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RACIAL DISCRIMINATION, GENDER DISCRIMINATION, AND SUBSTANCE ABUSE AMONG LATINA/OS NATIONWIDE

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Abstract

This study investigates the relationship between discrimination and substance abuse among Latina/os, and further examines whether this relationship differs by gender and type of discrimination. Analyses focus on the Latina/o respondents (n=1,039 men; n=1,273 women) from the National Latino and Asian American Study carried out from 2002–2003. Outcomes were alcohol abuse and drug abuse measured using DSM-IV definitions and criteria. Additional covariates included immigrant characteristics and demographics. Analyses were completed using gender-stratified multinomial logistic regression. Men reported more discrimination (39.6% versus 30.3%) and had higher prevalence of alcohol abuse (16.5% versus 4.5%) and drug abuse (9.5% versus 2.3%) than women. Discrimination was significantly associated with increased risk of alcohol abuse for women and increased risk of drug abuse for men. Men and women also varied in the types of discrimination (e.g. racial versus gender) reported, and in the associations between these types of discrimination and substance use. These data indicate that discrimination is associated with different substance abuse outcomes between genders. Future research should consider the mechanisms that explain these differences.

Keywords

discrimination; substance abuse; Latina/os; drugs; alcohol

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HUMAN PARTICIPATION PROTECTION

This research was declared exempt from University of California, Los Angeles institutional review board.

INTRODUCTION

Discrimination has been associated with substance *use* in several studies, yet the relationship between discrimination and the more serious outcome of substance *abuse* remain understudied, particularly among Latina/os¹. Two theoretical frameworks may help to explain the relationship between discrimination and substance abuse.

First, minority stress models posit that minority groups experience discrimination based on their minority status, and further, that this discrimination is stressful (Allison, 1998; Flores, et al., 2008; Meyer, 2003). Consistent with this perspective, several studies show that self-reported experiences of discrimination are related to perceived stress and biomarkers of stress (Pascoe & Smart Richman, 2009; Williams & Neighbors, 2001; Zeiders, Doane, & Roosa, 2012). Additionally, discrimination is related to many stress-related outcomes, ranging from psychological distress to cardiovascular disease (Brondolo, et al., 2008; Paradies, 2006; Pascoe & Smart Richman, 2009; Steffen, McNeilly, Anderson, & Sherwood, 2003; Williams, Neighbors, & Jackson, 2003).

Second, the stress-coping model of addiction posits that substance use is a coping response to stress (Gil, Wagner, & Vega, 2000; Shiffman & Wills, 1985; Wagner, Myers, & McIninch, 1999). Accordingly, racial/ethnic or other minorities may use alcohol and drugs to cope with discrimination (Borrell, et al., 2007). Although alcohol consumption in moderation may have health benefits (Cao & Prior, 2000), excessive alcohol use has severe health and social consequences for the individual, their family, and their community (Caetano, 2003; Galvan & Caetano, 2003; Iguchi, Bell, Ramchand, & Fain, 2005).

Over time, using alcohol and drugs to cope with discrimination may lead to substance abuse; individuals may learn they can alleviate negative feelings and improve positive feelings from using alcohol and drugs, and in this way learn to use substances to cope with discrimination (Sinha, 2001). Substance abuse is a disorder, defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress within a twelve month period (American Psychiatric Association Staff, 2000). Substance abuse has been identified as a harmful burden to society, which may lead to various chronic diseases, productivity losses, and an increase in injuries (Rice, 1999).

Latina/os are a key population in which to study discrimination and substance abuse. Given their levels of poverty, minority status, and residential concentration in areas with wide drug and alcohol distribution, Latina/os are considered at risk for substance abuse (Gil & Vega, 2001). The lifetime prevalence of alcohol abuse and dependence is 16.7% for Latinos and 4.3% for Latinas. Similarly, the lifetime prevalence of drug abuse and dependence is 9.4% for Latinos, and 2.4% for Latinas (Canino, Vega, Sribney, Warner, & Alegria, 2008). Of concern, epidemiologic trends suggest substance abuse among Latina/os is increasing (Caetano, Baruah, & Chartier, 2011; Warner, et al., 2006). For example, based on the National Survey on Drug Use and Health, rates of substance dependence or abuse among

¹The term “Latina/o” will be used to refer to both Latina women and Latino men, Latinos to men only (plural) and Latinas to women only (plural).

