

## Neighborhoods, cultural factors, and alcohol use disorder: A role for acculturative stress in Mexican American young adults

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### Abstract

**Purpose:** Trends in heavy drinking among Mexican American young adults are shifting in the United States. Despite elevated risks for alcohol use disorder (AUD) and related problems among Mexican American populations, little work has examined mechanisms contributing to alcohol outcomes in the context of their neighborhood environments. This study examines how neighborhood environment factors (ethnic density and distance to the nearest border port of entry) and cultural factors (acculturative stress and ethnic identity) relate to AUD.

**Method:** The sample of 575 Mexican American men and women (aged 18 to 30) was recruited from San Diego County, California, USA. We assessed the indirect effects of Mexican American ethnic density and distance to the nearest border port of entry, on AUD through acculturative stress and ethnic identity. Multiple group path analysis was used to test sex differences.

**Results:** While sex differences were not observed in the overall model, there were differential associations with focal variables for each group. For women, greater proportions of ethnic density and greater distance to the nearest port of entry were both negatively associated with AUD. For both women and men, acculturative stress was positively associated with AUD, and neighborhood environment indicators were not related to acculturative stress nor ethnic identity.

**Conclusions:** These data may inform further studies to integrate social and cultural mechanisms in creation of place-based strategies for AUD prevention.

### Introduction

In 2020, the year of the most recent decennial census, there were more than 62 million people living in the United States (US) who identified as Hispanic or Latino (US Census Bureau, 2020). Mexican-Americans and other Hispanic Americans represent about 19% of the US population, 39% of the population of the state of California, and 34% of the population of San Diego County (US Census Bureau, 2020), which is one of the most densely populated counties in the US-Mexico border region. The current study focuses on young adults living in San Diego County, California, to examine how neighborhood environment factors (ethnic density and distance to the nearest border port of entry) and cultural factors (acculturative stress and ethnic identity) relate to alcohol use disorder (AUD).

In the US, Hispanic populations have greater rates of alcohol problems (Ye et al., 2025), including persistent and recurring alcohol-related problems (Chartier & Caetano, 2010; Mulia et al., 2009; Zemore, 2007), than non-Hispanic White populations, even at similar levels of drinking (Witbrodt et al., 2014). Young Hispanic men are at increased risk of AUD relative to non-Hispanic White men (Grant et al., 2012), and this elevation in AUD risk is evident even after accounting for potential confounding factors (Ye et al., 2025). Non-Hispanic White men typically reduce heavy drinking throughout their 20s, but Hispanic men persist with heavy drinking into their 30s (Mulia et al., 2017; Williams et al., 2018), resulting in binge drinking rates in Hispanic men and women that are greater than or comparable to their non-Hispanic White counterparts (Salas-Wright et al., 2021).

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Mexican Americans make up the largest Hispanic ethnicity subgroup in the US (Noe-Bustamante, 2019) and have some of the highest rates of heavy alcohol use (Tam et al., 2024) and AUD prevalence among Hispanic people (Ríos-Bedoya & Freile-Salinas, 2014). These differences by ethnicity are particularly pronounced among men (Tam et al., 2024). Diverse drinking patterns among Hispanic national groups (e.g., Mexican American vs. Cuban American; Tam et al., 2024) likely reflect specific cultural norms around alcohol consumption (Vaeth et al., 2017) as well as elements of ethnic identity.

### Neighborhood Environment

In order to understand potentially unique risk and protective factors associated with AUD in Mexican American young adults, in this study we focus on residential neighborhood environments and cultural factors relevant to this population. Environmental factors play a role in the lived experiences of Hispanic people in the US, including the residential neighborhood environment and proximity to the US-Mexico border. Ethnic enclaves are areas with high concentrations of residents who share the same ethnic heritage. Although ethnic enclaves in the US are typically low-income (Lim et al., 2017) and may constrain economic mobility somewhat (Alba et al., 2013), these areas provide robust social networks that foster social cohesion and access to social capital (Toussaint-Comeau, 2012) and thus confer benefits including proximity to cultural and ethnic institutions (Anderson & Gerber, 2008). Increased social cohesion facilitates informal social controls to collectively monitor risky behaviors among residents, including heavy drinking (Bryden et al., 2013). Here we operationalize ethnic enclaves as areas with high residential concentrations of people with Mexican ancestry. This specific operationalization may better reflect social processes for this cultural group that would otherwise become obscured if ethnic enclaves were operationalized using a pan-ethnic designation, i.e., Hispanic residential concentration.

