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Lifetime and 12-Month Intermittent Explosive Disorder in Latinos

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Abstract

This study examined the occurrence, correlates, and psychiatric co-morbidities of lifetime and 12-month intermittent explosive disorder (IED) and whether impairment due to IED differed across Latino groups. We used data on 2,554 Latino adults (75.5% response rate) from the National Latino and Asian American Study (NLAAS). Lifetime and 12-month prevalence of IED among Latinos were 5.8% and 4.1%, respectively. Unemployment was a common risk factor for both lifetime and 12-month IED. Protective factors for both lifetime and 12-month IED were having poor/fair English proficiency and being born outside the U.S. mainland. Cubans, Mexicans and other Latinos had lower odds of both lifetime and 12-month IED relative to Puerto Ricans, while Puerto Ricans with IED did not demonstrate worse impairment compared with the other groups with IED. Lifetime and 12-month IED were associated with several depressive, anxiety, and substance use disorders. Given its significant association with a wide-range of mental disorders, future research should consider the validity of IED as a unique disorder or whether it is merely a constellation of symptoms that accompanies a variety of mental diseases.

Keywords

Hispanic Americans; impulse control disorders; mental health; comorbidity; epidemiology

A small handful of empirical studies of intermittent explosive disorder (IED) exist in the psychiatric literature. According to McElroy (1999), IED is characterized as having aggressive impulses and uncontrollable physical assaults and/or property destruction that occur on several occasions, with nosology similar to disorders, such as antisocial personality disorder, borderline personality disorder, conduct disorder, attention-deficit/hyperactivity disorder, as well as physical health problems, such as Alzheimer's disease. The episodes must be independent of other psychiatric disorders, general medical conditions, or substance use, including medications, and they must be grossly out of proportion to the stressor.

Recent clinical and population-based data show that IED is more common in the population than previously thought. For example, Coccaro, Schmidt, Samuels, and Nestadt (2004) examined the lifetime and 1-month prevalence of IED in a community sample from the Hopkins Epidemiology Study of Personality. They demonstrated that 6.3% of the sample

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met full lifetime IED criteria, and 2.4% met full 1-month criteria. Similar results were found in an outpatient clinical study of 1,300 participants in Rhode Island (Coccaro, Posternak, & Zimmerman, 2005). Coccaro et al. (2005) reported that 6.3% of outpatients met criteria for lifetime IED, and 3.1% met criteria for current IED. In a study using the National Comorbidity Survey Replication Study, a national probability study, Kessler, Coccaro, Fava, Jaeger, Jin, and Walters (2006) reported similar findings. They found that the lifetime and 12-month prevalence estimates for IED were 7.3% and 3.9%, respectively. Both Coccaro et al. (2005) and Kessler et al. (2006) showed that IED was associated with significant psychiatric comorbidities, and that IED generally went undertreated in affected individuals.

With this growing awareness of IED in the general population, it follows that studies should determine whether certain segments of the population have different risk for the disorder. While previous IED studies collected data on different racial and ethnic groups, they lacked specific information on Latino subethnic groups. For instance, Kessler et al. (2006) found that broadly defined lifetime IED was associated with an “other racial/ethnic” group and not with Blacks or Latinos relative to Whites; however, they did not report specific information on Latino subgroups. Examining Latinos by ethnic subgroup is important because studies have shown that Latinos vary in odds for mental disorders by national origin and levels of acculturation (Alegria et al., 2007; Ortega, Rosenheck, Alegria, & Desai, 2000). For instance, Puerto Ricans have been shown to have higher odds of internalizing disorders and comorbid psychiatric disorders than other Latino groups (Alegria, Canino, Stinson, & Grant, 2006; Ortega, Feldman, Canino, Steinman, & Alegria, 2006; Ortega & Rosenheck, 2000). In addition, given that previous studies have observed IED to be associated with several psychiatric comorbidities, we considered it important to examine the extent to which IED covaried with a wide range of psychiatric disorders in the Latino sample.