Latina/os rose from 7.0% in 2000 to 9.7% in 2010 (Epstein, 2002; Substance Abuse and Mental Health Services Administration, 2011).

Prior studies show that Latina/os experience discrimination. Perez and colleagues found that 39% of Latinos and 29% of Latinas reported experiencing everyday discrimination (Pérez, Fortuna, & Alegria, 2008). Several studies have demonstrated that discrimination is related to substance use among Mexican youth (Folch, Esteve, Zaragoza, Muñoz, & Casabona, 2010; Kulis, Marsiglia, & Nieri, 2009; Okamoto, Ritt-Olson, Soto, Baezconde-Garbanati, & Unger, 2009; Ornelas, Eng, & Perreira, 2010; Ortiz-Hernandez, Tello, & Valdés, 2009). However, these studies have not examined the broader Latina/o population and did not focus on the more clinically and socially problematic issue of substance abuse.

Another gap in the literature is how the relationship between discrimination and substance abuse may differ by gender. The intersectionality perspective extends both the minority stress and stress-coping models by recognizing that many people occupy multiple minority statuses (e.g. being a racial/ethnic minority and gendered minority), and that having multiple statuses may confer unique disadvantages and experiences compared to a single status (Crenshaw, 1989; Meyer, Schwartz, & Frost, 2008; Schulz & Mullings, 2006; Viruell-Fuentes, Miranda, & Abdulrahim, 2012). This qualitative difference can manifest in many ways, including different exposures to discrimination, ways of coping with discrimination, and expectations regarding use of substances.

Many forms of discrimination and the life circumstances affecting exposure to it are inherently gendered. For example, Latinos may be more likely than Latinas to be stereotyped as aggressive, while Latinas may encounter sexualized forms of discrimination (Collins, 2004; Ford, Whetten, Hall, Kaufman, & Thrasher, 2007; Hyde, 1997; Roberts, 1997). Men may be more likely than women to encounter, for example, employment discrimination if working in the formal sectors while women more likely to work in informal or domestic spheres that place them at risk for sexualized discrimination (Burgess & Borgida, 1999; Reimers, 1983).

Some have suggested that having multiple disadvantaged statuses (“double jeopardy”) would lead to a stronger association between discrimination and poor outcomes compared to those who have just a single disadvantaged status (Asakura, Gee, Nakayama, & Niwa, 2008; Grollman, 2012; Szymanski & Stewart, 2010). Accordingly, one might hypothesize a stronger association between discrimination and substance abuse among women compared to men because Latinas occupy two disadvantaged positions (racial/ethnic minority and gendered minority) compared to Latinos (racial/ethnic minority).

That said, intersectionality does not necessarily prescribe that more statuses are worse, but recognizes that different statuses imply different contexts. According to prevailing social norms, men are expected to be independent and rational, whereas women are expected to be dependent, emotional, and supportive; which in turn influences coping strategies (Ptacek, Smith, & Dodge, 1994; Tamres, Janicki, & Helgeson, 2002). Similarly, gender stereotypes have produced a dichotomy where certain characteristics, are socialized as being feminine or masculine, and individuals feel compelled to meet the expectations of their gender

(Courtenay, 2000). Further, men have been found to feel increased pressure to meet their expectations and as they are socialized to be the stronger and dominant gender thus engage in more risk-taking behaviors such as using alcohol and drugs (Courtenay, 2000).

Latinos are often seen as more of a societal threat than Latinas. In general, Latina/os tend to be stereotyped as being uneducated, poor, and overly sexualized regardless of gender (e.g. housekeeper, day laborer, Latin lover, spicy Latina). However, Latino men tend to be stereotyped as aggressive, dangerous, and engaging in criminal or gang-related behavior, more so than their female counterparts (Vasquez, 2010). As such, one would expect that Latinos face unique forms of discrimination. This tends to be reflected in self-reports as Latinos report higher levels of discrimination than Latinas (Pérez, et al., 2008). In addition, Latinos also have higher levels of substance abuse (Caetano, et al., 2011; Canino, et al., 2008) than Latinas (Pérez, et al., 2008). Men have been found to have more maladaptive coping patterns, being more likely to turn to alcohol and drugs to cope with stress, compared to women (Cooper, Russell, Skinner, Frone, & Mudar, 1992; Lindquist, Beilin, & Knuiman, 1997; Ptacek, Smith, & Zanas, 1992). Given this rationale, one might hypothesize a stronger association between discrimination and substance abuse among men compared to women in the present study because Latinos may tend to cope with stress in general by using alcohol and drugs.