In previous research with Hispanic samples, it was found that residence in Hispanic ethnic enclaves is protective for many health conditions, all-cause mortality, and certain health risk behaviors such as alcohol use (Eschbach et al., 2004; Kulis et al., 2007; Osypuk et al., 2009). Hispanic people who live in areas with a greater density of Hispanic residents are at decreased risk for past-year AUD (Molina et al., 2012) and experience fewer negative consequences of drinking (Jones-Webb & Karriker-Jaffe, 2013). In relation to reductions in alcohol use and AUD, prior research in this sample suggests that Mexican American young women may benefit more from residence in Mexican American ethnic enclaves than their male counterparts (Tam et al., 2025).

Mexican and Mexican American residents who live closer to the US-Mexico border region report higher rates of AUD than their counterparts in communities further from the border (Borges et al., 2015; Caetano et al., 2012; Caetano et al., 2013; Cherpitel et al., 2015). Parts of the border region experience high levels of drug traffic and violence (Sabo et al., 2014; Wright, 2011), and heavy drinking may result in part from stresses of living in communities with greater instability and disorder (Bryden et al., 2013). Hispanic men may be more likely than Hispanic women to use alcohol to

cope with stressors (Cobb, 2025). On the other hand, living close to the US-Mexico border also may incur benefits of proximity to cultural and ethnic institutions and facilitate maintaining social ties with family and friends in Mexico (Anderson & Gerber, 2008). Mechanisms behind these associations are largely unstudied; thus, the current study examines two cultural correlates relevant to AUD—acculturative stress and ethnic identity—that may help explain how young adult Mexican Americans' residential neighborhoods relate to AUD.

### Cultural Mechanisms: Acculturative Stress and Ethnic Identity

Extant research with Hispanic people suggests several types of cultural factors are related to AUD by way of heavy drinking. One of these is acculturative stress. Acculturative stress refers to stressors associated with navigating conflicting cultural identities (Berry, 2006). Higher levels of acculturative stress are associated with increased alcohol problems and hazardous alcohol use (Jankowski et al., 2020; Pinedo et al., 2017), including in a subset of the present sample of Mexican American young adults (Ehlers et al., 2009). Living in areas with greater densities of Mexican-origin residents may be negatively associated with acculturative stress, which in turn lowers risk for AUD. In addition to living among people of the same ethnic group, young people in ethnic enclave areas or in neighborhoods close to the border region have access to cultural institutions that facilitate exploration of salient cultural values and practices that support their cultural identity development (Vo-Jutabha et al., 2009; White, Knight, et al., 2018; White, Zeiders, & Safa, 2018). One mixed methods study with Mexican American adolescents showed that the ways in which young people labeled or described themselves reflected their residential neighborhoods (Pasco & White, 2020). Adolescents living in neighborhoods with greater availability of ethnic-specific institutional resources (e.g., churches and social organizations) were more likely to label themselves as Mexican than their peers in neighborhoods with fewer such resources, suggesting these neighborhoods may be safe spaces for cultural identity exploration. It is unknown whether living in neighborhoods with increased proportions of Mexican American residents or in closer proximity to the US-Mexico border is indirectly linked to AUD through acculturative stress, however.

