicity categories were based on respondents' self-reports to questions based on U.S. Census categories.

Procedures for Data Collection in Diverse Languages

Professional interviewers from the University of Michigan Survey Research Center conducted interviews for the studies. Interviewers were selected to match the cultural background and language preferences of the participants of NLAAS and NSAL.²⁸ All interviews in the NSAL and NCS-R were conducted in English. The majority of CPES interviews were completed face to face using a computer-assisted instrument. Interviews that were not completed in person were done over the telephone (<10%). As a measure of quality control, all interviewers received extensive training on the instruments and were required to complete a training certification. Also, a 10% random sample of each interviewer's completed respondents was recontacted over the telephone to examine the reliability of responses. Informed consent was obtained after all interview procedures were explained to participants. The internal review boards of the principal investigators' institutions and the University of Michigan approved all study methods and protocols.

Eligibility criteria for each study were as follows. For the NCS-R, participants had to be aged 18 and older and speak English; there was no race or ethnicity criterion. For NSAL, participants had to be aged 18 and older, to speak English and to self-identify as black or non-Latino white. Only Caribbean black respondents were eligible in specified Caribbean sample areas. For NLAAS, participants had to be aged 18 and older; speak English, Spanish, Vietnamese, Cantonese, or Tagalog; and self-identify as Latino, Asian, or non-Latino, non-Asian white.³⁰ All three studies followed organic exclusion criteria, meaning that psychiatric symptoms were not considered if they were due to a medical condition or physiological effects of a substance. The algorithms used for determining each of the diagnoses were identical across the three studies.³⁰

The proportion of missing responses was less than 1%.³⁰ Questions related to income had the highest rates of item-missing data across studies (6.3%–10.6%).³⁰ Missing values were imputed in the following variables: education, employment status, insurance, English language proficiency, and scale variables. Missing data were imputed using the hotdeck module in Stata 9 (Stata Corp, College Station, TX).³⁸ Missing data patterns were tabulated according to household income, subethnicity, sex, age, education category, region, household composition, and employment status. Missing values are then replaced stochastically by matching on the above variables that are not missing.

Diagnostic Assessment

In the NLAAS, NSAL and NCS-R, a modified version of the World Mental Health Composite International Diagnostic Interview (WMH-CIDI)³⁹ was used to identify the presence

of lifetime and 12-month psychiatric disorders according to the DSM-IV⁴⁰ and International Classification of Diseases, Tenth Revision. Each diagnostic section of the interview included questions assessing lifetime persistence of the disorder, intensity and duration of the distress, and impairment associated with the disorder. The discrete disorders included in this study were classified in one of four composite diagnostic categories for lifetime or 12-month prevalence: any depressive disorder (dysthymia or major depressive episode), any anxiety disorder (agoraphobia, social phobia, generalized anxiety disorder, posttraumatic stress disorder, or panic disorder), any substance disorder (drug abuse, drug dependence, alcohol abuse, or alcohol dependence), or any of the assessed psychiatric disorders. Diagnoses based on the WMH-CIDI showed good concordance with the Structured Clinical Interview for DSM-IV.⁴¹ Kappa was 0.45 for anxiety disorders, 0.54 for mood disorders, and 0.70 for substance use disorders.⁴¹

Statistical Analyses

Sociodemographic characteristics and immigration measures were described using weighted estimates, and Pearson chi-square tests for contingency tables with second-order Rao-Scott adjustments were used to assess significant differences among groups.⁴² Models were adjusted for sampling design using a first-order Taylor series approximation, and analysis of significance was performed using design-adjusted Wald tests.^{43,44} All inferential procedures accounted for the complex survey design were conducted using Stata statistical software version 10.1 (Stata Corp.).