Thus, there are two reasons to suspect that the relationship between discrimination and substance use varies by gender. On the one hand, the relationship between discrimination and drug use may be stronger for women than men given “double jeopardy.” On the other hand, this relationship may be stronger for men than women given the context of gendered social norms regarding substance use.

Accordingly, the present study looks at the relationship between discrimination and substance abuse among Latina/o adults in the US. We hypothesize that discrimination will be related to higher levels of substance abuse, even after adjusting for relevant covariates. We further hypothesize that gender moderates the relationship between discrimination and substance use.

METHODS

Sample

Data for this analysis come from the National Latino and Asian American Study (NLAAS), a community household survey carried out in 2002 and 2003 (Alegria, et al., 2004). The sample frame for NLAAS was a four-stage national area probability sample with oversampling for specific groups, such as Puerto Ricans (Heeringa, et al., 2004). NLAAS employed a multi-frame sample design based on primary stage units, area segments, and housing units that were designed to be nationally representative of all US populations including Latina/os and Asians; details on the sampling strategy can be found elsewhere (Heeringa, et al., 2004). Face-to-face interviews were conducted between May 2002 and November 2003 by lay interviewers in both English and Spanish (Guarnaccia, et al., 2007). The present study focuses on the 1,127 Latino and 1,427 Latina respondents. The final weighted response rate for the Latina/o sample was 75.5% (Heeringa, et al., 2004).

Respondents with missing data (8% of Latinos and 11% of Latinas) were excluded from the analysis yielding an analytic sample of 1,039 Latinos and 1,273 Latinas. It is important to note that respondents with missing data did not differ substantially from those included in the analyses on key variables such as prevalence of substance abuse and reports of discrimination. Following an explanation of study procedures in their preferred language, written informed consent was obtained from respondents. Recruitment, consent, and interviewing procedures were approved by the institutional review boards of the Cambridge Health Alliance, the University of Washington, and the University of Michigan (Alegria, et al., 2007).

Measures

Dependent variables—The dependent variables for this analysis were lifetime *alcohol abuse* and *illicit drug abuse* (though available in the dataset, past-year alcohol and illicit drug abuse were not included due to low prevalence rates). These outcomes were measured using the World Health Organization Composite International Diagnostic Interview (WHM-CIDI). The WHM-CIDI was designed to be administered by lay interviewers, to assess for mental disorders based on the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) definitions and criteria, and to be applicable in cross-cultural studies (Gee, Spencer, Chen, Yip, & Takeuchi, 2007; WHO, 1998). Alcohol and illicit drug abuse were categorized as: (0) non-use, (1) substance use without abuse, and (2) substance abuse.

Independent variables—*Discrimination* was measured using the everyday discrimination scale developed by Williams and colleagues (Williams, Yan Yu, Jackson, & Anderson, 1997), which includes nine items such as: (1) You are treated with less respect than other people, (2) People act as if they think you are not smart, (3) People act as if they think you are dishonest, and (4) People act as if you are not as good as they are. The response categories ranged from (1) almost every day to (6) never. The items in the discrimination scale have a standardized Cronbach's alpha score of 0.91 in the present study (Pérez, et al., 2008). Responses were summed, averaged, and dichotomized as low discrimination versus moderate to high discrimination as done by previous studies (Mays & Cochran, 2001; Otiniano & Gee, 2012; Pérez, et al., 2008). Respondents who reported discrimination were also asked what they thought was the main reason for these experiences. Type of discrimination was categorized as: (0) no discrimination, (1) racial discrimination, (2) gender discrimination, (3) socioeconomic status discrimination, and (4) other discrimination.

Sociodemographic characteristics included Latina/o ethnicity, region, age, education, employment, household income, poverty, nativity, age at immigration, length of stay, immigrant stress, language of interview, marital status, family support, neighborhood safety problem, neighborhood drug problem, social desirability, arrest, and incarceration. Age at immigration, length of stay, and immigrant stress were included as conditionally relevant variables (Cohen, 1968) on nativity in the present analyses.