A second cultural factor of interest is ethnic identity, or having a positive sense of belonging to one's ethnic background regarding culture, language, attitudes, and beliefs (Phinney, 1992). Through attachment to one's own ethnic group, strong ethnic identity protects against AUD and other health risks (Burnett-Zeigler et al., 2013). There are mixed findings on the relationship between ethnic identity and AUD for Hispanic people in the US (Burnett-Zeigler et al., 2013; Espinosa et al., 2023; Molina et al., 2016); however, ethnic identity is positively associated with abstinence from alcohol use (Castro et al., 2009) and, among Mexican American young men in particular, negatively associated with heavy drinking (Zamboanga et al., 2006). Living in neighborhoods with a high concentration of people from one's own ethnic group is positively associated with greater ethnic identity (Pasco & White, 2020). By contrast, although the US-Mexico border region reflects a diminished

presence of any single, dominant culture (Pinedo et al., 2017), a greater distance from the border region may be associated with weaker Mexican ethnic identity.

### Current Study

Acculturative stress and ethnic identity both are important for substance use outcomes in Mexican American young adults. In this study, we emphasize these cultural factors as potential mechanisms linking area-level proportions of Mexican-origin residents, and distance from the US-Mexico border, with AUD. Because of documented sex differences in alcohol outcomes, we also examined sex differences in pathways to AUD in this young adult community sample.

## Methods

### Participants and Procedures

Data came from a study examining individual- and community-level risk factors for AUD among Mexican American young adults in San Diego County, California (Ehlers et al., 2009; Ehlers et al., 2014). Participants were recruited from the years 2003 through 2018 using a commercial mailing list that consisted of individuals with Hispanic surnames in postal ZIP codes with over 20% of residents reporting Hispanic heritage. Potential participants were screened for eligibility (i.e., identify as Mexican, between ages 18 to 30 years, read and write in English, and be US residents), and then they completed a detailed psychiatric history interview. Respondent addresses were geocoded and linked to the corresponding Census tract to append area-level information (e.g., the proportion of residents born outside the US and the proportion with incomes below the US federal poverty level) from the 2000 and 2010 US Census and 5-year estimates from the 2009-2018 American Community Surveys (United States Census Bureau, 2018), based on the year of the interview. The Institutional Review Board (IRB) at The Scripps Research Institute (IRB protocol #17-7022) approved the study.

### Measures

#### Current AUD

The psychiatric history interview included the Semi-Structured Assessment for the Genetics of Alcoholism (S-SAGA), which has been validated in different ethnic groups (Bucholz et al., 1994; Hesselbrock et al., 1999) and used to assess mental health disorders in the current sample of Mexican American young adults (Ehlers et al., 2015). The S-SAGA allows for lifetime and current diagnoses of AUD. Current diagnosis for AUD is a dichotomous indicator based on the presence of symptoms in at least two domains in the past 12 months, as described in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition (American Psychiatric Association, 2013). In the analytic sample, 24.4% ( $n = 153$ ) met criteria for current AUD.

#### Acculturative Stress

Acculturative stress was based on 11 items from the Mena et al. (1987) scale to gauge the level of stress experienced on topics such as conflicting values and expectations with family members, language barriers, and perceived

discrimination (1 = extremely stressful to 5 = not at all stressful; Caetano et al., 2008). This reduced scale has demonstrated reliability and association with AUD, sleep disturbances, posttraumatic stress disorder, and other anxiety disorders (Ehlers et al., 2009; Ehlers et al., 2016). Responses were reverse-scored and summed, and internal consistency in this sample was  $\alpha = 0.85$  ( $M = 23.58$ ,  $SD = 8.30$ ; minimum [min] = 11.0 and maximum [max] = 51.0).

#### Ethnic Identity

Ethnic identity was captured using Phinney's Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992), with items asking about the respondent's ethnicity or ethnic group and their corresponding feelings or reactions to statements such as "I have spent time trying to find out more about my ethnic group" and "I have a lot of pride in my ethnic group." Response options ranged from 1 = strongly disagree to 4 = strongly agree. This scale has adequate to good reliability across a range of ethnic groups and ages, including in Mexican American adolescents and young adults (Eng & Tram, 2021; Estrada & Jimenez, 2018; Zamboanga et al., 2006). Responses were averaged, and internal consistency in this sample was acceptably high ( $\alpha = 0.87$ ;  $M = 3.06$ ,  $SD = 0.52$ ; min = 1 and max = 4).