The lifetime and 12-month prevalence rates of psychiatric illness for each ethnic minority group were estimated using Bayesian methods. Bayesian estimates address the problems of small sample sizes and large sample weighting. Direct estimation in small samples is not reliable and often derives a large standard error.⁴⁵ This is especially true when estimating prevalence rates of rare diseases with small weighted samples. The Bayesian approach works better than the traditional survey design estimator when prevalence rates are low because of the serious skewness in the distribution of the estimator.⁴⁵ To compare lifetime and 12-month prevalence rates, pairwise comparisons were conducted between each minority group and non-Latino whites and between U.S.-born participants and immigrants within each ethnic and racial group. Because the sex distribution varies across the subethnic groups, the sex adjustment was applied by matching the sex proportion to the 2000 Census. Because of the multiple comparisons, only results with $P \leq .01$ were discussed.

RESULTS

Sociodemographic and Immigration Characteristics

Table 1 examines sociodemographic and immigration characteristics of older non-Latino white, Latino, Asian, African-American, and Afro-Caribbean adults. The majority of Latinos reported low education (66.2% reported <12 years of education), being born outside the United States (53.4%), their English proficiency as fair or poor (53.2%) and living 70% of their lives in the United States (60.7%). The majority of Asians reported having a college education

Table 1. Distribution of Sociodemographic Characteristics for Non-Latino White, Latino, Asian, African-American, and Afro-Caribbean Respondents (Aged ≥ 60)

Sociodemographic Variable	% (Standard Error)					P-Value
	Non-Latino White (n = 831)	Latino (n = 420)	Asian (n = 260)	African American (n = 671)	Afro-Caribbean (n = 193)	
Education, years						
≤11	24.5 (2.5)	66.2 (4.3)	30.4 (3.7)	43.1 (2.7)	38.2 (5.5)	<.001
12	36.7 (2.7)	14.8 (2.5)	19.2 (3.4)	29.7 (2.2)	32.7 (5.3)	
13–15	22.1 (2.1)	8.1 (1.5)	17.7 (2.5)	13.3 (1.9)	10.5 (3.4)	
≥16	16.7 (1.8)	10.9 (2.7)	32.7 (4.2)	13.9 (1.8)	18.6 (3.7)	
Annual household income, \$						
≤14,999	19.2 (1.4)	43.3 (5.4)	33.2 (4.9)	36.9 (2.5)	24.5 (5.0)	<.001
15,000–34,999	30.8 (1.7)	26.2 (4.2)	18.3 (3.2)	35.3 (2.0)	38.2 (6.4)	
35,000–74,999	31.7 (2.1)	20.5 (3.9)	24.2 (4.2)	18.6 (1.9)	22.0 (4.9)	
≥75,000	18.3 (2.0)	10.0 (2.7)	24.3 (3.0)	9.2 (1.7)	15.3 (5.6)	
Nativity						
Born in United States	95.1 (1.2)	46.6 (5.1)	21.3 (6.2)	99.7 (0.2)	30.7 (6.3)	<.001
Born outside United States	4.9 (1.2)	53.4 (5.1)	78.7 (6.2)	0.3 (0.2)	69.3 (6.3)	
Ratio of life lived in the United States						
<0.3	0.0 (0.0)	10.2 (1.9)	36.3 (5.3)	0.0 (0.0)	62.8 (6.6)	<.001
0.3–0.7	0.0 (0.0)	29.1 (3.3)	36.3 (4.7)	0.0 (0.0)	0.0 (0.0)	
≥0.7	100.0 (0.0)	60.7 (3.9)	27.4 (7.1)	100.0 (0.0)	37.2 (6.6)	
English language proficiency						
Poor to fair	0.0 (0.0)	53.2 (5.1)	50.3 (4.6)	0.0 (0.0)	4.2 (1.6)	<.001
Good to excellent	100.0 (0.0)	46.8 (5.1)	49.7 (4.6)	100.0 (0.0)	95.8 (1.6)	

(50.4%), being born outside of the United States (78.7%), and their English proficiency as fair or poor (50.3%). The majority of African Americans reported having 12 years of education or less (72.8%) and earning less than \$35,000 (72.2%). The majority of the Afro-Caribbean respondents reported being born outside of the United States (69.3%), had lived less than 30% of their lives in the United States (62.8%), and rated their English proficiency as good or excellent (95.8%).