Immigrant stress was measured using an adaptation of the acculturative stress scale used in the Mexican American Prevalence and Services Survey (Gee, et al., 2007; Vega, Alderete,

Kolody, & Aguilar-Gaxiola, 1998). This scale included 10 items such as: (1) feeling guilty for leaving friends and family behind, (2) being questioned about legal status, and (3) difficulty finding work due to Latino descent. Responses were summed and averaged, yielding a continuous variable ranging from 1 to 10, with higher values corresponding to higher levels of stress.

Marital status was measured by asking respondents about their marital status, classified as (1) married/cohabiting, (2) divorced/separated/widowed, and (3) never married. Responses were recoded yielding a dichotomous variable married/cohabiting versus not based on the skewed distribution of responses to married/cohabiting.

Family support was measured by asking respondents if they agreed with three statements taken from the Circumplex Model of Marital and Family Systems (Olson, 1986), including (1) Family members like to spend free time with each other, (2) Family members feel very close to each other, and (3) Family togetherness is very important. Response categories ranged from (1) strongly agree to (4) strongly disagree (Gee, et al., 2007). Responses were reverse-coded so higher values corresponded to greater family support, summed, and averaged. Responses were skewed with the majority of respondents strongly agreeing with the three statements thus were dichotomized as low to moderate family support versus high family support.

Neighborhood safety problem and neighborhood drug problem were measured by asking respondents how true the following statements were about their neighborhood: "I feel safe being out alone in my neighborhood during the night" and "People sell or use drugs in my neighborhood". Response categories ranged from (1) very true to (4) not at all true. The neighborhood drug problem variable was reverse coded so higher values would correspond to increased problem. Responses were skewed with roughly half of respondents reporting: (1) it was not at all true that they felt safe in their neighborhood at night, and (2) it was very true that people sell or use drugs in their neighborhood. Based on the skewed distribution of both variables towards a neighborhood problem, they were dichotomized as low to moderate problem versus high problem.

Social desirability may lead to under reporting of discrimination and substance use, (Gee, et al., 2007; Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005) and was measured using the Zuckerman Personality Scales (Gee, Walsemann, & Takeuchi, 2010; Zuckerman, 1991). Responses were summed yielding a continuous variable ranging from 0 to 10 with higher values indicating higher social desirability.

Analytic Plan

Analyses began with simple descriptive analyses, including bivariate associations between substance abuse and independent variables. To determine if the relationship between discrimination and substance abuse held after adjusting for all other covariates, multinomial logistic regression, was used (the baseline category was non-use). Multinomial logistic regression was used instead of ordinal logistic regression since a Brant test showed the parallel regressions assumption was violated. Preliminary analyses using interaction terms showed that gender moderated discrimination; the final models presented here are stratified

by gender for a more parsimonious interpretation (multinomial models with interaction terms can be difficult to interpret). Given the number of variables related to immigrant characteristics, collinearity diagnostics were carried out and no problems were identified. Analyses were weighted to be representative of the US Latina/o population (Heeringa, et al., 2004) and carried out using the Stata (v11) software (StataCorp, 2009).

RESULTS

Table 1 shows the descriptive statistics of the respondents stratified by gender. Latinos and Latinas shared certain sociodemographic characteristics. Both were in their late thirties (36.97 and 38.47, respectively) and had a less than high school education (10.83 and 10.75 years of school, respectively). However, Latinos and Latinas differed in terms of substance abuse, discrimination, and involvement in the criminal justice system. Among Latinos, the prevalence of alcohol abuse was 16.49% and the prevalence of drug abuse was 9.49%. Among Latinas, the prevalence of alcohol abuse was 4.49% and the prevalence of drug abuse was 2.61%. Latinos reported higher levels of everyday discrimination than Latinas (39.61% and 30.28%, respectively). One-third of Latinos reported they had been arrested (34.47%) compared to less than one-tenth of Latinas (8.17%). A higher proportion of Latinos also indicated that they had been incarcerated compared to Latinas (15.96% and 3.44%, respectively).