#### Neighborhood Ethnic Concentration

Neighborhood ethnic concentration was a continuous measure derived from percentage of Mexican residents in the respondent's residential Census tract ( $M = 42.1\%$ ,  $SD = 23.3\%$ ; min = 5.0% and max = 95.0%). Because traditionally-defined ethnic enclaves are in dense, urban areas, Census tracts are suitable for approximating these neighborhoods (Tam, 2019). Respondent residential addresses were geocoded in ArcMap 10.6 and linked to Census tract information on ethnic concentration from the US Census and American Community Surveys' five-year estimates from 2009-2018, based on the year of each participant's interview. To increase statistical power beyond that provided by a dichotomous indicator of enclave status, the continuous measure of Mexican ethnic concentration was used to characterize respondents' neighborhoods.

#### Distance to Nearest Port of Entry

The US-Mexico port of entry (POE) is a place where one may enter or exit each country. Respondents' geocoded addresses were mapped and the distance in roadway miles was calculated from the POE closest to their residence ( $M = 13.85$  miles,  $SD = 9.19$ ; min = 0.90 miles and max = 59.0 miles).

#### Covariates

Covariates were *sex* (male vs. female as referent), *age* (continuous), *marital status* (married vs. unmarried as referent), *income* (indicators for confirmed low income and confirmed high income, with middle/missing income as referent), *US-born nativity* (vs. foreign-born as referent), and *family history of alcohol dependence*, defined by AUD in a first-degree relative.

#### Analysis Strategy

First, we examined associations among variables using logistic regression analysis and chi-squared tests. We then

used path analysis to model indirect effects of neighborhood ethnic concentration and distance to nearest border POE on current AUD, as mediated by acculturative stress and ethnic identity. To examine sex differences in mediated effects, we conducted path analysis simultaneously with male and female samples, with no cross-group constraints. We used several fit indices (i.e., chi-square, root-mean-square error of approximation [RMSEA], comparative fit index [CFI], and Tucker-Lewis index [TLI]) and model interpretability to evaluate model fit and determine covariate inclusion. We then used the MODEL TEST command to assess sex differences in the direct effects of the neighborhood variables on AUD. All descriptive analyses and logistic regression models were conducted using Stata Version 16.1 (StataCorp., 2019), and the path analysis was conducted using the weighted least square (WLSMV) estimator in Mplus version 7.4 (Muthén & Muthén, 2013). Tract-level variance in AUD was very low in preliminary analyses and did not warrant multilevel analyses.

## Results

### Descriptive Statistics

In the analytic sample ( $n = 575$ ), 58.5% of respondents identified as women, the average age was 23.9 years ( $SD = 3.8$ ), and 88.0% were US-born. The linked Census data showed that respondents lived in neighborhoods where, on average, 31.0% of residents were foreign-born ( $SD = 11.69$ ), 16.4% had a four-year college degree ( $SD = 16.67$ ), 15.5% were below the federal poverty level ( $SD = 10.99$ ), and 64.3% were non-Hispanic White ( $SD = 14.54$ ). Table 1 presents distributions of key variables and sociodemographic characteristics for the full sample and by sex. More men than women reported current AUD (33.6% vs. 18.1%,  $p < 0.001$ ), but more women reported family history of AUD (44.2% vs. 29.4%,  $p = 0.001$ ). More women reported low income than men (39.5% vs. 28.2%,  $p = 0.01$ ). There were no significant differences by sex in the neighborhood variables or hypothesized mediators.