We also examine the relationship between IED and measures of acculturation, because acculturation has been linked to the odds of psychiatric disorders, even though the results of these studies have not always been consistent. For example, several adult psychiatric epidemiologic studies have found that low acculturated Mexican American immigrants have better mental health than their U.S.-born, more acculturated counterparts (Burnam, Hough, Karno, Escobar, & Telles, 1987; Grant et al., 2004; Ortega et al., 2000; Vega et al., 1998). Longer length of stay in the U.S., younger age of arrival, U.S. birth, and English language use have been shown to be positively associated with the odds for psychiatric disorders among Mexican Americans, as well as other Latino subgroups (Grant et al., 2004; Vega et al., 2002; Vega et al., 1998). However, the relationship between acculturation and the odds for psychopathology seems to vary by ethnic group and type of disorder. In two studies, the odds for depressive or anxiety disorders did not differ by nativity among adult Puerto Ricans or Cubans living in the U.S. (Alegria et al., 2007), but meeting criteria for substance use disorders differentiated the groups.

Thus, in this paper, we examined the associations of IED with sociodemographics and other psychiatric disorders and with measures of acculturation. We also examined whether there were differences in IED-related impairment across the Latino subgroups. This is the first time that the prevalence and correlates of IED are presented in a heterogeneous sample of Latinos living in the U.S.

Method

The National Latino and Asian American Study (NLAAS) has been described in detail elsewhere (Alegria et al., 2006; Heeringa et al., 2004; Ortega et al., 2006). The original study makes use of both national Latino and Asian samples; however, we only report on the Latino sample here. The NLAAS is based on a stratified area probability sample design. All

study participants are 18 years or older from the noninstitutionalized population of the coterminous U.S. The sample consists of 2,554 Latinos (75.5% weighted response rate). Of the Latinos, 577 were Cuban; 495 were Puerto Rican; 868 were Mexican; and 614 were other Latino. The interviews were conducted in both English and Spanish by trained interviewers at the University of Michigan's Institute for Social Research (ISR) between May 2002 and November 2003.

Measures

Detailed description and the internal consistency of most of the nondiagnostic measures used in the NLAAS have been described in a separate report (Alegria et al., 2004). The survey instruments used in the NLAAS were administered in both English and Spanish. Standard prevalidated measures that were not available in Spanish were translated and adapted using a comprehensive process guided by a conceptual model that focused on cross-cultural equivalence in five dimensions (semantic, content, technical, criterion, and conceptual equivalence) following a cultural adaptation model described in detail elsewhere (Alegria et al., 2004). In the current study, we use measures of demographics and personal characteristics, psychiatric disorders, and measures of acculturation.

Demographic and personal characteristics—These variables included sex (male, female), age in years (18–34, 35–49, 50–64, 65 or more), education (≤11 years, 12 years, 13–16 years, ≥17 years), marital status (never married, previously married, married-cohabiting), occupational status (employed, out of labor force, unemployed), family income (≤$14,999, $15,000–$34,999, $35,000–$74,999, ≥$75,000), perception of financial need (has more money than need, just enough money, not enough money), and subethnic Latino groups (Puerto Rican, Cuban, Mexican, other Latino country).

Acculturation—Nativity and language were our proxies for acculturation and represent different levels of exposure to mainstream U.S. culture (Berry, 2003). Nativity was coded as a dichotomous variable: U.S.-born (reference category) versus Puerto Rico or foreign-born. English or Spanish language proficiency was based on answers to the question, “How well do you speak English (Spanish)?” Response categories were *poor, fair, good, or excellent.* We also created a measure for language selected for administration of the survey interview (English/Spanish). The other variable related to acculturation was number of parents born in the U.S. (whether at least one parent was U.S.-born or if both were U.S.-born).

Psychiatric disorders—The diagnostic interview of the World Mental Health Survey Initiative version of the World Health Organization Composite International Diagnostic Interview (WMH-CIDI; Kessler & Ustun, 2004) was used to assess psychiatric disorder. The WMH-CIDI is a fully structured diagnostic instrument administered by trained lay interviewers. WMH-CIDI diagnoses are based on criteria for the Diagnostic and Statistical Manual of Mental Disorders, version 4 (*DSM–IV*) and ICD-10 symptom criteria. Reliability of the WMH-CIDI was not assessed; however, the instrument has demonstrated good concordance between *DSM–IV* diagnoses based on the WMH-CIDI assessments and the Structured Clinical Interview for Axis I Disorders (SCID; Haro et al., 2006).