Sex-Adjusted Lifetime and 12-Month Prevalence Estimates

Table 2 presents comparisons of sex-adjusted lifetime prevalence rates of psychiatric disorders for older non-Latino white, Latino, Asian, African-American, and Afro-Caribbean adults. Non-Latino whites and Latinos had similar lifetime prevalence rates of any depressive disorder (12.2% vs 16.4%), any anxiety disorder (13.5% vs 15.3%), any substance use disorder (5.9% vs 4.5%), and any psychiatric disorder (23.9% vs 26.8%). Asians had significantly lower rates of any substance use disorder (1.3% vs 5.9%) and any psychiatric disorder (14.6% vs 23.9%) than non-Latino whites. African Americans had significantly lower rates of any depressive disorder (5.4% vs 12.2%) than non-Latino whites. Afro-Caribbean respondents did not differ from non-Latino whites on any depressive disorder (8.1% vs 12.2%), any anxiety disorder (11.2% vs 13.5%), any substance use disorder (4.5% vs 5.9%), or any psychiatric disorder (17.3% vs 23.9%).

With regard to lifetime prevalence of specific disorders, non-Latino whites and Latinos did not differ, although non-

Latino whites had higher rates of alcohol dependence (2.2% vs 0.2%) and alcohol abuse (5.7% vs 1.2%) than Asians. Non-Latino whites had higher rates of major depressive episode (11.6% vs 5.3%) than African Americans. Non-Latino whites exhibited significantly greater rates of generalized anxiety disorder (GAD; 5.5% vs 1.1%) and social phobia (6.8% vs 1.1%) than Afro-Caribbean respondents.

Table 3 presents the comparison of 12-month prevalence rates of psychiatric disorders according to race and ethnicity. Significantly higher rates of any 12-month depressive disorders (8.0% vs 3.2%) were found in Latinos than in non-Latino whites. When examining differences in the prevalence rates of specific 12-month disorders, significantly higher rates of major depressive episodes (7.3% vs 2.9%) were found in Latinos than in non-Latino whites. No differences in the prevalence estimates of 12-month disorders were observed between non-Latino whites and the other racial and ethnic groups.

Exploratory Analyses: Lifetime and 12-Month Prevalence Estimates Compared According to Ethnicity and Nativity

Comparisons were made between U.S.-born and immigrant respondents for the Latino, Asian, and Afro-Caribbean groups. Because of small sample size of immigrant African Americans, no meaningful comparisons could be made with the African-American sample, and they were excluded from subsequent analyses. Table 4 presents the comparisons of sex-adjusted lifetime prevalence estimates for non-Latino white, Latino, Asian, African-American, and Afro-Caribbean respondents according to nativity. There were no

Table 2. Comparison of Lifetime Prevalence Rates of Psychiatric Disorders for Older (≥ 60) Non-Latino, Latino, Asian, African-American, and Afro-Caribbean Respondents (Sex-Adjusted Bayesian Estimates)