**Table 1**

**Key Variable and Sociodemographic Distributions for the Full Sample and by Sex**

	Overall <i>n</i> = 575	Men <i>n</i> = 238	Women <i>n</i> = 337	<i>p</i>
Current AUD	24.52% (141)	33.61% (80)	18.10% (61)	<0.001
Neighborhood environment				
% Mexican residents	42.10 (23.33)	40.61 (23.33)	43.13 (23.18)	0.40
Distance from POE	13.85 (9.19)	13.86 (9.04)	13.85 (9.31)	0.75
Acculturative stress (M/SD)	23.58 (8.30)	23.87 (8.31)	23.38 (8.30)	0.52
Ethnic identity (M/SD)	3.06 (0.52)	3.02 (0.53)	3.09 (0.50)	0.09
Family history of AUD	38.09% (219)	29.41% (70)	44.21% (149)	0.001
Born in the United States	88.00% (506)	89.92% (214)	86.65% (292)	0.20
Age (M/SD)	23.89 (3.80)	23.87 (3.99)	23.89 (3.66)	0.87
Married	16.87% (97)	14.29% (34)	18.69% (63)	0.18
Income <sup>1</sup>				0.01
High income	20.00% (115)	24.79% (59)	16.62% (56)	
Low income	34.78% (200)	28.15% (67)	39.47% (133)	

**Note.** AUD, alcohol use disorder; POE, port of entry <sup>1</sup>Reference = middle income/missing.

### Preliminary Regression Models

Table 2 presents preliminary logistic regression results for AUD for the full sample and by sex. In the full sample, a greater distance to the nearest border POE was marginally associated with reduced odds of current AUD ( $p = 0.098$ ). This association was not statistically significant for men ( $p = 0.889$ ), but it was marginally significant for women ( $p = 0.050$ ). Acculturative stress was positively associated with AUD in the full sample ( $p = 0.009$ ), with marginally significant relationships (and similar odds ratios) for both men ( $p = 0.061$ ) and women ( $p = 0.075$ ).

### Multiple-Group Path Analysis

Our final indirect effects model was an excellent fit to the data ( $\chi^2(14) = 12.9, p = .534, RMSEA = 0.00, CFI = 1.00, TLI = 1.10$ ); coefficients for focal variables are presented in Figure 1. There were significant direct effects of the

neighborhood environment (ethnic concentration and distance to nearest border POE) on AUD for women, with a significant protective effect of the proportion of Mexican American residents on reduced likelihood of current AUD ( $\beta = -0.011, p = 0.016$ ), and a similar pattern for the direct effect of distance from border POE on AUD ( $\beta = 0.027, p = 0.007$ ).

When converted to odds ratios, this translates to a reduction in the odds of AUD of approximately 2% for every one percent increase in the proportion of neighborhood residents who also identify as Mexican or Mexican American ( $OR \approx 0.98$ ), and a reduction in the odds of AUD of approximately 4% for every mile further from the nearest border port of entry ( $OR \approx 0.96$ ). For men, however, there were no significant direct effects from ethnic concentration or distance to nearest border POE on AUD ( $p = 0.787$  and  $0.998$ , respectively). Despite the apparent variation in model estimates, a Wald test yielded no significant difference between men and women in the direct effects of the two

neighborhood variables on AUD ( $\chi^2(2) = 3.3, p = 0.194$ ). Acculturative stress was positively related to AUD for both women ( $\beta = 0.163, p = 0.035$ ) and men ( $\beta = 0.159, p = 0.034$ ), which translates to an increase in the odds of AUD of approximately 32% for every one-point increase in acculturative stress (OR  $\approx$  1.32 for women and 1.31 for

men). Ethnic identity was not related to AUD for either women ( $p = 0.392$ ) or men ( $p = 0.933$ ). There were no indirect effects between environment and AUD through either ethnic identity or acculturative stress for either women or men. Standardized coefficients for the final path model are presented in Table 2.