For the current study, we used both lifetime and 12-month measures of IED. Lifetime IED is defined as positive if the respondent satisfies all the following three criteria: (a) several discrete episodes of failure to resist aggressive impulses that result in serious acts of assault or destruction of property; (b) the degree of aggressiveness expressed during the episodes is grossly out of proportion to any precipitating psychosocial stressors; and (c) the aggressive episodes are not due to the direct physiological effects of a substance or a general medical condition. The 12-month diagnosis of IED was positive if the respondent had a positive

diagnosis of lifetime IED, and the most recent anger attack happened in the past 12 months. The CIDI diagnostic diagnoses of impulse control disorders have not been validated because the SCID does not assess these disorders (Kessler et al., 2006), thus we are unable to provide reliability estimates on the IED measures.

We also estimated lifetime and 12-month prevalence rates for the following five composite diagnostic categories covering 13 disorders: any depressive disorder (major depressive episode and dysthymia); any anxiety disorder (panic disorder, agoraphobia, social phobia, posttraumatic stress disorder, and generalized anxiety disorder); and any substance disorder (alcohol abuse, alcohol dependence, drug abuse, drug dependence with abuse). We also measured, for participants under the age 45, whether participants had any conduct disorder.

IED-related impairment—We assessed IED-related impairment using the Sheehan Disability Scale (Leon, Olfson, Portera, Farber, & Sheehan, 1997). The scales are scored 0 to 10, where 0 means *no impairment* and 10 means *very severe impairment* when thinking about the past month or in the past 12 months when the participant had his or her IED. Scores from 1 to 10 are categorized as having any impairment. Scores from 7 to 10 are categorized as having severe impairment. Any and severe impairment were measured in home management, ability to work, ability to form and maintain close relationships with other people, social life, and having any impairment.

Data Analyses

All data were analyzed using STATA (Stata Corp., 2004) to account for the stratified and oversampling features of the study design. First, multivariate logistic regression models were computed to determine the associations of lifetime and 12-month IED with demographic and personal characteristics. Second, multivariate logistic regression models were computed to determine the associations of lifetime and 12-month IED with the other lifetime and 12-month psychiatric disorders. The comparison groups were those who do not meet criteria for the psychiatric disorders (i.e., those without a depressive disorder, without major depressive disorder, etc.). Third, we computed multivariate logistic regression models to determine the association of lifetime and 12-month IED with the acculturation measures (nativity, English language proficiency, language of interview, and generational status). Because previous studies of acculturation and mental health have mostly shown that acculturation is associated with increased odds of psychiatric disorder (Ortega et al., 2000; Vega et al., 1998), we used born in the U.S., good/excellent English proficiency, English language of interview, and both parents born in the U.S. as reference categories. Finally, we examined separately, for those with lifetime IED or 12-month IED, whether impairment in home management, ability to work, personal life, social life, and having any impairment was different across Latino subgroups.

Results

Of the entire Latino sample, 5.8% were classified with lifetime IED and 4.1% with 12-month IED. As seen in Table 1, males were 1.4 (95% CI = 1.01, 1.87) times more likely to have lifetime IED than females. Those who were never married were more likely (OR = 1.5, 95% CI = 1.01, 2.09) to have lifetime IED than those who were married. The unemployed had higher odds of lifetime IED (OR = 2.39, 95% CI = 1.33, 4.30) and 12-month IED (OR = 2.98, 95% CI = 1.39, 6.40) than the employed. Cubans, Mexicans, and other Latinos had significantly lower odds of both lifetime and 12-month IED compared with Puerto Ricans.