Table 2 shows the unadjusted and adjusted associations between discrimination and substance abuse using multinomial logistic regression, stratified by gender. In terms of alcohol abuse, among Latinos, discrimination was significantly associated with greater odds of alcohol abuse, but not alcohol use at the bivariate level; however, at the multivariate level, discrimination was no longer significantly associated with alcohol abuse (OR=1.82). For Latinas, discrimination was significantly associated with higher odds of alcohol use and abuse at the bivariate level; and discrimination was significantly associated with higher odds of alcohol abuse (OR=2.45) after adjusting for additional covariates. In terms of drug abuse, for Latinos, discrimination was significantly associated with higher odds of both drug use and abuse at the bivariate level. Further, discrimination was significantly associated with higher odds (OR=2.17) of drug abuse after adjusting for additional covariates. For Latinas, discrimination was significantly associated with higher odds of drug use and abuse at the bivariate level; and discrimination was significantly associated with higher odds of drug use (OR=1.39), after adjusting for covariates.

Table 3 shows the gender-stratified unadjusted and adjusted multinomial logistic regression results of the associations between discrimination and substance abuse. Among Latinos, significant bivariate associations existed between alcohol abuse and discrimination based on four statuses (race/ethnicity, gender, SES and some other status); however these associations were not significant at the multivariate level. No associations existed in the relationship between alcohol use and discrimination among Latinos. In bivariate analyses among Latinas, significant associations existed between alcohol use and discrimination based on three statuses (race/ethnicity, gender, and some other status), and between alcohol abuse and discrimination based on two statuses (gender and some other status). In the multivariate

analyses, alcohol use was associated with discrimination based on gender (OR=3.20) and based on some other status (OR=2.26).

With regard to drug use and abuse, for Latinos, discrimination based on three social statuses (race/ethnicity, SES, and some other status) were each associated with drug use and drug abuse in bivariate analyses. In the multivariate analyses, racial discrimination was significantly associated with higher odds (OR=3.94) of drug abuse after adjusting for covariates. For Latinas, discrimination based on four social statuses (race/ethnicity, gender, SES and some other status) were each associated with drug use; and discrimination based on three statuses (gender, SES and some other status) were each associated with drug abuse at the bivariate level. None of these associations were significant in the multivariate analyses, which adjusted for covariates.

DISCUSSION

The current study finds that self-reported discrimination is associated with substance abuse among a nationally representative sample of Latina/os. Further, the data show that these associations vary by type of discrimination, gender, and by type of substance.

In accord with the minority stress and stress-coping models, prior studies have also found that self-reported discrimination is related to substance use among this population (Folch, et al., 2010; Kulis, et al., 2009; Okamoto, et al., 2009; Ornelas, et al., 2010; Ortiz-Hernandez, et al., 2009). A key contribution of the present study is to investigate not only substance use, but the more serious problem of substance abuse. The data show a two-fold greater odds of drug abuse among both men and women for every unit increase in discrimination. This association was statistically significant only for men after adjusting for poverty and other covariates, but it is worth noting that the strength of association were similar across both genders. A similar pattern was observed for alcohol abuse, although the strength of association was higher among women, and statistically significant, whereas the association was weaker and not significant among men.

Taken together, these findings imply that discrimination may be statistically associated with substance abuse among men, and alcohol abuse among women. Although preliminary, it is worth considering the potential explanations for these findings.

Gender differences are sometimes thought to stem from innate biological differences, where women rely more heavily on social networks and emotion focused coping strategies than men (Tamres, et al., 2002). Animal studies have shown that males often have “fight-or-flight” responses to stress, whereas females often have “tend-and-befriend” responses (Klein, Popke, & Grunberg, 1998; Tamres, et al., 2002). Studies among infants and young children have also shown gender differences in emotional expression, which has been interpreted as suggesting that gender differences in coping are innate (Malatesta, et al., 1989; Tamres, et al., 2002). Our findings do not support this explanation, as our findings suggest that Latinos and Latinas may both use substances to cope with discrimination, even if the types of substance differs by gender.

A second explanation is that stress appraisal may differ by gender, which can then lead to differences in coping (Tamres, et al., 2002). Discrimination may be viewed as more stressful to men versus women (or vice versa), eliciting different responses. We were unable to evaluate this idea because NLAAS did not have a measure of stress appraisal. Future studies which measure stress appraisal and resiliency would be helpful to determine if men and women experience the same levels of stress from discrimination. In addition, while type of occupation may differ by gender (Burgess & Borgida, 1999; Reimers, 1983), employment status was not related to reports of discrimination for Latinos or Latinas in the present study.