**Table 2**  
*Logistic Regression Models for AUD, Overall and by Sex*

	Full Sample (n = 570)		Men (n = 238)		Women (n = 332)	
	OR	95% CI	OR	95% CI	OR	95% CI
Female	0.42***	(0.28 - 0.64)				
% Mexican residents	0.99	(0.98 - 1.00)	1.00	(0.98 - 1.01)	0.98*	(0.96 - 0.99)
Distance from POE	0.98†	(0.95 - 1.01)	1.00	(0.96 - 1.04)	0.95*	(0.94 - 1.00)
Acculturative stress	1.03**	(1.01 - 1.06)	1.04†	(1.00 - 1.07)	1.03†	(1.00 - 1.07)
Ethnic identity	0.86	(0.58 - 1.29)	0.95	(0.53 - 1.70)	0.82	(0.46 - 1.47)
Family history of AUD	1.73*	(1.14 - 2.63)	2.23*	(1.21 - 4.13)	1.38	(0.77 - 2.48)
US-born (vs. foreign-born)	1.27	(0.63 - 2.56)	1.14	(0.40 - 3.27)	1.52	(0.55 - 4.22)
Age	0.97	(0.92 - 1.03)	0.98	(0.91 - 1.05)	0.96	(0.89 - 1.05)
Married	0.48*	(0.25 - 0.95)	0.46	(0.17 - 1.24)	0.60	(0.23 - 1.55)
High income <sup>1</sup>	0.75	(0.43 - 1.31)	0.40*	(0.19 - 0.87)	1.56	(0.69 - 3.53)
Low income <sup>1</sup>	0.93	(0.59 - 1.46)	0.65	(0.33 - 1.27)	1.42	(0.74 - 2.74)
Constant	1.14	(0.13 - 9.73)	0.53	(0.03 - 10.60)	1.02	(0.04 - 27.29)

**Note.** AUD, alcohol use disorder; POE, port of entry; <sup>1</sup>Reference = Middle income/missing; OR = odds ratio; CI = confidence interval

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , †  $p < 0.10$

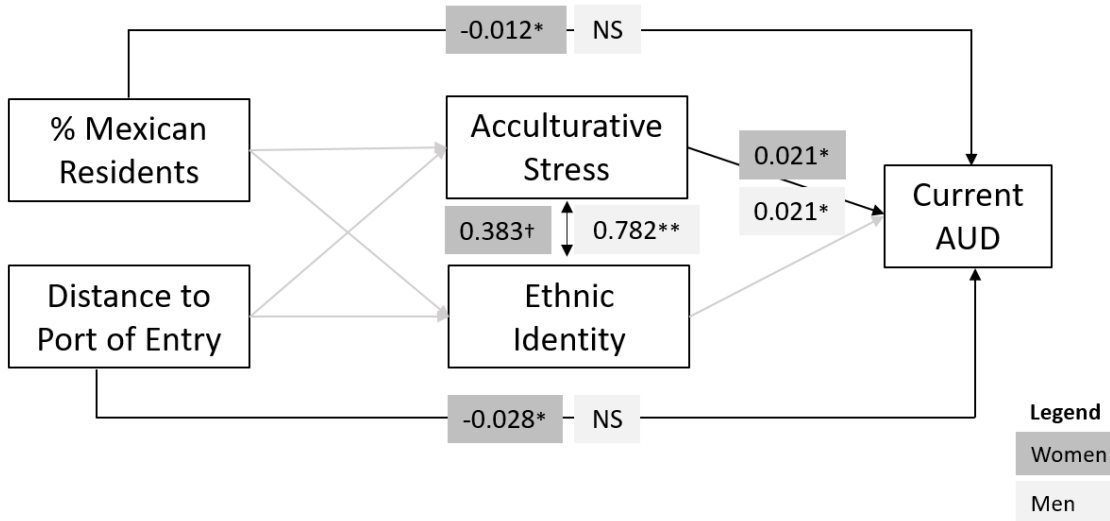
**Table 3**  
*Standardized Coefficients for Final Path Model from Environment to AUD (n = 575)*

	Men			Women		
	Current AUD	Accul. Stress	Ethnic Identity	Current AUD	Accul. Stress	Ethnic Identity
Neighborhood						
% Mexican residents	-0.001	-0.002	0.005	-0.011*	-0.003	<0.000
Distance from POE	<0.000	0.003	-0.007	-0.027**	0.004	-0.010
Cultural indicators						
Acculturative stress	0.159*	--		0.163*	--	
Ethnic identity	-0.006		--	-0.063		--
Individual characteristics						
US-born (vs. foreign-born)	0.088	0.033	-0.789**	0.141	-0.039	0.010
Family history of AUD	0.501**			0.153		
Age	-0.016	-0.019	0.016	-0.023	-0.026†	0.016
Income (vs. middle income) <sup>1</sup>						
High income	-0.458*			0.203		
Low income	-0.238			0.192		
Married (vs. never married)	-0.439	-0.587**		-0.174	-0.124	