Table 2 shows the results for the associations between lifetime and 12-month IED with other lifetime and 12-month psychiatric disorders. All lifetime disorders and groupings of disorders were significantly associated with both lifetime IED and 12-month IED, with the

exception of alcohol dependence (for 12-month IED) and drug dependence with abuse. For example, those with lifetime IED were on average six times more likely to have lifetime panic disorder (OR = 6.08, 95% CI = 2.49, 14.92) and alcohol dependence (OR = 6.91, 95% CI = 3.61, 13.22). More than one in every five Latino participants with a last 12 month diagnosis of panic disorder, agoraphobia, posttraumatic stress disorder, drug abuse, or conduct disorder met last year criteria for IED.

Table 3 shows the association between the acculturation measures and lifetime and 12-month IED. Those who were born outside the U.S. mainland were significantly less likely to have either lifetime (OR = 0.36, 95% CI = 0.20, 0.64) or 12-month IED (OR = 0.36, 95% CI = 0.17, 0.76) than those born in the U.S. mainland. Similarly, those who were born outside the U.S. mainland with both parents also born outside the mainland were significantly less likely to have lifetime (OR = 0.38, 95% CI = 0.19, 0.74) and 12-month IED (OR = 0.38, 95% CI = 0.17, 0.83) than those who were born in the U.S. and whose parents were both U.S.-born. Finally, those who had poor/fair English proficiency were less likely to have lifetime (OR = 0.43, 95% CI = 0.24, 0.77) and 12-month IED (OR = 0.40, 95% CI = 0.18, 0.88) than those who had good/excellent English proficiency. Likewise, those who selected to be interviewed in Spanish interview had lower odds of having lifetime IED (OR = 0.55, 95% CI = 0.32, 0.93) than those who had an English interview.

We did not find significant differences in impairment across the Latino subgroups (see Table 4), which was different from that observed for lifetime and 12-month IED.

Discussion

Our lifetime and 12-month IED prevalence estimates from the NLAAS were similar to the estimates observed in the National Comorbidity Survey Replication (NCS-R; Kessler et al., 2006). However, while the NCS-R did not find differences in odds for IED by Latino ethnicity compared with non-Latino Whites, they did not distinguish Latinos by their subethnic groups nor did they include non-English speakers. In our study, we found that IED is relatively prevalent among Latinos, and that when Latinos are compared against each other, Puerto Ricans have the highest odds of both lifetime and 12-month IED.

The observation that Puerto Ricans demonstrate more odds for IED is consistent with other psychiatric studies that have reported the following: (a) that among mainland Puerto Ricans, reporting psychological symptoms is relatively culturally acceptable and possibly desirable (Haberman, 1976); and (b) that Puerto Ricans are more expressive in their responses to mental health questions, which may reflect an acquiescent response style (Dohrenwend & Dohrenwend, 1969; Haberman, 1976; Krause & Carr, 1978). Dohrenwend and Dohrenwend (1969) found that Puerto Ricans had more psychiatric illness than other groups with comparable sociodemographic characteristics, and that there appears to be a distinctive willingness among Puerto Ricans to express symptoms of mental illness, suggesting that the responses may be culturally conditioned. For a more thorough discussion on this topic, please see Guarnaccia (1993) and Guarnaccia, Good, and Kleinman (1990). Our findings that Puerto Ricans with IED did not differ in IED-related impairment from the other Latinos with IED suggest that the observed odds for IED might not reflect disabling psychopathology, but rather differences in response styles.

More recent epidemiological studies have also shown Puerto Ricans to have higher odds for psychiatric disorder than other Latinos (Alegria et al., 2007; Ortega et al., 2006). A distinguishing characteristic of island-born Puerto Ricans is that they enjoy citizenship at birth (unlike foreign-born Latinos), but they may feel more discriminated against when compared with other Latinos and non-Latino Whites, which could increase their risk for

psychopathology (Alegria et al., 2007). A diminishing labor force and increasing unemployment of Puerto Ricans (U.S. Census Bureau, 2002) appears to have eroded the ability for social mobility that might have been expected when coming to the mainland. This is important to note, because we found that unemployment was associated with the odds for both lifetime and 12-month IED. An alternative explanation is that the "healthy migrant effect" may not apply to Puerto Rican migrants possibly due to negative selection (the sicker migrate to get better medical care) among Puerto Rican migrants to the U.S., which has been suggested by some researchers (see Enchautegui & Freeman, 2005). There is no empirical evidence, however, that negative migration could explain our findings.