Psychiatric Disorder	% (Standard Error)					Any Racial or Ethnic Difference
	Non-Latino White (n = 831)	Latino (n = 420)	Asian (n = 260)	African American (n = 671)	Afro-Caribbean (n = 193)	
Any depressive disorder	12.2 (1.4)	16.4 (2.6)	7.7 (2.0)	5.4 (1.0)	8.1 (3.3)	WAA
Major depressive episode	11.6 (1.4)	15.7 (2.5)	7.5 (2.0)	5.3 (1.0)	6.7 (3.0)	WAA
Dysthymia	2.4 (0.7)	2.9 (1.0)	2.4 (1.1)	1.4 (0.5)	2.9 (2.1)	NS
Any anxiety disorder	13.5 (1.4)	15.3 (2.5)	10.9 (2.3)	11.9 (1.4)	11.2 (3.6)	NS
Agoraphobia without panic disorder	0.8 (0.4)	1.3 (0.7)	0.8 (0.7)	1.5 (0.5)	2.9 (2.0)	NS
General anxiety disorder	5.5 (1.0)	5.7 (1.5)	3.8 (1.4)	2.9 (0.7)	1.1 (1.2)	WAC
Panic disorder	2.4 (0.7)	2.2 (1.1)	1.4 (0.9)	1.4 (0.5)	3.2 (1.8)	NS
Posttraumatic stress disorder	2.8 (0.7)	3.0 (1.0)	2.3 (1.1)	4.8 (0.9)	3.1 (2.0)	NS
Social phobia	6.8 (1.1)	5.6 (1.7)	3.1 (1.2)	5.1 (1.0)	1.1 (1.0)	WAC
Any substance use disorder	5.9 (1.0)	4.5 (1.6)	1.3 (0.8)	9.0 (1.3)	4.5 (2.7)	WA
Alcohol dependence	2.2 (0.6)	1.4 (0.9)	0.2 (0.3)	2.3 (0.7)	2.2 (2.1)	WA
Alcohol abuse	5.7 (0.9)	4.3 (1.4)	1.2 (0.8)	8.5 (1.3)	4.1 (2.5)	WA
Drug dependence	0.1 (0.1)	0.2 (0.3)	0.0 (0.1)	0.6 (0.3)	0.3 (0.6)	NS
Drug abuse	0.4 (0.2)	0.4 (0.4)	0.1 (0.2)	1.1 (0.4)	0.5 (0.7)	NS
Any psychiatric disorder	23.9 (1.9)	26.8 (3.2)	14.6 (2.6)	21.1 (1.9)	17.3 (4.1)	WA

WAA = significant difference between non-Latino whites and African Americans; WAC = significant difference between non-Latino whites and Afro-Caribbean respondents; WA = significant difference between non-Latino whites and Asians; NS = not significant.

significant differences in the aggregate categories of psychiatric illness according to nativity. Immigrant Latinos had higher rates of dysthymia (4.8% (standard error 1.7%) vs 0.8% (1.0%)) and GAD (8.8% (2.3%) vs 2.2% (1.8%); data not shown in Table 4) than U.S.-born Latinos. Asian immigrants had higher rates of GAD (4.7% (1.8%) vs

0.3% (0.7%); data not shown in Table 4) than U.S.-born Asians.

Table 5 presents sex-adjusted 12-month prevalence estimates for non-Latino white, Latino, Asian, African-American, and Afro-Caribbean respondents according to nativity. Immigrant Latinos, again, had greater rates of

Table 3. Comparison of 12-Month Prevalence Rates of Psychiatric Disorders for Older (≥ 60) Non-Latino, Latino, Asian, African-American, and Afro-Caribbean Respondents (Sex-Adjusted Bayesian Estimates)