**Notes:** AUD, alcohol use disorder; Accul., acculturative; POE, port of entry; <sup>1</sup>Reference = middle income/missing  
\*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , † $p < 0.10$

**Figure 1**

**Multiple Group Path Models by Sex**



**Note:** Grey lines denote non-significant associations for both sex groups.  
 \*\* $p < .001$  \* $p < .05$  † $p < .10$

**Discussion**

We examined whether cultural mechanisms such as acculturative stress and ethnic identity mediated relationships between neighborhood environmental factors (Mexican American residential concentration and distance to the US-Mexico border) and AUD in a sample of Mexican American young adults. As in prior studies (e.g., Molina et al., 2012), higher levels of neighborhood ethnic concentration were protective for AUD, with a 10% increase in the proportion of residents who identify as Mexican or Mexican American being associated with approximately 20% reduction in the odds of AUD, but this was only for women. Women experience social processes differently from men, and this difference may extend to their lived experiences in ethnic enclaves. Ethnic enclaves traditionally afford social ties and community integration that are protective for residents (Viruell-Fuentes et al., 2013). Given the documented sex differences in social role expectations among Mexican Americans (Archuleta, 2015), women may use their social supports differently than men in these communities. There also may be sex-related drinking norms within areas with higher concentrations of Mexican American residents. A heavy drinking culture (Cook & Caetano, 2014) and permissive norms toward drinking among Mexican men (Gilbert & Cervantes, 1986) may explain the null associations observed among men, as there is far less acceptance of drinking among Hispanic women (Ramisetty-Mikler et al., 2010). Future research in larger samples may be able to identify other neighborhood factors that vary significantly between young adult men and women living in this part of the US-Mexico border region.

Greater distance from the US-Mexico border also was negatively associated with AUD for young Mexican American women only. This finding runs counter to a study of Mexican American people who use alcohol in Texas, which found that men who lived close to the border region had greater risk of AUD than women (Cherpitel et al., 2015).

While crime rates along the border region in the US are actually lower compared with the rest of the country, violence in the contiguous Mexican cities is more likely (Castañeda & Chiappetta, 2020; Perez Esparza et al., 2020). Those who live closer to a port of entry also may be more likely to work and travel in Mexico (King, 2011). Therefore, women in these areas may feel more unsafe and potentially experience greater distress (and subsequently have greater risk for AUD) than their counterparts who live further away from a port of entry. These conflicting results may also be due to variability in drinking and related problems by study location (Cherpitel et al., 2015); a larger study may replicate these analyses across multiple geographic areas to confirm observed sex differences. The current analysis sample was also living within 60 miles of the nearest border port of entry, so future studies with more geographic variability in distance from the border may be useful for advancing research on alcohol use and AUD risks and protective factors for Mexican American young adults in this region of the country.

Despite studies showing acculturative stress is more meaningful for Hispanic women relative to men (Zemore, 2007), acculturative stress did not mediate the relationship between distance from the border region and AUD for either women or men. That acculturative stress was positively associated with AUD for both men and women was not surprising, given robust evidence on the relationship between acculturation or acculturative stress and drinking outcomes (Jankowski et al., 2020; Pinedo et al., 2017). Ethnic identity, however, was not related to AUD for either group. This may be partially due to the high scores on Mexican American ethnic identity in this sample (an average of 3.0 out of 4.0). Future work could examine bicultural efficacy, or one’s perceived ability to act in two cultures, directly and indirectly in relation to AUD. The authors of the Bicultural Self-Efficacy Scale (BSES) argued that a person’s heritage and mainstream cultures may not be mutually exclusive, and thus single-culture items may not fully

represent one's full sense of cultural identity between the two (David et al., 2009).