Consistent with previous clinical and population-based studies, we found that IED co-occurred with a slew of psychiatric disorders, including depressive, anxiety, substance use, and conduct disorders (Coccaro et al., 2005; Coccaro et al., 2004; McElroy, Soutullo, Beckman, Taylor, & Keck, 1998). The association of IED with every disorder measured, with the exception of alcohol dependence (for 12-month IED) and drug dependence with abuse, raises the question of whether IED is a unique impulse-control disorder or a common symptom manifestation that occurs to vulnerable individuals in stressful situations across a wide range of disorders. Another interesting finding is that the unemployed were more likely to have IED than the employed, while income level was not associated with IED. These findings suggest that IED might serve to identify problems with effective coping skills under stressful circumstances, rather than be a unique psychiatric disorder.

Finally, our findings are similar to that of other studies of acculturation and psychiatric disorders. We found that those with poor/fair English proficiency and those who were born outside the mainland U.S. were less likely to have IED than those with good/excellent English proficiency or were born in the mainland U.S. The finding of the protective effect of nativity and poor/fair English proficiency on the risk for IED reinforces the view that sociocultural change is consequential for studying mental health problems. It also points toward the role of important social and historical processes that shape both why immigrant groups may have alternative effective ways to cope with stressful circumstances. For instance, strong social ties (Kawachi & Berkman, 2001) and religious attendance (Franzini, Ribble, & Wingfield, 2005; Pajevic, Sinanovic, & Hasanovic, 2005) may protect against negative interactions in stressful contexts. The fact that language plays a significant role in IED hints to the importance of social networks in building expectations, values, and norms that constrain certain behaviors (Escobar, 1998; Greenblatt, Becerra, & Serafetinides, 1982).

Limitations

While our findings are useful to establish the 12-month and lifetime prevalence of IED, as well as the psychiatric comorbidities and sociodemographic risk factors associated with IED among different Latino subethnic groups, the study has several limitations. The NLAAS was not originally designed to test the mechanisms of IED. Thus, we did not have specific predictors on the social, cultural, or clinical predictors of the disease. We were only able to determine its association with sociodemographic and acculturation factors and with psychiatric comorbidities. The NLAAS also did not collect data on the 25% who did not respond to the survey, so we are unable to compare responders with nonresponders to determine whether there was any potential response bias. The reliability of the English or Spanish versions of the WMH-CIDI has not been conducted, and the SCID does not assess impulse control disorders, thus we do not have information on the reliability of the IED measures. Furthermore, as in any cross-sectional study, we are unable to determine the temporal sequencing of the observed relationships and unable to determine cross-generational differences that might explain our ethnic group differences. Another possible limitation is that the WMH-CIDI requires good cognition to comprehend some of the more elaborate diagnostic probes. If Latinos with low education and literacy did not understand

certain questions, they might misreport symptoms, thereby biasing the prevalence estimates of psychiatric disorder. However, this seems unlikely, because Alegria et al. (2007) stratified the sample for education and compared the Latinos and non-Latino Whites and found the same differences.

Conclusions

In this large, national psychiatric epidemiologic study of Latinos, we observed that both lifetime and 12-month IED prevalence to be similar to estimates reported in other clinical and national studies of non-Latinos. We also observed that IED was associated with a number of psychiatric comorbidities, and that indicators of acculturation were protective against IED, while unemployment, male sex, and not being married were risk factors. Of the Latinos, Mexicans, Cubans, and other Latinos demonstrated lower odds of IED relative to Puerto Ricans; however, Puerto Ricans did not demonstrate worse IED-related impairment. More research is needed on the nosology and epidemiology of IED.