A third explanation is that individuals are socialized in different ways based on gender roles as well as societal norms and expectations around masculinity and femininity, and these gender roles are learned as early as infancy (Witt, 1997). In the U.S. and in Latin America, drinking is seen as part of the process to becoming a man (Lee, et al., 2006; Lemle & Mishkind, 1989). Unsurprisingly, use and abuse of alcohol is more common among men than women, partially as a result of these social norms (Caetano & Galvan, 2001; Gomberg, 1993; Holmila & Raitasalo, 2005; Otiniano Verissimo, Gee, Iguchi, Ford, & Friedman, 2013; Wilsnack, Vogeltanz, Wilsnack, & Harris, 2000; Wilsnack & Wilsnack, 1997). Because alcohol use is more prevalent among men, there may be a ceiling effect such that alcohol use may not be a very responsive coping mechanism to discrimination among men. By contrast, we may see this association among women because there is less of a ceiling. This explanation seems to be the one most consistent with our findings.

Our data further highlight the importance of examining multiple types of discrimination. For example, both women and men reported roughly similar levels of discrimination based on skin color (23% and 26%, respectively). Yet, not surprisingly, discrimination based on gender was an order of magnitude higher among women compared to men (7.8% vs. 0.8%, respectively). Among women, gender discrimination was the 6th most commonly reported type of discrimination (behind ethnicity, race, "other", income/education, and age). Further, although women reported less gender discrimination than racial discrimination, the experience of gender discrimination is nonetheless correlated with alcohol use, whereas racial discrimination was not. Taken together, these findings suggest that prevalence does not necessarily imply importance.

Further, it should be noted that our measure of unfair treatment was not designed to focus on gender discrimination. Instead, women volunteered to attribute discrimination to gender or some other characteristic. It is likely that there would be greater reporting of gender discrimination had we used a scale specifically focused on the experiences of women (inappropriate sexual innuendos, stereotyped as being overly emotional, etc.). The inclusion of such measures would be a natural extension of our current study.

Other caveats should be recognized. First, substance use was measured with self-reports. Although we used a standardized instrument developed by the World Health Organization to ascertain risk using DSM-IV criteria, self-reported data do risk response biases, such as through underreporting (Morrall, McCaffrey, & Iguchi, 2000). However, the prevalence of lifetime substance abuse among Latina/o NLAAS respondents is comparable to those found among Mexican Americans using results from the 2001 to 2002 National Epidemiologic

Survey on Alcohol and Related Conditions which also provides a representative sample of the US; respondents had prevalence rates of 12.1% and 4.3% for alcohol and drug abuse, respectively (Grant, et al., 2004). Drug testing was not used in this study, but would another way to ascertain drug use.

Additionally, our study measured participants' self-reports of discrimination and are potentially subject to reporting biases as noted above. Further, these reports focus on personal experiences of discrimination and do not capture broader aspects of institutionalized discrimination.

Third, as NLAAS was a cross-sectional study, the relationships reported here cannot be deemed causal. Fourth, the small sample sizes in some of the cells highlights the need for additional studies on discrimination and substance abuse, particularly for Latinas given their low prevalence of drug abuse. Lastly, the present analyses did not include measures of stress. The lack of stress measures does not invalidate our analysis, but future studies would be enriched by testing whether stress indeed lies on the theoretical pathway as a mediator.

In closing, our study of a large nationally representative sample finds that self-reported discrimination is associated with higher levels of substance abuse among Latina/os. This finding is nuanced, however. Specifically, racial discrimination is associated with drug abuse for Latinos, whereas for Latinas gender discrimination and other types of discrimination are associated with alcohol use. This suggests that future work on discrimination should be more nuanced to consider intersectionality. This could be extended to consider other characteristics such as sexual orientation, social class, age, and of course, gender.

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DESCRIPTIVE STATISTICS OF LATINA/OS (weighted). NATIONAL LATINO AND ASIAN AMERICAN STUDY (NLAAS), 2002–2003.

