Published in final edited form as:

Drug Alcohol Depend. 2009 January 1; 99(1-3): 215–221. doi:10.1016/j.drugalcdep.2008.08.011.

The Hispanic Americans Baseline Alcohol Survey (HABLAS): The association between birthplace, acculturation and alcohol abuse and dependence across Hispanic national groups

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Abstract

Hispanics are heterogeneous in national origin, evidenced by wide ranges of alcohol abuse and dependence rates across different Hispanic national groups. This paper examines associations between 12-month rates of DSM-IV alcohol abuse and dependence with birthplace and acculturation. The 2006 Hispanic Americans Baseline Alcohol Survey, using a multistage cluster sample design, interviewed 5,224 adults (18+ years) in five selected U.S. metropolitan areas: Miami, New York, Philadelphia, Houston, and Los Angeles. Comprehensive data on drinking behavior were collected and the analyses include bivariate and multivariate regression techniques. Alcohol abuse and dependence rates were higher among U.S.-born Puerto Ricans and South/Central Americans compared to their foreign-born counterparts, while no such differences were found for Cuban and Mexican Americans. Overall, those with higher acculturation report higher rates of abuse and dependence (statistically significant only for abuse among Puerto Ricans). Risk factors for abuse include being male and being in the high acculturation group. Risk factors for dependence include being male, being Puerto Rican or Mexican American, having less than a college education, and being U.S.-born. Hispanics were found to share several common risk factors with the larger U.S. population for abuse and dependence, such as male gender, lower education, and lower income.

Keywords

Hispanic groups; alcohol abuse; alcohol dependence; acculturation; birthplace

1. Introduction

This paper examines the association between birthplace, acculturation, and alcohol abuse and dependence among four United States Hispanic national groups: Puerto Ricans, Cuban Americans, Mexican Americans, and South/Central Americans. As described in the paragraphs below, this focus is based on the growing size and importance of the Hispanic population in the U.S., the heterogeneity of drinking patterns and alcohol problems found across Hispanic national groups, and the importance of acculturation and birthplace in shaping these drinking patterns and alcohol-related problems. First, there has been considerable growth in the U.S. Hispanic population in the past 20 years. A recent demographic update indicates that Hispanics

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already are 13.3% of the U.S. population (Ramirez and De la Cruz, 2003) and are expected to be approximately 25% of the population in 2050 (Falcon et al., 2001; U.S. Census Bureau, 2000). Second, in spite of widespread recognition that Hispanics are heterogeneous by reason of national origin, research focusing on specific Hispanic national groups is sparse in the alcohol field. The majority of the previous research in this field report findings for Hispanics as a whole (see for instance, Caetano and Clark, 1998a; Caetano and Clark, 1998b) or focus only on one national group, usually Mexican Americans (Grant et al., 2004b; Markides et al., 1990; Neff et al., 1991). A few studies have provided data on more than one national group (e.g., Black and Markides, 1993; Caetano and Galvan, 2001; Dawson, 1998). However, these studies are limited because their analyses are based on data from small samples of some Hispanic national groups (e.g. Puerto Ricans, Cuban Americans, and South/Central Americans).

Hispanic subgroup heterogeneity is reflected in the wide range of alcohol abuse and dependence rates across national groups. Recently reported 12-month prevalence rates for DSM-IV alcohol abuse vary from 1.8% (Cuban Americans) to 5.6% (Mexican Americans) among males, and from 0.2% (South/Central Americans) to 1.1% (Cuban Americans) among females (Caetano et al., 2008b). Twelve-month rates for DSM-IV alcohol dependence among males vary from 5.3% among Cuban Americans to 15.3% among Puerto Ricans. Among females, the rates range from 0.8% among South/Central Americans to 6.4% among Puerto Ricans. Recent alcohol abuse rates based on U.S. national data (6.93% for males and 2.55% for females) are higher than those above (Grant et al., 2004a). The U.S. rate for alcohol dependence among males (5.42%) is lower than for Hispanic males reported above. The rate for females (2.32%) was slightly higher than those for South/Central and Cuban Americans, similar to that for Mexican Americans, and lower than that for Puerto Ricans.