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Table 1

Bivariate and Multivariate Associations of Demographic and Personal Factors With Lifetime and 12-Month Intermittent Explosive Disorder (IED)

	Lifetime IED (*n* = 158)		12-month IED (*n* = 106)	
	% (*SE*)	OR (95% CI)	% (*SE*)	OR (95% CI)
Total	5.84 (0.65)		4.09 (0.47)	
Sex				
Male	6.68 (0.82)	1.38(1.01,1.87)	4.68 (0.61)	1.37 (0.87,2.15)
Female	4.95 (0.71)	1.0	3.47 (0.64)	1.0
	(*p* = .0432)[1]		(*p* = .1676)	
Age				
18–34 years	6.84 (1.05)	4.69 (0.98,22.35)	4.81 (0.80)	4.71 (0.54,40.88)
35–49 years	5.53 (0.98)	3.74 (0.96,14.50)	3.61 (0.71)	3.50 (0.50,24.50)
50–64 years	5.33 (1.28)	3.60 (0.84,15.46)	4.25 (1.19)	4.13 (0.59,28.90)
65 or more years	1.54 (1.10)	1.0	1.06 (1.05)	1.0
	(*p* = .1109)		(*p* = .2436)	
Education				
<11 years	4.39 (0.88)	0.76 (0.25,2.33)	3.16 (0.67)	1.38 (0.43,4.41)
12 years	5.94 (1.13)	1.05 (0.38,2.92)	3.99 (0.97)	1.75 (0.48,6.36)
13–16 years	8.25 (1.25)	1.50 (0.56,4.00)	6.07 (1.05)	2.73 (0.81,9.25)
>17 years	5.67 (2.43)	1.0	2.31 (1.34)	1.0
	(*p* = .0567)		(*p* = 0.0715)	
Marital status				
Never married	7.52 (1.25)	1.45 (1.01,2.09)	5.62 (1.25)	1.52 (0.93,2.52)
Previously married	5.84 (1.06)	1.11 (0.65,1.88)	3.40 (1.10)	0.90 (0.39,2.09)
Married-cohabitating	5.31 (0.79)	1.0	3.75 (0.59)	1.0
	(*p* = .1748)		(*p* = .2704)	
Occupational status				
Employed	5.18 (0.74)	1.0	3.47 (0.60)	1.0
Out of labor force	5.85 (0.98)	1.14 (0.77,1.68)	4.03 (0.91)	1.17 (0.67,2.04)
Unemployed	11.54 (2.57)	2.39 (1.33,4.30)	9.68 (2.48)	2.98 (1.39,6.40)
	(*p* = .0072)		(*p* = .0081)	
Annual family income				
<$14,999	5.69 (1.08)	1.03(0.65,1.65)	3.74 (0.96)	1.34 (0.63,2.83)
$15,000–$34,999	4.49 (1.17)	0.81 (0.37,1.74)	3.12 (0.83)	1.11 (0.44,2.81)
$35,000–$74,999	7.60 (1.16)	1.41 (0.77,2.57)	6.19 (1.12)	2.27 (0.97,5.35)
>$75,000	5.51 (1.29)	1.0	2.82 (0.97)	1.0
	(*p* = .2566)		(*p* = .0990)	
Perception of financial need				
Has more money than need	7.91 (2.65)	1.0	1.89 (1.22)	1.0
Just enough money	5.77 (0.84)	0.71 (0.29,1.74)	3.92 (0.62)	2.12 (0.51,8.82)
Not enough money	5.57 (0.96)	0.69 (0.28,1.70)	4.48 (0.74)	2.44 (0.60,9.84)

	Lifetime IED (*n* = 158)		12-month IED (*n* = 106)	
	% (*SE*)	OR (95% CI)	% (*SE*)	OR (95% CI)
	(*p* = .3480)		(*p* = .8066)	
Latino sub-ethnic group				
Puerto Rican	10.75 (1.34)	1.0	7.33 (1.23)	1.0
Cuban	3.63 (0.67)	0.31 (0.19,0.51)	2.17 (0.42)	0.28 (0.16,0.48)
Mexican	5.52 (0.72)	0.49 (0.32,0.73)	3.97 (0.67)	0.52 (0.31,0.89)
Other	5.13 (1.24)	0.45 (0.25,0.81)	3.50 (1.00)	0.46 (0.21,1.00)
	(*p* = 0.0064)		(*p* = .0764)	

[1] Adjusted Wald tests are conducted to test for the difference in prevalence rates of IED across groups.