TABLE 1

	Latinos (n=1,039)	Latinas (n=1,273)
SUBSTANCE ABUSE		
Alcohol Abuse (%)		
No alcohol use	14.55	51.08
Alcohol use, no abuse	68.95	44.43
Alcohol Abuse	16.49	4.49
Drug Abuse (%)		
No drug use	57.19	75.04
Drug use, no abuse	33.33	22.35
Drug Abuse	9.49	2.61
Alcohol and Drug Abuse (%)	8.84	2.07
DISCRIMINATION		
Everyday Discrimination (%)	39.61	30.28
Everyday Discrimination Attribution (%)		
Ethnicity ^a	26.58	23.03
Race ^a	26.34	20.32
Skin Color ^a	3.80	3.07
Gender ^b	0.77	7.77
Income or Education Level ^c	10.16	8.94
Age ^d	7.12	8.39
Height ^d	1.05	0.53
Sexual Orientation ^d	0.41	0.69
Weight ^d	2.20	3.33
Other ^d	18.22	19.25
Unspecified ^d	3.35	4.68
CRIMINAL JUSTICE SYSTEM		
Arrested (%)	34.47	8.17
Incarcerated (%)	15.96	3.44

	Latinos (n=1,039)	Latinas (n=1,273)
DEMOGRAPHICS		
Latina/o Ethnicity (%)		
Puerto Rican	10.09	10.17
Cuban	4.59	4.89
Mexican	56.00	55.94
Other	29.32	28.99
Region (%)		
Northeast	17.47	18.64
Midwest	9.21	8.71
South	31.74	31.32
West	41.59	41.33
Age, mean (SE) range	36.97 (0.63)	38.47 (0.70) 18 – 97
Education, mean (SE) range	10.83 (0.16)	10.75 (0.23) 0 – 17
Employed (%)	74.21	50.92
Household Income (%)		
Less than \$15,000	22.59	30.66
\$15,000–35,000	26.61	28.98
\$35,000–75,000	31.87	25.53
More than \$75,000	18.94	14.84
Poverty (%)	21.81	30.51
IMMIGRANT CHARACTERISTICS		
Foreign born (%)	55.98	55.49
Birthplace (%)		
United States	44.02	44.51
Mexico	31.93	30.56
Cuba	3.38	3.78
Puerto Rico	4.27	3.75
Dominican Republic	3.82	4.85
Other	12.59	12.56
English Language Interview (%)	48.77	47.69
Length of stay¹, mean (SE) range	18.15 (0.69)	18.53 (0.73) 0 – 80

	Latinos (n=1,039)	Latinas (n=1,273)
Age at immigration ^f , mean (SE) range	19.56 (0.45)	20.78 (0.47) 0 – 85
Immigrant Stress ^f , mean (SE) range	2.77 (0.15)	2.89 (0.13) 0 – 10
<i>SOCIAL INFLUENCES</i>		
Marital status (%)	54.61	47.28
Family support (%)	69.25	66.83
Neighborhood safety problem (%)	51.23	63.95
Neighborhood drug problem (%)	49.06	47.95
Social Desirability, mean (SE) range	2.62 (0.11)	2.53 (0.13) 0 – 10

Notes:

Foreign born refers to those born outside of the Continental US.

Length of stay indicates duration in the US for those not born in the Continental US.

^aRacial;

^bGender;

^cSocioeconomic status;

^dOther.

^fForeign born Latinos (n=654); Foreign born Latinas (n=787).

TABLE 2

ASSOCIATION BETWEEN DISCRIMINATION AND SUBSTANCE ABUSE AMONG LATINA/OS (weighted). NATIONAL LATINO AND ASIAN AMERICAN STUDY (NLAAS), 2002–2003.

	LATINO MEN (n=1,039)				LATINA WOMEN (n=1,273)			
	Unadjusted OR (SE)	Adjusted OR (SE)	Unadjusted OR (SE)	Adjusted OR (SE)	Unadjusted OR (SE)	Adjusted OR (SE)	Unadjusted OR (SE)	Adjusted OR (SE)
Discrimination	Alcohol Use ¹		Alcohol Abuse ¹		Alcohol Use ¹		Alcohol Abuse ¹	
	1.24 (0.29)	1.12 (0.36)	3.15 (0.94) ***	1.82 (0.75)	2.09 (0.37) ***	1.36 (0.28)	6.51 (1.83) ***	2.45 (0.92) *
Discrimination	Drug Use ²		Drug Abuse ²		Drug Use ²		Drug Abuse ²	
	2.29 (0.31) ***	1.17 (0.23)	5.19 (1.43) ***	2.17 (0.75) *	2.82 (0.39) ***	1.39 (0.20) *	6.22 (2.25) ***	2.15 (1.11)

Notes:

Models used multinomial regression and adjust for Latina/o ethnicity, region, age, education, employment, income, poverty, nativity, language of interview, length of stay, age at immigration, immigrant stress, marital status, family support, neighborhood safety problem, neighborhood drug problem, neighborhood drug problem, social desirability, arrest and incarceration where indicated.