Acculturation is a complex process, broadly understood as the adoption of cultural traditions and values of the host society by immigrant groups. Previous research with U.S. Hispanics has indicated that both birthplace and acculturation determine levels and pattern of alcohol consumption as well as the prevalence of abuse and dependence. In general, high acculturation and being born in the U.S. seem to affect Hispanics' health in a negative way (Lara et al., 2005). Regarding alcohol consumption, acculturation has been consistently associated with drinking among women but not among men (Caetano, 1987b; Gilbert, 1987; Markides et al., 1990; Zemore, 2005). Acculturation also has a general effect of liberalizing norms and attitudes towards drinking (Caetano, 1987a, b; Caetano and Medina Mora, 1988; Markides et al., 1988; Markides et al., 1990; Neff et al., 1987). In a sample of Hispanics in the Texas/Mexico border, most of whom are Mexican Americans, acculturation also has gender-specific effects. Multivariate analyses indicated that men who were "very Mexican", "bicultural Mexican", or "bicultural Anglo" are at higher risk for alcohol abuse and/or dependence compared to "very Anglo/Anglicized" men. For women, acculturation level did not predict alcohol disorders (Caetano et al., 2008d).

Regarding birthplace, U.S.-born Hispanics have a higher likelihood of reporting a number of alcohol-related problems. For instance, a higher proportion of U.S.-born Hispanics report driving under the influence of alcohol than those who are foreign-born (Caetano and Clark, 2000; Caetano and McGrath, 2005), which could be an indication of their higher level of drinking. Grant et al. (2004b) reported that when compared to the foreign-born, Mexican Americans born in the U.S. had higher rates of abuse (16% versus 9.1%) and dependence (14.5% versus 6.2%). Alegria et al. (2007a; 2007b) also reported higher odds of lifetime and 12-month substance abuse disease for U.S.-born Hispanics compared to the foreign-born, independent of years of life in the U.S. Odds were also lower in first and second generation Hispanics compared to third generation and later. Ortega et al. (2000) reported similar findings for acculturation and lifetime risk of a diagnosis of substance abuse. Finally, Vega et al.

(1998) reported that U.S.-born Mexican Americans were almost 5 times more likely to have a lifetime diagnosis of alcohol abuse or dependence than immigrants with less than 13 years of life in the U.S. When compared to immigrants who had a longer stay in the U.S. (more than 13 years), the odds of alcohol abuse and dependence among U.S.-born Mexican Americans were lower (3 times) but still substantially higher than the U.S.-born.

Unfortunately, this previous research on the effects of acculturation, birthplace, drinking and associated problems has focused only on U.S. Hispanics as a whole and not on differences in these associations across national groups. In other words, there is no knowledge on whether these effects are invariant across Hispanic national groups or, if they vary, what are the characteristics of these variations. Differences in age structure and socioeconomic status across national groups (e.g., Cuban Americans are older and have higher levels of education and income), in reasons for immigrating to the U.S. (mostly political for Cuban Americans versus economic for most Mexican Americans and South/Central Americans) suggest that acculturation and birthplace should not have a homogeneous effect on drinking and problems when national groups are considered. With this as a background, this paper examines 12-month rates of DSM-IV alcohol abuse and dependence and their association with birthplace and acculturation in each of the four larger Hispanic national groups in the U.S.: Puerto Ricans, Cuban Americans, Mexican Americans, and South/Central Americans. The existing research does not provide enough evidence on which to base specific hypotheses about the direction and strength of the association of acculturation, birthplace and rates of abuse and dependence in each national group. However, to explore the possibility that such variations exist, besides examining main effects for acculturation, birthplace and national groups on abuse and dependence, the analysis also tests for interaction effects between acculturation and national group and birthplace and national group.