Table 2

Lifetime and 12-Month Intermittent Explosive Disorder (IED) and Co-Occurring Psychiatric Disorders Among Latinos

	Lifetime IED**		12-month IED***	
	% (*SE*)	OR (95% CI)†	% (*SE*)	OR (95% CI)†
Depressive disorders				
Any depressive disorder	13.73 (2.26)	3.54 (2.14,5.88)	13.65 (2.99)	4.94 (2.66,9.19)
Major depressive disorder	12.95 (2.1)	3.21 (1.94,5.29)	12.32 (2.7)	4.22 (2.34,7.63)
Dysthymia	23.49 (7.22)	5.27 (2.03,13.67)	17.07 (7.89)	4.79 (1.58,14.47)
Anxiety disorders				
Any anxiety disorder	14.39 (2.16)	4.05 (2.39,6.84)	14.59 (2.57)	5.80 (3.35,10.04)
Panic disorder	25.23 (7.77)	6.10 (2.49,14.92)	24.59 (9.32)	10.35 (3.07,34.87)
Agoraphobia	19.13 (3.35)	4.01 (2.41,6.68)	20.65 (4.36)	6.78 (2.89,15.94)
Social phobia	15.39 (2.84)	3.31 (1.87,5.87)	15.09 (3.66)	4.39 (2.17,8.88)
Posttraumatic stress disorder	18.77 (3.74)	4.46 (2.43,8.18)	26.73 (5.24)	11.55 (5.98,22.30)
Generalized anxiety disorder	12.06 (3.45)	2.58 (1.41,4.72)	12.35 (4.3)	3.29 (1.35,7.98)
Substance use disorders				
Any substance disorder	17.99 (2.89)	4.59 (3.04,6.93)	18.99 (5.71)	4.88 (2.19,10.91)
Alcohol abuse	18.16 (2.84)	4.65 (3.20,6.76)	17.12 (7.43)	3.75 (1.24,11.31)
Alcohol dependence	26.05 (6.08)	6.91 (3.61,13.22)	13.32 (7.42)	2.67 (0.69,10.70)
Drug abuse	18.22 (2.95)	3.51 (2.23,5.53)	31.89 (13.32)	8.70 (2.01,37.53)
Drug dependence with abuse	17.87 (7.11)	2.98 (0.99,9.02)	11.24 (7.57)	2.02 (0.38,10.87)
Conduct disorder*	18.08 (4.04)	3.18 (1.42,7.14)	23.25 (15.04)	3.96 (0.68,23.16)

*Only respondents under the age of 45 years were asked the question of conduct disorder.

**Lifetime IED associated with lifetime psychiatric disorders.

***Past 12 months IED associated with past 12 months psychiatric disorders.

†Adjusted for age, sex, education, marital status, employment status, household income, financial need, and Latino sub-ethnicity.

Table 3

Adjusted Associations of Lifetime and 12-Month Intermittent Explosive Disorder (IED) With the Acculturation Measures

	Lifetime IED		12-month IED	
	% (*SE*)	OR (95% CI)[†]	% (*SE*)	OR (95% CI)[†]
Nativity				
Born in US	9.54 (1.05)	1.0	6.66 (0.83)	1.0
Born in PR or foreign-born	3.23 (0.68)	0.36 (0.20,0.64)	2.27 (0.54)	0.36 (0.17,0.76)
English proficiency				
Poor/fair	3.16 (0.74)	0.43 (0.24,0.77)	2.14 (0.65)	0.40 (0.18,0.88)
Good/excellent	8.48 (0.99)	1.0	6.0 (0.75)	1.0
Language of interview				
English	8.28 (1.02)	1.0	5.57 (0.75)	1.0
Spanish	3.80 (0.70)	0.55 (0.32, 0.93)	2.84 (0.58)	0.62 (0.32,1.22)
Generational status				
Born in PR or foreign-born	3.23 (0.68)	0.38 (0.19,0.74)	2.27 (0.54)	0.38 (0.17,0.83)
US-born with one parent US-born	9.69 (1.39)	1.04 (0.58,1.87)	6.69 (1.13)	1.02 (0.61,1.71)
US-born with both parents US-born	9.38 (1.74)	1.0	6.63 (1.13)	1.0

[†]Adjusted for age, sex, education, marital status, employment status, household income, financial need, and Latino sub-ethnicity.