Psychiatric Disorders	% (Standard Error)					Any Racial or Ethnic Difference
	Non-Latino White (n = 831)	Latino (n = 420)	Asian (n = 260)	African American (n = 671)	Afro-Caribbean (n = 193)	
Any depressive disorder	3.2 (0.8)	8.0 (1.8)	2.1 (1.0)	2.3 (0.6)	4.6 (2.7)	WL
Depression	2.9 (0.7)	7.3 (1.8)	2.0 (1.0)	2.2 (0.6)	4.5 (2.7)	WL
Dysthymia	1.1 (0.5)	2.4 (0.9)	0.6 (0.5)	0.8 (0.4)	1.8 (1.7)	NS
Any anxiety disorder	5.6 (1.0)	6.8 (1.6)	7.0 (1.8)	6.6 (1.1)	1.9 (1.4)	NS
Agoraphobia without panic disorder	0.3 (0.2)	1.1 (0.6)	0.5 (0.5)	0.5 (0.3)	0.5 (0.8)	NS
General anxiety disorder	1.9 (0.6)	1.5 (0.7)	1.6 (1.0)	1.1 (0.4)	0.8 (1.1)	NS
Panic disorder	0.9 (0.4)	1.9 (1.1)	1.0 (0.8)	0.8 (0.4)	0.4 (0.7)	NS
Posttraumatic stress disorder	1.0 (0.4)	2.2 (0.9)	2.1 (1.1)	2.2 (0.6)	0.4 (0.7)	NS
Social phobia	2.8 (0.7)	1.8 (0.8)	2.0 (1.0)	3.0 (0.7)	0.7 (0.9)	NS
Any substance disorder	0.2 (0.2)	0.3 (0.3)	0.1 (0.3)	0.6 (0.3)	0.5 (0.8)	NS
Alcohol dependence	0.1 (0.1)	0.2 (0.3)	0.1 (0.2)	0.3 (0.2)	0.2 (0.6)	NS
Alcohol abuse	0.1 (0.1)	0.2 (0.3)	0.1 (0.2)	0.4 (0.3)	0.4 (0.7)	NS
Drug dependence	0.0 (0.1)	0.1 (0.3)	0.1 (0.3)	0.0 (0.0)	0.3 (0.6)	NS
Drug abuse	0.0 (0.1)	0.1 (0.3)	0.1 (0.2)	0.1 (0.1)	0.3 (0.5)	NS
Any disorder	7.3 (1.1)	12.1 (2.2)	7.8 (2.0)	7.7 (1.1)	5.9 (2.8)	NS

WL = significant difference between non-Latino whites and Latinos; NS = not significant.

Table 4. Comparisons of Lifetime Prevalence of Psychiatric Disorders According to Nativity for Older (≥ 60) Non-Latino White, Latino, Asian, and Afro-Caribbean Respondents (Sex-Adjusted Bayesian Estimates)

Psychiatric Disorder	% (Standard Error)				
	U.S.	Non-Latino White (n = 831)	Latino (n = 420)	Asian (n = 260)	Afro-Caribbean (n = 193)
		n = 795	n = 91	n = 46	n = 34
	IM	n = 36	n = 329	n = 214	n = 159
Any depressive disorder	U.S.	12.6 (1.5)	12.6 (4.0)	8.9 (4.7)	13.6 (7.6)
	IM	4.4 (3.7)	19.7 (3.1)	7.4 (2.2)	5.7 (3.3)
	P-value	.04	.16	.78	.34
Any anxiety disorder	U.S.	13.9 (1.5)	11.7 (4.1)	5.1 (3.3)	14.5 (6.7)
	IM	4.7 (3.5)	18.5 (3.0)	12.5 (2.8)	9.7 (4.2)
	P-value	0.02	.19	.09	.55
Any substance use disorder	U.S.	5.9 (1.0)	5.6 (2.9)	2.4 (2.5)	8.2 (6.3)
	IM	5.4 (4.7)	3.6 (1.5)	1.0 (0.8)	2.9 (2.7)
	P-value	.93	.54	.60	.43
Any psychiatric disorder	U.S.	24.4 (2.0)	22.6 (5.4)	13.1 (5.4)	25.8 (8.0)
	IM	14.5 (6.5)	30.4 (3.6)	15.0 (3.0)	13.6 (4.8)
	P-value	.15	.23	.75	.19

U.S. = U.S.-born; IM = immigrant.

dysthymia (4.0% (1.5%) vs 0.5% (0.7%); data not shown in Table 5) than U.S.-born Latinos.

