



Research Paper

Immigration policies as political determinants of alcohol and drug misuse among US-born Latinos



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ABSTRACT

Background: The role of immigration policies as political determinants of health among US-born Latinos is significantly understudied. Immigration policies can produce immigration-related stressors that have ‘spill over’ effects on the health behaviors of US-born Latinos. However, less is known about how immigration-related stressors relate to substance misuse among US-born Latinos.

Methods: 1,784 US-born Latinos were recruited via web-panels in September 2021 to complete an online questionnaire. Inclusion criteria included: (1) self-identifying as Latino; (2) born in the US; and (3) being 18 years of age or older. Participants were asked 14-items related to immigration-related stressors and past-year substance use behaviors. Dependent variables included past-year: heavy drinking, high intensity drinking, illicit drug use, prescription drug misuse, cannabis use, cocaine use, methamphetamine use, prescription sedative misuse, and prescription opioid misuse. Two separate multivariable logistic regression models were conducted for each outcome to investigate associations between (1) specific immigration-related stressors and substance misuse; and (2) experiencing greater (vs. fewer) number of immigration-related stressors and substance misuse.

Results: On average, US-born Latinos reported experiencing 3 immigration-related stressors. In multivariable analyses, being fearful or worried about being detained for immigration reasons was associated with increased odds of engaging in heavy drinking, high intensity drinking, and illicit drug use. Having ever feared or worried about being potentially deported for immigration reasons and having ever witnessed or experienced an immigration raid was associated with high intensity drinking. Parental detentions and deportations in childhood were independently associated with high intensity drinking, illicit drug use, and prescription drug misuse. Notably, greater number of immigration-related stressor experiences increased the odds of substance misuse.

Conclusion: Punitive immigration and enforcement policies give rise to multiple stressors that may render US-born Latinos vulnerable to misusing substances as a way of coping. Policies and public health interventions aimed at preventing and treating substance misuse should consider how immigration policies impact the behaviors of US-born Latinos.

Introduction

The role of immigration policies as political determinant of health among US-born Latinos is significantly understudied. Although immigration policies are directed toward foreign-born individuals, these policies have been found to carry ‘spill over’ effects that shape the everyday lives and livelihoods of US-born Latinos as well (Alberto et al., 2020; Asad, 2020; Eskenazi et al., 2019; Pinedo, 2020b; Stanhope et al., 2019; Szkupinski Quiroga et al., 2019). To begin, US-born Latinos are significantly impacted by the detention and deportations of immigrant family members. About 27% of US-born Latinos report that they have experienced the detention or deportation of a family member

(Pinedo, 2020b). Beyond detentions and deportations, punitive and restrictive immigration policies, and hostile rhetoric towards immigrants also contribute to anti-immigrant climates that yield stressful environments for Latinos, including US-born Latinos. Anti-immigration policies and rhetoric are highly racialized and disproportionately focus on Latinos (Armenta, 2017; Asad, 2020; Nichols et al., 2018; Viruell-Fuentes et al., 2012). For example, although the Patriot Act was originally intended to combat terrorism, it has recently been invoked far more often to detain and deport Latinos (Golash-Boza, 2012). Some politicians and media outlets rely on anti-immigrant discourse by portraying Latino immigrants as violent criminals, drug traffickers, and as a threat to society as a way of garnering support for punitive immigration and enforcement policies (Gonzalez, 2019; Lopez, 2022; Papakyriakopoulos and Zuckerman, 2021). These media depictions and anti-immigrant rhetoric then serve to perpetuate stereotypes, racism, discrimination, harassment, and violence towards Latinos regardless of immigration status

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(Armenta, 2017; Szkupinski Quiroga et al., 2019; Viruell-Fuentes et al., 2012).

Anti-immigrant environments intersect with the racialization of immigrants and foster circumstances where US-born Latinos are presumed to be undocumented immigrants and criminals (Pinedo et al., 2021; Viruell-Fuentes et al., 2012). Studies have found that US-born Latinos believe their race/ethnicity places them at greater risk for immigration enforcement encounters and anti-immigrant sentiments as being a 'dog whistle' (i.e., coded-language) for anti-Latino sentiments (Branton et al., 2011; Cruz Nichols et al., 2018; Pinedo et al., 2021). One study found that Latinos perceive anti-immigration views as being largely driven by negative perceptions towards Latinos as a racial/ethnic group and less about immigration issues (Vargas et al., 2017). Relatedly, studies using samples of White participants have found that support for more restrictive and punitive immigration policies are associated with negative attitudes towards Latinos (Branton et al., 2011; Shin et al., 2015).