2. Methods

2.1. Sampling and data collection

Data were collected as part of the 2006 Hispanic Americans Baseline Alcohol Survey (HABLAS). The HABLAS employed a multistage cluster random sample design in five selected metropolitan areas of the U.S.: Miami, New York, Philadelphia, Houston, and Los Angeles. These sites were chosen because of the large proportion of Hispanics of specific national groups in their population. Respondents are a representative sample of the Hispanic civilian non-institutionalized population aged 18 and older in these sites. A total of 5,224 individuals were interviewed, for a design adjusted response rate of 76%. This rate is estimated taking into consideration the proportion of housing units with unknown eligibility that, based on Census data, are likely to be eligible. Face-to-face Computer Assisted Personal Interviews (CAPI) lasting one hour on average were conducted in respondents' homes by trained interviewers, all of which were bilingual English/Spanish. About 70% of the interviews were conducted in Spanish. Respondents received a \$25 incentive for their participation in the study.

2.2. Questionnaire translation

Once the English questionnaire was pre-tested and finalized, it was translated into Spanish by a lead translator, and then independently translated back to English. The two versions of the questionnaire, original English and Spanish, were then harmonized by a group of seven translators from different parts of Latin America (Cuba, Puerto Rico, Venezuela, Argentina, Peru, Mexico and the Dominican Republic) to take into account the possibility that respondents in different Hispanic national groups would use different idioms and words in their daily use of Spanish. This group of translators, working together, created a roster of terms and words that appeared in the questionnaire and that had different usage across the Spanish spoken by

different Hispanic national groups. This roster was provided to the interviewers, who then used it when necessary during interviews in the field.

2.3. Measurements

2.3.1. Alcohol abuse and dependence—These two diagnoses were identified with questions from the Composite International Diagnostic Interview – Substance Abuse Module (CIDI-SAM) (Cottler et al., 1989; Keating et al., 1992). This is a standardized diagnostic interview schedule fully structured and precoded which can be administered by lay-interviewers. Reliability checks for DSM-III-R substance abuse disorders showed an average Kappa of .82; the reliability for alcohol dependence diagnosis was .92 (Keating et al., 1992). This operationalization covers the seven criteria for alcohol dependence as well as the four criteria for alcohol abuse described in the 4th edition of the Diagnostic and Statistical Manual of the American Psychiatric Association (American Psychiatric Association, 1994). Following DSM-IV guidelines, respondents who reported three or more alcohol indicators as present in the 12 months prior to the interview were considered as alcohol dependent. Those who reported one or more criteria for abuse in the same time frame were considered as alcohol abusers. Also following DSM-IV diagnostic hierarchy, those classified as abusers did not have a positive diagnosis of dependence.

2.3.2. Ethnicity and Hispanic national origin—This was done in two steps and is based on self-identification. The first step included screening households by asking the household informant whether there were any adult household members that were Hispanic/Latino. Once these adults were identified, one was randomly selected to be interviewed. In the second step, during the survey interview, the ethnicity of the adult selected into the survey was confirmed through self-identification. Respondents were asked “Which of these groups best describes your own ethnic identification: Puerto Rican, Cuban, Cuban American, Mexican, Mexican American (including Chicano/a), Dominican, South American, Central American.” In this paper, Dominicans are grouped with South/Central Americans.

2.3.3. Birthplace—Respondents were asked, “In what state, territory, or country were you born?” All of those who stated that they had been born in a country other than the U.S. or in a U.S. territory (including Puerto Rico) were coded as foreign-born.

2.3.4. Acculturation level—This scale was developed by Caetano (1987b). It is built from 12 questions covering the following information: daily use of and ability to speak, read, and write English and Spanish; preference for media (books, radio, and T.V.) in English or Spanish; ethnicity of people with whom respondents interact with at church, at parties, the neighborhood in which respondents currently live and lived while growing up; and finally, a series of questions about values thought to be characteristic of the Hispanic lifestyle. With the exception of the items used to assess language use, all other items are coded in a four-point Likert scale (strongly agree to strongly disagree). The scale’s reliability was assessed with Cronbach’s Alpha (0.91) and the split-half method (0.87, Guttman split-half coefficient). The scale correlates positively with being U.S.-born (0.58) and with number of years of life in the U.S. (0.22), and correlates negatively with age (-0.36). It also has positive correlations with drinking and alcohol problems. All these correlations are in the expected direction and empirically confirm the scale’s construct validity. A continuous score of acculturation was computed and the subjects were grouped into three categories – low, medium, and high acculturation levels using tertiles.