¹ Models used no alcohol use as the base outcome;

² Models used no drug use as the base outcome.

Length of stay, age at immigration, and acculturative stress conditionally relevant based on nativity.

* p 0.05;

** p 0.01

*** p 0.001

TABLE 3

ASSOCIATION BETWEEN TYPE OF DISCRIMINATION AND SUBSTANCE ABUSE AMONG LATINA/OS (weighted). NATIONAL LATINO AND ASIAN AMERICAN STUDY (NLAAS), 2002–2003.

		LATINO MEN (n=1,039)						LATINA WOMEN (n=1,236)					
		Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted		
		OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)	OR (SE)		
		Alcohol Use ¹			Alcohol Abuse ¹			Alcohol Use ¹			Alcohol Abuse ¹		
Discrimination		Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
None		1.51 (0.37)	1.20 (0.41)	5.06 (2.46)**	2.33 (1.25)	1.62 (0.29)*	1.35 (0.24)	2.40 (1.58)	1.14 (0.92)	22.93 (18.08)***	3.76 (2.58)	1.14 (0.92)	
Racial		4.40 (5.49)	2.88 (3.73)	68.84 (89.91)**	38.85 (86.66)	7.83 (3.61)***	3.20 (1.23)**	22.93 (18.08)***	3.76 (2.58)	5.01 (4.34)	1.96 (2.64)	3.76 (2.58)	
Gender		2.49 (1.66)	1.85 (1.31)	8.94 (8.69)*	3.77 (3.59)	1.52 (0.52)	1.42 (0.48)	5.01 (4.34)	1.96 (2.64)	7.98 (5.03)**	2.09 (1.78)	1.96 (2.64)	
SES		1.26 (0.35)	1.01 (0.35)	5.78 (2.87)***	2.42 (1.35)	3.09 (0.80)***	2.26 (0.57)**	7.98 (5.03)**	2.09 (1.78)				
Other													
		Drug Use ²			Drug Abuse ²			Drug Use ²			Drug Abuse ²		
Discrimination		Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	
None		2.44 (0.43)***	1.48 (0.32)	8.34 (4.78)***	3.94 (2.58)*	2.28 (0.48)***	1.65 (0.46)	2.60 (1.27)	1.48 (0.90)	8.41 (6.70)*	5.94 (6.82)	1.48 (0.90)	
Racial		0.90 (1.11)	0.28 (0.33)	14.21 (21.22)	5.97 (10.09)	6.27 (1.95)***	1.99 (0.82)	8.41 (6.70)*	5.94 (6.82)	5.25 (4.08)*	1.57 (1.33)	5.94 (6.82)	
Gender		2.57 (1.00)*	1.39 (0.53)	8.86 (8.38)*	4.09 (4.36)	2.20 (0.83)*	1.58 (0.59)	5.25 (4.08)*	1.57 (1.33)	5.96 (3.11)***	2.10 (1.52)	1.57 (1.33)	
SES		3.67 (0.84)***	1.71 (0.57)	12.24 (6.48)***	4.19 (3.03)	3.45 (0.55)***	1.71 (0.47)	5.96 (3.11)***	2.10 (1.52)				
Other													

Notes:

Models used multinomial regression and adjust for Latino/o ethnicity, region, age, education, employment, income, poverty, nativity, language of interview, length of stay, age at immigration, immigrant stress, marital status, family support, neighborhood safety problem, neighborhood drug problem, neighborhood drug problem, social desirability, arrest and incarceration where indicated.

¹Models used no alcohol use as the base outcome;

²Models used no drug use as the base outcome.

Length of stay, age at immigration, and acculturative stress conditionally relevant based on nativity.

* p 0.05;
** p 0.01
*** p 0.001