Anti-immigrant climates also facilitate the disproportionate targeting of Latinos by immigration enforcement. Immigration enforcement activities are deeply embedded in racism and racial profiling and thus US-born Latinos are highly vulnerable to being detained and scrutinized about their citizenship status because they are often perceived as undocumented immigrants (Lyll, 2016; Pinedo et al., 2021; Viruell-Fuentes et al., 2012; Wang, 2018). In many communities where police officers can legally conduct immigration checks during 'lawful' stops, Latinos are disproportionately targeted. For example, Arizona law enforcement can uphold immigration laws under the SB 1070 legislative act (deemed the 'show me your papers' law). In Tucson, Arizona, Latinos comprise over 75% of persons pulled over and asked to provide proof of citizenship or legal immigration status (Lyll, 2016). During home immigration raids, officials forcefully enter people's homes and question everyone in the household over their immigration status, regardless of which person the raid is targeting (Lopez, 2019). During workplace immigration raids, officials focus on detaining everyone who 'looks like an immigrant' (Ayon, 2012; Fleming et al., 2019; Lopez, 2022). To illustrate this point, in 2018, during a series of large scale, surprise, workplace immigration raids, Latino workers described how immigration officials divided employees by skin color—all Latino-appearing employees were detained and interrogated while White employees were ignored and even allowed to take a smoking break outside while interrogations took place (Michigan, 2021). These raids also impact US-born Latinos who have to prove their citizenship or immigration status.

Immigration policies produce immigration-related stressors that carry important mental health and substance use implications. Immigration enforcement experiences foster circumstances that elicit significant emotional and psychological harms, feelings of racism and discrimination, and mistrust of government agencies among US-born Latinos (Bruzelius and Baum, 2019; Cruz Nichols et al., 2018; Lopez, 2022; Lopez et al., 2017; Pinedo et al., 2021), which are risk factors for poor mental health status and influence vulnerability to substance use. In fact, research has found that anti-immigrant climates (e.g., living in states and communities with increased punitive immigration policies, greater immigration enforcement activities, perceived anti-immigration sentiments) and immigration enforcement encounters (e.g., deportation of family members, experiencing an immigration raid) are associated with poorer mental health status (Becerra et al., 2013; Bruzelius and Baum, 2019; Hatzenbuehler et al., 2017; Pinedo et al., 2021). Emerging work with US-born Latinos has also documented that the detention and deportation of immigrant family members and friends is linked to problematic alcohol use, illicit drug use, and prescription drug misuse (Pinedo, 2020a, b; Roche et al., 2020). However, the ways in which other immigration-related stressors, beyond the deportations of others, relate to substance use vulnerability have not been empirically assessed. To address this gap, our research team recently completed a qualitative study to identify immigration-related stressors that may influence poor mental health and substance misuse (Pinedo et al., 2021). Results of that study suggested the presence of several novel immigration-

related stressors that may increase vulnerability to substance use and that have not been previously investigated among US-born Latinos. Examples of these stressors include anti-immigration discrimination experiences, fear of being detained or deported, and experiencing an immigration raid. These findings informed the development of the survey items utilized in the present study, (Table 1).

The objective of this study is to quantitatively investigate whether, and if so which, immigration-related stressors are associated with substance misuse (i.e., heavy drinking, high intensity drinking, illicit drug use, and prescription drug misuse) using a recently collected, large dataset. A secondary objective is to assess whether experiencing a greater number of immigration-related stressors will be associated with increased odds of reporting substance misuse relative to experiencing fewer or none. Additionally, an exploratory objective was to investigate whether specific drugs (e.g., cannabis, cocaine, methamphetamine, prescription opioids) are associated with specific immigration-related stressors and with experiencing a greater number of immigration-related stressors. We have two hypotheses related to the first two objectives. First, we hypothesized that individual immigration-related stressors related to immigration enforcement encounters (e.g., fear of deportation, family deportation) and anti-immigration experiences (e.g., perceived hostility towards immigrants, anti-immigrant encounters) will be associated with all substance misuse outcomes. Second, we hypothesized that experiencing a greater (vs. fewer or none) number of immigration-related stressors will be associated with a greater likelihood of reporting substance misuse. We have no *a priori* hypothesis for our third objective because it is an exploratory research question.