DISCUSSION

This study compared lifetime and 12-month prevalence rates of many psychiatric illnesses in a nationally representative sample of older adults from five racial and ethnic groups. The primary hypothesis was partially supported. Older non-Latino whites exhibited a greater prevalence of

several lifetime diagnoses than older Asian, African-American, and Afro-Caribbean respondents, although older Latinos did not differ from older non-Latino whites on any lifetime diagnosis and had higher 12-month rates of any depressive disorder. No differences were observed in the 12-month diagnoses between older non-Latino whites and the other racial and ethnic minority groups. The secondary, exploratory hypothesis was not supported either. Older immigrant Latinos had higher lifetime rates of dysthymia and GAD and 12-month rates of GAD than their U.S.-born

Table 5. Comparisons of 12-Month Prevalence of Psychiatric Disorders by Nativity for Older (≥ 60) Non-Latino White, Latino, Asian, and Afro-Caribbean Respondents (Sex-Adjusted Bayesian Estimates)

Psychiatric Disorder	% (Standard Error)				
	U.S.	Non-Latino White (N = 831)	Latino (N = 420)	Asian (N = 260)	Afro-Caribbean (N = 193)
		n = 795	n = 91	n = 46	n = 34
	IM	n = 36	n = 329	n = 214	n = 159
Any depressive disorder	U.S.	3.4 (0.8)	5.0 (2.8)	0.3 (0.8)	9.2 (6.9)
	IM	0.4 (1.0)	10.7 (2.5)	2.5 (1.3)	2.6 (2.6)
	P-value	.02	.12	.15	.38
Any anxiety disorder	U.S.	5.8 (1.1)	4.3 (2.5)	1.7 (2.1)	2.3 (2.9)
	IM	2.1 (2.3)	9.1 (2.2)	8.5 (2.3)	1.8 (1.7)
	P-value	.14	.16	.03	.86
Any substance use disorder	U.S.	0.2 (0.2)	0.4 (0.7)	0.4 (0.9)	1.1 (2.1)
	IM	0.4 (1.0)	0.2 (0.3)	0.1 (0.3)	0.3 (0.7)
	P-value	.85	.77	.75	.72
Any psychiatric disorder	U.S.	7.5 (1.1)	8.5 (3.5)	1.8 (2.0)	11.1 (7.4)
	IM	2.2 (2.4)	15.3 (2.8)	9.5 (2.6)	3.6 (2.7)
	P-value	.04	.13	.02	.34

U.S. = U.S.-born; IM = immigrant.

counterparts. Older immigrant Asians had higher lifetime rates of GAD than their U.S.-born counterparts.

This study had several limitations. First, the presence of dementia was not reported because of the small numbers of respondents who interviewers reported having cognitive impairment. Second, severe mental illness rates (e.g., schizophrenia, schizoaffective disorder, and bipolar disorder) were not reported, because lay-administered diagnostic assessments tend to substantially overestimate the prevalence of these disorders.⁴⁶ Third, the sample size was small for immigrant non-Latino whites and African Americans in the nativity analyses. Although small sample sizes may limit the generalizability, meaningful differences were found, and this remains the largest dataset of ethnic minority older adults. Fourth, a type II error is possible with the multiple comparisons being made, so the results should be replicated, but interpreting results with $P \leq .01$ reduces the potential of committing a type II error. Fifth, this study did not examine whether results varied between subethnic Latino and Asian groups because of limited sample size for older subethnic populations. Sixth, lifetime prevalence rates can be subject to recall bias, particularly in older adults.⁴⁷

The finding that lifetime rates of psychiatric illness were not significantly different between older Latinos and non-Latino whites is inconsistent with previous data on younger adults.^{21,25,48} Also in contrast to previous psychiatric epidemiology studies, the current study found that older Latinos had higher 12-month rates of major depressive episode than non-Latino whites. A possible reason for these findings could be that older Latinos may experience greater family intergenerational conflict, which is a significant interpersonal stressor.⁴⁹ They may feel more culturally, socially, or linguistically isolated when the younger generation becomes acculturated and their children's beliefs, values and behaviors begin to deviate from the more-traditional ones the older adults hold. Highly burdened immigrant families who are working hard and are economically challenged may lack time and energy to care for older relatives and may fail to demonstrate the respect and family-affiliated values that the older adults may expect.⁵⁰ This might lead to depressive disorders as older Latinos age.