2.3.5. Other sociodemographic variables

Age: Based on self-reported age, the respondents were grouped into four categories: 18-29, 30-39, 40-49, and 50 years or older.

Education status: Respondents were categorized into five education categories: a) less than high school; b) completed high school or GED; c) technical or vocational school; d) some college; e) completed four-year college or higher (reference group).

Income: Respondents were asked to identify the category into which their total household income fell from a list of 12 categories, beginning with <\$4,000 ending with a highest category of >\$100,000. However, nearly 20% of the total sample (n=1,069) either refused to provide their income or did not know their income. For these respondents, log-transformed income was multiply imputed using the Markov Chain Monte Carlo method (Schafer, 1997) as implemented in SAS PROC MI. Imputed incomes were transformed back to the 12 categories. Imputations were based on the respondent's education, employment status, marital status, household size, age, metropolitan area of residence, Hispanic nationality, whether the respondent was born in the U.S., how long respondent had lived in the U.S., acculturation, whether the respondent had driven an automobile in the past year, and annual wage and salary data for the respondent's occupation in the case of employed respondents. The source of the wage and salary estimates was the Occupational Employment Statistics (OES) program, a cooperative program between the Bureau of Labor Statistics (BLS) and State Workforce Agencies (SWAs). The OES program produces employment and wage estimates for various occupations, excluding self-employed individuals. These data were publicly available online through the BLS website (<http://www.bls.gov/oes/>). State and metropolitan estimates were used corresponding to the five locations where interviews were conducted for this study. In all, ten imputed income values were generated. The mean of the ten log-transformed imputations was used for purposes of running preliminary regression models.

2.4. Statistical analyses

To account for the multistage cluster sample design used in the HABLAS, the Software for Survey Data Analysis (SUDAAN; Research Triangle Institute, 2005) was used for all analyses. Analyses were conducted on data weighted to correct for unequal probabilities of selection into the sample. In addition, a post-stratification weight was applied, which corrects for non-response and adjusts the sample to known Hispanic population distributions on certain demographic variables (education, age, and gender for all sites; plus ethnicity for the Miami, New York, and Philadelphia samples).

Logistic regression models were developed with drinkers only, that is, all respondents who reported having a least one drink of wine, beer or spirits in the 12 months prior to the survey interview. A drink was defined as a 5 ounces glass of wine, a 12 ounce can of beer and a shot of 1.5 ounces of liquor. The preliminary models were run first using the mean of the imputed income values. Once the variables in the models were finalized, each model was run five times using five different imputed income values, one at a time. Beta coefficients and their standard errors were extracted and inputted into SAS. The resulting matrix was analyzed with SAS's PROC MIANALYZE to arrive at final results. The exponentials of the beta coefficients and the confidence intervals for the standard errors were taken and reported as odds ratios and 95% confidence intervals for each of the two outcome variables – alcohol abuse and alcohol dependence.

3. Results

3.1. Prevalence of DSM-IV alcohol abuse and dependence by birthplace and acculturation

Among Puerto Ricans, those who are U.S.-born have rates of alcohol abuse and dependence that are about 2 times and 2.8 times higher than those born abroad, respectively. Among Cuban Americans and Mexican Americans, the differences between U.S.-born and foreign-born are not statistically significant. Among South/Central Americans, rates are also higher among the

U.S.-born, but the differences are statistically significant only for alcohol dependence (Table 1).

Regarding acculturation, in general, those in the high acculturation group have higher rates of abuse and dependence than the lower acculturation groups. However, this difference is statistically significant only for alcohol abuse among Puerto Ricans.