Environmental factors were not related to AUD via the hypothesized cultural mechanisms, and this prompts a need for further inquiry of other pathways to AUD. People living close to the US-Mexico border generally place less importance on a dominant culture (Pinedo et al., 2017), and in these places, social networks, language, and customs from both countries are central components of daily life among residents (Martínez, 1994). Finally, neighborhood effects vary by other social identities such as age (Vaeth et al., 2015) and socioeconomic status (Wodtke et al., 2016), and it would be worthwhile to test cultural mechanisms with Mexican and Mexican American samples disaggregated by these characteristics as well (White, Knight, et al., 2018).

There also are differences between US-Mexico border regions in California (where our sample was recruited) and other US states. For example, most people who reside along the southern US border are in California (67%) or Texas (18%), with Texas communities in this region more likely to be rural, and California communities more racially and ethnically diverse (comprised of approximately 40% Hispanic residents), while Texas communities in the border region are over 80% Hispanic (Alliance San Diego, 2023). Finally, socioeconomic profiles show California residents are at lower risk for health problems compared with Texas residents (Welton, 2022). Because most border region inhabitants are in California, these findings contribute to the literature on neighborhood processes for Mexican American young adults in this unique geographic environment.

Although not a focus of the current study, US-born nativity status was negatively associated with ethnic identity among men. The proximal social context guides ethnic identity formation among US-born young people (Umaña-Taylor et al., 2014), with differential processes noted for Mexican-origin youth with foreign- compared with US-born parents (Umaña-Taylor et al., 2013). Some research suggests group membership is important for self-definition among men, and that men are more likely than women to feel pressure for acceptance among peers (Wilson & Leaper, 2016). It would be worthwhile for future neighborhood studies to consider nativity status and generational status among US-born individuals as possible effect modifiers. In addition to greater risk of AUD and heavy drinking with each successive generation (Greene & Maggs, 2018), it is possible that social ties in enclaves would be differentially salient for those of more distal Mexican heritage.

There are several limitations to note. First, the sample comprised participants who responded to an address-based outreach flier to participate in a research study, and eligibility was limited to those who spoke fluent English and were primarily second generation. Findings therefore cannot be generalized to all Mexican American young adults. Additionally, the prevalence of AUD was high in this community sample, which also may impact generalizability to other samples with lower rates of AUD and problems associated with heavy alcohol use. Further, while the Acculturation Stress Scale was previously validated, it contains items that address general stress rather than acculturation stress specifically, thus risking confounding of

general and acculturation stress. Future studies may benefit from inclusion of diverse measures of stress that can separate general stressors from those specifically related to acculturation and cultural identity. Another limitation concerns the limited range of the border proximity measure. While differences in associations with border proximity observed for the young women and young men in this sample may reflect differences in mobility, we were not able to test this hypothesis. Finally, these secondary data were not collected explicitly for the analyses presented here. Because Mexican American young adults are a priority population, however, we sought to maximize use of these data to inform prevention efforts. It is possible that young adults with AUD may differentially move to certain neighborhoods, and we are unable to address reverse causation in the cross-sectional data. Future studies should consider longitudinal designs to capture, in detail, the lived experiences of young people residing in the US-Mexico border region.

## Conclusions

The current study offers data on the relationship between cultural factors and AUD for a specific subsample of the US Hispanic population living in the US-Mexico border region. Our work fills a gap by focusing on Mexican Americans given their unique lived experiences in the US and high risks for heavy drinking and AUD. Hispanic people in the US—especially women (Zemore et al., 2014)—are less likely than other racial and ethnic groups to access specialty alcohol or drug treatment (Guerrero et al., 2013). These results highlight the possible role of acculturation stress in the development of AUD for Mexican American young adults, as well as potential benefits of residence in ethnic enclaves for young Mexican American women. Findings may inform future work to integrate cultural mechanisms in place-based AUD prevention and treatment strategies to reach young adults in the US-Mexico border region.

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