Consistent with previous research is the result that the rates of alcohol and substance use is lower in Asians than in non-Latino whites. Studies with Asian adults have found lower levels of alcohol consumption and a lower prevalence of alcohol disorders in Asians than in non-Latino whites.^{51,52} Psychological and biological factors may help explain the low rates of alcohol use in the older Asian population. Psychologically, the older Asians in this study may have had high levels of ethnic identification (how closely the people feels that their ideas and feelings are to others of the same racial or ethnic background), which has been shown to be protective against having a history of alcohol disorders.⁵³ Biologically, a high number of older Asians may be unable to break down alcohol, causing a negative reaction to alcohol intake. The body's inability to break down alcohol is higher in Asians than in non-Latino whites.^{54,55}

Consistent with previous research was the finding that older African Americans had lower lifetime prevalence rates of any depressive disorder and major depressive episode. These findings are consistent with the results of a previous

study that used the same NSAL dataset and found that older African Americans (≥ 55) have lower rates of depression.¹⁵ Social support and religious involvement may explain this result. Older African Americans tend to have large social support networks, which can aid in overcoming mental health problems and provide protection against mental illness.⁵⁶ African Americans, particularly those living in the South, have higher levels of religious involvement,⁵⁷ which has been shown to enhance psychological well-being.⁵⁸

This is the first study to measure the epidemiology of psychiatric illnesses in the older Afro-Caribbean population. Older Afro-Caribbean respondents had significantly lower rates of GAD and social phobia than older non-Latino whites. Low acculturation may help explain this finding. The majority of the Afro-Caribbeans in this study had spent less than one-third of their lives in the United States. A previous study reported that the longer immigrants remain in their country of origin during the ages at which people are most at risk of developing psychiatric disorders (after age 7 but before the late 20s), the less cumulative risk of onset of disorders they appear to experience.⁵⁹ Although that study focused on Latinos, the same principle could explain why the Afro-Caribbean respondents had lower lifetime rates of GAD and social phobia. The older Afro-Caribbean respondents had spent less than 30% of their lives in the United States. By staying in their home countries longer, they may have taken advantage of the protective factors involved in emigrating at a later age.

The pattern of higher rates of psychopathology among the immigrant Latinos and Asians in the nativity analyses was unique to older Latino and Asian immigrants and is not seen in younger immigrant adults.²¹ The current study found that the majority of Latino and Asian immigrants had poorer English proficiency, despite being in the United States for half of their lives, than the more recent English-speaking Afro-Caribbean immigrants. The lack of English proficiency may make the immigrant Latinos and Asians feel socially isolated during their older years and as if they do not belong in the dominant culture.⁶⁰ This may lead to feelings of anxiety and depression. Also, older immigrants may lack the language and cultural fluency necessary to overcome social isolation and access barriers to quality health care that could relieve anxiety and depression.⁶¹⁻⁶³

As the population continues to increase in age and diversity, future studies should focus on those aged 60 and older with larger numbers of ethnic minority older adults. Future research could compare prevalence rates of elderly ethnic minorities living in the United States with those living in their countries of origin. Furthermore, additional research can clarify the reasons for inconsistencies with Latino immigrant findings and explore plausible reasons such as differences in intergenerational conflict, segmented assimilation, or unfulfilled migratory expectations. Cross-cultural equivalence of diagnostic measurement issues in Asian ethnicities also warrants further investigation.

Caution should be taken not to generalize the protective effects of ethnicity or nativity into old age. Although older Asians and African Americans continue the trend of lower prevalence rates of some psychiatric disorders, the rates of psychiatric disorders in older Latinos are similar to or greater than those of older non-Latino whites. Also, the

effect of nativity seems to vary with age, psychiatric disorder, and ethnicity. To guide age and culturally appropriate mental health services, it is critical to identify and understand specific components of various cultures that are protective against psychopathology, as well as those that increase the risk of psychiatric morbidity. Clinicians and healthcare providers need to consider these patterns of psychiatric disorders, including differences in rates between immigrant populations, and use this information to guide their assessments of psychiatric symptoms in older adults from differing ethnic groups.

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