3.2. Correlates of DSM-IV alcohol abuse and dependence

The logistic regression analysis examining correlates of alcohol abuse and dependence was conducted as follows: Once the main effects model (Table 2) was fit, four interaction terms were tested, one at a time: gender by acculturation, gender by birthplace, national group by acculturation and national group by birthplace. The first two interactions were tested because of the well known differential effect of acculturation on drinking for men and women, as discussed above. The two other interaction terms tested potential differential effects of acculturation and birthplace across national groups. An omnibus chi-square testing of the contribution of these interactions one at a time to the explanatory power of the model did not show statistically significant effects, and the interactions were dropped from the model.

The model for alcohol abuse shows two factors of risk, being a male and high acculturation level (Table 2). Factors of risk for alcohol dependence are being a male, being of Puerto Rican or Mexican American origin compared to Cuban American, having any educational level below college or professional school education, and being U.S.-born. Higher income is a protective factor against alcohol dependence.

4. Discussion

The results in this paper show a different picture depending on whether the focus is on alcohol abuse or alcohol dependence. First, regarding acculturation and birthplace, the results of the multivariate analysis show that acculturation is associated with alcohol abuse, while birthplace is associated with alcohol dependence. According to expectations, those in the high acculturation group are more at risk for abuse than those in the other two groups. This effect for acculturation may be associated with the type of criteria that are part of the DSM-IV diagnosis of abuse, which includes failure to carry out major obligations, repeated use of alcohol in dangerous situations, legal problems and use of alcohol despite social or interpersonal problems. Highly acculturated Hispanics, especially women, drink more than those in low and medium acculturation levels. They also may be in jobs with higher pay and are affected more directly by the consequences of drinking. U.S.-born Hispanics, presumably with higher income and perhaps more access to cars, have higher rates of drinking and driving (Caetano et al., 2008a), which is one of the indicators of alcohol abuse in the DSM-IV. Consistent with this point (Keyes and Hasin, 2008), in a group of 1385 individuals diagnosed as alcohol abusers, the majority (69%) met criteria based only on either driving after drinking or driving while drinking.

The result showing that U.S.-born Hispanics are more at risk for alcohol dependence than the foreign-born is also according to expectations. Past research with a variety of samples of U.S. Hispanics has consistently showed that U.S.-born Hispanics are more at risk for alcohol abuse and dependence, as well as a number of other psychiatric diagnoses, than the foreign-born (Alegria et al., 2007a; Alegria et al., 2007b; Grant et al., 2004b; Ortega et al., 2000; Vega et al., 1998). This protective effect of foreign birth on alcohol dependence has been explained in a variety of ways. One hypothesis, selective migration, suggests that most of those who migrate are in better health and free of substance abuse and dependence (Alegria et al., 2007a). Others suggest that it is acculturation to U.S. society, which is more present among the U.S.-born, that brings an increased risk for substance abuse disorders and other health-related problems (Vega

et al., 1998). More exposure to alcohol and illicit drugs as well as more acceptance of alcohol and drug use among the U.S.-born could lead to higher rates of dependence to these drugs. This could be facilitated by the fact that the U.S.-born may have a higher socioeconomic status and thus more disposable income to buy alcohol.

Multivariate results for alcohol dependence show that Puerto Ricans and Mexican Americans are at a higher risk than Cuban Americans. Previous papers in the literature have reported evidence associated with these differences, showing that Mexican Americans have higher rates of binge drinking once a week or more often (Caetano, 1988; Caetano and Galvan, 2001) as well as, together with South/Central Americans, a higher rate of arrest for driving under the influence of alcohol than other groups (Caetano et al., 2008c). Alegria et al. (2007a) reported that Puerto Rican men were more likely to have a diagnosis of lifetime substance abuse disorder, and associated such an increased risk with higher levels of unemployment and underemployment. These same authors also suggest that because Puerto Ricans are U.S. citizens they may have higher expectations for sharing the country's wealth, and are thus more exposed to frustration and stress when facing economic deprivation. Also, Cuban Americans are different from other U.S. Hispanic national groups. Data from the 2000 U.S. Census provides evidence of this difference (see Ramirez, 2004). They are older, with a median age of 40.3 years, while in the other Hispanic national groups the median age ranges from 24 to 33. Cuban Americans also have the highest proportion of naturalized citizens and the highest proportion of people who entered the U.S. before 1970 (39.6%). The proportion of Cuban Americans with a bachelor degree (21%) is second only to that of South/Central Americans (30%). These two groups also have the highest median income, higher than \$42,000. But perhaps, what sets Cuban Americans most apart from other Hispanic groups is that the great majority of them came to the U.S. for political reasons, after the Cuban revolution. In other Hispanic groups, there also are some refugees from political regimes in South and Central America, but the majority of Hispanics in these groups came to the U.S. to find better jobs and better opportunities.