Table 4

Impairment in Role Functioning Associated With Lifetime and 12-Month Intermittent Explosive Disorder (IED) by Latino Subgroup

	All Latinos % (*SE*)	Puerto Rican % (*SE*)	Cuban % (*SE*)	Mexican % (*SE*)	Other Latino % (*SE*)	Chi-square *p* value
Lifetime IED						
Prevalence of any impairment‡						
Home management	44.3 (4.8)	50.5 (9.3)	29.2 (10.2)	43.9 (7.6)	42.4 (11.9)	0.7979
Ability to work	36.9 (4.7)	35.8 (9.3)	24.6 (8.6)	37.9 (6.2)	36.9 (12.0)	0.8743
Personal life	47.7 (5.7)	39.2 (9.5)	46.7 (11.8)	53.0 (7.9)	43.2 (12.1)	0.5965
Social life	45.8 (5.7)	42.0 (10.2)	50.0 (11.9)	47.4 (9.3)	44.8 (11.6)	0.9344
Any	55.2 (5.6)	54.5 (8.5)	50.0 (11.9)	57.7 (8.5)	51.2 (12.2)	0.8567
Prevalence of severe impairment						
Home management	13.0 (2.5)	15.8 (6.1)	2.8 (2.4)	10.4 (2.3)	17.8 (8.7)	0.5508
Ability to work	13.2 (2.1)	17.7 (7.5)	7.2 (4.7)	12.0 (2.7)	13.1 (6.7)	0.8253
Personal life	12.4 (2.2)	14.2 (6.3)	11.2 (5.7)	12.0 (2.7)	12.0 (7.6)	0.9639
Social life	13.4 (1.9)	15.8 (7.7)	19.9 (9.8)	11.7 (2.7)	14.4 (6.2)	0.8653
Any	20.0 (3.0)	24.4 (8.9)	19.9 (9.8)	13.4 (3.1)	30.4 (10.4)	0.2595
12-month IED						
Prevalence of any impairment‡						
Home management	63.6 (5.0)	74.0 (10.0)	48.7 (15.7)	61.4 (7.5)	62.1 (14.7)	0.7253
Ability to work	52.9 (5.5)	52.5 (12.7)	41.0 (14.8)	53.1 (6.6)	54.1 (15.3)	0.9494
Personal life	68.5 (6.0)	57.5 (12.4)	78.1 (13.1)	74.1 (7.2)	63.2 (14.7)	0.5597
Social life	65.7 (6.5)	61.5 (13.2)	83.5 (12.2)	66.3 (10.3)	65.6 (12.9)	0.8961
Any	79.2 (5.4)	79.9 (8.9)	83.5 (12.2)	80.8 (7.7)	75.0 (13.8)	0.8986
Prevalence of severe impairment						
Home management	18.7 (3.2)	23.2 (8.4)	4.7 (4.6)	14.5 (3.3)	26.0 (12.4)	0.5237
Ability to work	18.9 (3.0)	26.0 (10.2)	12.0 (8.5)	16.8 (3.7)	19.2 (9.0)	0.8017
Personal life	17.8 (2.9)	20.8 (8.8)	18.8 (10.3)	16.8 (3.7)	17.6 (11.5)	0.9474
Social life	19.2 (2.4)	23.1 (10.8)	33.3 (15.7)	16.4 (3.8)	21.0 (8.9)	0.7867
Any	28.7 (3.8)	35.7 (12.0)	33.3 (15.7)	18.8 (3.9)	44.6 (13.7)	0.1887

‡Included mild, moderate, or severe impairment.