Methods

Study design and population

In September 2021, a national sample of 1,784 US-born Latinos was recruited to complete a structured online questionnaire. Inclusion criteria included: (1) self-identifying as Latino; (2) born in the US; and (3) being 18 years of age or older. Participants were recruited via a Qualtrics web-panel, which is comprised of participants who have already agreed to take part in survey research. Web-panels aim to be representative of the general population by recruiting web-panel participants through targeted sampling techniques using public and proprietary resources (e.g., emails, social media, and other channels of communication). Potential participants are then randomly selected from the web-panel and invited through a personalized notification via their Qualtrics dashboard account to complete the study's screener questionnaire to determine study eligibility criteria. To minimize self-selection bias, survey invitations did not include specific details about the study's objective or purpose. Participants who met study eligibility criteria and consented to participate in the study were then invited to complete the structured, self-administered, online questionnaire. A total of 3,482 potential participants completed the screener questionnaire, and 1,784 participants were eligible and completed the online questionnaire. Participants received \$5 for their participation in the online survey, which was administered by Qualtrics. The University of Texas at Austin's Institutional Review Board approved all study protocols before the study began.

Measures

Socio-demographic characteristics

Socio-demographics variables included age, biological sex (male or female), Latino origin (Mexican; Puerto Rican; Cuban; Central American; South American; Caribbean), parental nativity (both parents born in the US; at least one parent was born outside the US), employment status (unemployed; employed part- or full-time), educational attainment (less than high school; graduated high school; some college; graduated college), and total annual household income (less

Table 1

Socio-demographic, immigration-related stressors, mental health, and substance use characteristics of US-born Latinos in the United States, n=1,784, 2021.

<i>Variables</i>	<i>Total Sample % (N or Mean)</i>
<i>Socio-demographics</i>	
Latino origin	
Mexican	63% (1,119)
Puerto Rican	19% (346)
Cuban	4% (74)
Central American	6% (115)
South American	5% (85)
Caribbean	3% (45)
Sex	
Female	54% (955)
Male	46% (829)
Mean age (SD, Range)	33 (SD: 13.13; Range: 18-79)
Parental nativity	
Neither parent is an immigrant	52% (923)
At least one parent is an immigrant	48% (861)
Employed part/full-time	66% (1,182)
Educational attainment	
Less than high school	5% (85)
Graduated high school	31% (551)
Some college	35% (622)
Graduated college	29% (526)
Total annual household income	
Less than \$20,000	24% (424)
\$20,000 - \$34,999	21% (383)
\$35,000 - \$49,999	17% (306)
\$50,000 - \$74,999	16% (299)
\$75,000 - \$99,999	11% (195)
\$100,000 or over	10% (177)
<i>Immigration-related stressors</i>	
Ever feared or worried about:	
Being stopped or questioned regarding immigration status by immigration officials	20% (378)
Being detained for immigration reasons	13% (238)
Being deported for immigration reasons	12% (217)
Having a parent(s) deported	15% (265)
Having a family member (e.g., sibling, uncle, aunt, cousin) deported	21% (383)
Having a close friend deported	23% (413)
Having a parent deported as a child	18% (324)
Believe home state policies are unfavorable towards immigrants	31% (553)
Believes attitudes and sentiments towards immigrants in home state are unfavorable or hostile	43% (768)
Believes attitudes and sentiments towards immigrants in community of residence are unfavorable or hostile	36% (638)
Has ever encountered a personal anti-immigration experience	21% (373)
Has ever witnessed or experienced an immigration raid	11% (191)
Personally knows an immigrant that has been detained or deported	33% (594)
Ever separated from parent(s) as a minor because of immigration issues	
No	90% (1,590)
Yes, parent(s) was detained, but not deported	6% (114)
Yes, parent(s) was deported	4% (72)
Number of immigration-related stressors experienced	
None	(25%) 442
1-2	(28%) 505
3-4	(19%) 343
5-6	(12%) 210
7-8	(9%) 158
9 or more	(7%) 126
Mean number of reported immigration-related stressors (SD)	3.09 (3.03)
<i>Mental Health Status</i>	
Mean psychological distress score (SD)	4.67 (3.74)
<i>Alcohol and Drug Use History (past-year)</i>	
Heavy drinking	42% (752)
High intensity drinking	33% (587)
Prescription drug misuse	20% (353)
Illicit drug use	20% (356)
Types of drug used in the past year	
Cannabis	41% (723)
Cocaine	5% (98)
Methamphetamine	6% (106)
Inhalants	2% (32)
Hallucinogens	4% (75)
Street opioid (e.g. heroin)	2% (41)
Prescription sedatives (non-medical use/not as prescribed)	6% (110)
Prescription stimulants (non-medical use/not as prescribed)	3% (63)
Prescription opioids (non-medical use/not as prescribed)	8% (142)