National Hispanic groups with different reasons for immigration to the U.S. may be exposed to different types of stresses post immigration and thus have more or less risk to develop alcohol use disorders, including dependence. Groups such as Cuban Americans, which came to the U.S. mostly for political reasons may be better educated and may have more resources to cope with immigration stresses. They may receive more help when first arriving in the country, and may also come with family, which can provide an extra source of support. All these factors may mitigate post immigration stress that can lead to excessive drinking and alcohol use disorders. Immigrants that come to the U.S. for economic reasons are, in general, less educated, have less resources to cope with stress, and frequently come alone to work in low paying jobs. Many are also illegal immigrants. These immigrants may therefore be subject to a high level of stress, living isolated and in conditions that are conducive to excessive drinking and a higher risk of alcohol use disorders.

Besides birthplace and acculturation, the logistic regression also shows that males are more likely to be alcohol abusers. This is not unexpected. Regarding alcohol dependence, males and those with less than a college education are more likely to report alcohol dependence. Higher income is a protective factor for dependence. As in the case of alcohol abuse, it has long been established that males are more at risk for alcohol dependence, which seems to be associated above all with the fact that men drink more than women (Grant et al., 2004a). The combination of a higher risk for those with less education and less risk for those with higher income suggests that social disadvantage may put one more at risk for dependence either because of less access to adequate care and perhaps less resources to cope with problems associated with excessive drinking. Further, the combination of low income and low education may put individuals at a higher risk for cumulative adversity, as represented by an accumulation of stressful life events

during one's lifetime (Turner and Lloyd, 1995). This cumulative adversity has been associated with a higher risk for substance use disorders (Turner and Lloyd, 1995). Lower socioeconomic status can also be associated with alcohol dependence because of impaired work abilities due to alcohol disorder. Given the cross-sectional nature of the data under analysis it is not possible to state whether low socioeconomic status preceded or is a consequence of excessive drinking and alcohol use disorders.

This study has several strengths and some weaknesses. It collected information on alcohol consumption and DSM-IV alcohol use disorders from representative samples of Hispanic national groups in five large metropolitan areas in the U.S. Face-to-face interviews were conducted in English or Spanish, thus allowing for the selection of respondents who were not English-speakers. The survey also achieved a high response rate. However, nearly one quarter of the selected respondents refused to be interviewed. The data under analysis are cross-sectional in nature, and do not allow for considerations of time order in the analyses. Respondents may have under-reported some of the behaviors under analysis. If under-reporting is higher in a particular group than in others, this could affect the relationships discussed in this study. A household was eligible for inclusion in the sample if a resident acknowledged the presence of a Hispanic in the household. This could lead to under-identification of persons of Hispanic origin, especially in household with 2nd or 3rd generation Hispanics.

In conclusion, there are variations in the rates of alcohol abuse and dependence across Hispanic national groups. However, Hispanics share with the larger U.S. common factors of risk for abuse and dependence such as male gender, lower education, and lower income. Certain Hispanic national groups are at particularly high risk for abuse and dependence. Highly acculturated Hispanics seem to be more at risk for alcohol abuse but not dependence, irrespective of their national origin. U.S.-born Hispanics are also more at risk for alcohol dependence than the foreign-born.

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Table 1
Prevalence of DSM-IV alcohol use disorders by place of birth, acculturation level, and by Hispanic national group

		Place of Birth											
		Puerto Rican				Cuban American				Mexican American			
		U.S.-Born	Foreign-Born	Sig.		U.S.-Born	Foreign-Born	Sig.		U.S.-Born	Foreign-Born	Sig.	
Alcohol abuse		4.3 (545)	1.6 (783)	*		3.6 (101)	1.1 (1,225)	ns		4.0 (349)	3.0 (935)	ns	
Alcohol dependence		16.5 (544)	6.0 (782)	***		6.2 (101)	2.8 (1,225)	ns		11.0 (350)	7.9 (931)	ns	
Acculturation Level													
		Puerto Rican				Cuban American				Mexican American			
		Low	Medium	High	Sig.	Low	Medium	High	Sig.	Low	Medium	High	Sig.
Alcohol abuse		0.1 (240)	1.3 (384)	4.2 (709)	***	0.9 (635)	0.8 (425)	2.8 (267)	ns	2.1 (552)	3.3 (361)	4.6 (373)	ns
Alcohol dependence		8.2 (240)	7.7 (383)	12.6 (708)	ns	1.8 (635)	4.1 (425)	4.4 (267)	ns	7.6 (550)	9.9 (361)	9.1 (372)	ns

Note: Numbers in parenthesis are denominators; percentages are weighted.

ns= not significant;

* $p<.05$;

** $p<.01$;

*** $p<.001$

Table 2

Odds ratios and 95% confidence intervals from the logistic regression model predicting alcohol abuse and alcohol dependence

	Alcohol Abuse (n=2,331)		Alcohol Dependence (n=2,614)	
	OR	95% CI	OR	95% CI
Male (Ref: Female)	5.17 ^{***}	2.69-9.95	3.57 ^{***}	2.27-5.61
Age (Ref: 18-29 years)				
30-39	0.50	0.25-1.00	0.80	0.54-1.20
40-49	0.46	0.19-1.11	0.85	0.51-1.41
50+	0.54	0.19-1.55	0.60	0.31-1.16
Hispanic national group (Ref: Cuban American)				
Puerto Rican	1.35	0.54-3.34	2.15 [*]	1.17-3.97
Mexican American	2.00	0.83-4.85	1.99 [*]	1.04-3.82
South/Central American	1.29	0.54-3.09	1.26	0.68-2.34
Marital Status (Ref: Married living with spouse/ living with someone)				
Married not living with spouse/separated/ divorced/widowed	0.54	0.25-1.18	1.12	0.71-1.75
Never married/never lived with someone	1.02	0.54-1.93	1.22	0.82-1.82
Education level (Ref: 4-year college degree, graduate/professional school)				
< High school	1.86	0.60-5.75	6.02 ^{***}	2.88-12.61
High school diploma/GED	1.46	0.50-4.22	3.23 ^{**}	1.57-6.65
Technical/vocational school	1.07	0.19-6.05	3.36 [*]	1.08-10.47
Some college	1.13	0.37-3.45	3.41 ^{**}	1.50-7.79
Employment Status (Ref: Full/part-time employment)				
Unemployed (unemployed, looking/ unemployed, not looking)	1.57	0.66-3.76	0.80	0.46-1.39
Retired	0.61	0.12-2.93	0.95	0.30-2.98
Homemaker	0.76	0.23-2.46	0.88	0.35-2.24
Disabled	0.33	0.08-1.38	1.11	0.56-2.18
Other (illness, student, something else, never worked)	0.92	0.25-3.35	1.12	0.56-2.24
Income ^a	1.00	0.98-1.01	0.98 ^{**}	0.98-0.99
Place of birth, U.S.-born (Ref: Foreign-born)	1.51	0.85-2.68	2.56 ^{***}	1.64-3.97
Acculturation level (Ref: Low)				
Medium	1.40	0.65-3.00	1.07	0.69-1.67
High	2.38 [*]	1.09-5.22	1.13	0.68-1.86

*
p<0.05,

**
p<0.01,

p<0.001

^aContinuous variable.