than \$20,000; \$20,000-\$34,999; \$35,000-\$49,999; \$50,000-\$74,999; \$75,000-\$99,999; \$100,000 or above).

Immigration-related stressors

Immigration-related questions included a total of 14 items on a diversity of topics. Our research team developed these questions, which were informed by past qualitative work identifying specific immigration-related stressors linked to poor mental health and substance misuse among US-born Latinos (Pinedo et al., 2021). Participants were first asked, “Regardless of your own immigration status, have you ever feared or worried about”: Being stopped or questioned regarding your immigration status by immigration officials; being detained for immigration reasons; being deported for immigration reasons; having a parent(s) deported; having a parent deported; having a family member (e.g., sibling, uncle, aunt, cousin) deported; having a close friend deported; and having a parent deported when you were a *child*. Next, participants were asked whether they would describe policies in the state they live in as hostile or unfavorable towards immigrants; whether they would describe attitudes and sentiments towards immigrants in their state of residence as unfavorable or hostile; and whether they would describe attitudes and sentiments towards immigrants as hostile or unfavorable in their community of residence. All response options were yes/no.

Additionally, participants were asked whether they had ever encountered a personal anti-immigration experience (such as being told to “go back to your country” or been called a xenophobic term such as “wetback”) and if they had ever witnessed or experienced an immigration raid. Response options were yes/no. Lastly, participants were asked about their experiences with detentions and deportations, including whether they personally knew someone who had been detained or deported (yes/no) and whether they had ever been separated from their parent(s) as a minor because of immigration issues (No; Yes, parent(s) was detained, but not deported; or Yes, parent(s) was deported). Using these 14 immigration-related stressor variables, we created an immigration-related stressor index by creating a count variable to account for how many immigration-related stressors participants reported experiencing: None; 1-2; 3-4; 5-6; 7-8; and 9 or more. This variable was constructed to assess the extent to which experiencing a greater number of immigration-related stressors is associated with increased likelihood of substance misuse.

Mental health status

The four-item Patient Health Questionnaire (PHQ-4; Kroenke et al., 2009) was used to assess psychological distress. Participants were asked to self-report how often, over the past 2 weeks, they had been bothered by the following problems: (1) feeling nervous, anxious, or on edge; (2) not being able to stop or control worrying; (3) feeling down, depressed, or hopeless; and (4) little interest or pleasure in doing things. Response options included: not at all; several days; more than half the days; and nearly every day. Each response option was assigned a numeric value ranging from 0 (not at all) to 3 (nearly every day). A total score was computed with a possible range from 0 to 12. Higher scores indicate greater psychological distress. The Cronbach’s alpha coefficient was 0.88.

Dependent variables: past-year alcohol and drug use behaviors

Substance misuse outcomes included heavy drinking, high intensity drinking, illicit drug use, and prescription drug misuse. Heavy drinking was assessed via the Alcohol Use Disorder Identification Test-Concise (AUDIT-C) (Bush, 1998). Participants were asked three items to assess their frequency of drinking, quantity of drinks consumed on a typical drinking day, and how often they consume 6 or more drinks per occasion. Response options were scored and summed with a possible total score range from 0 to 12. A score of 4 or more for men and 3 or more for women is characterized as a positive screen for past-year heavy drinking. High-intensity drinking is defined as at least twice the gender-specific binge drinking threshold—10 drinks or more for men and 8 drinks or

more for women at least once per month (Patrick and Azar, 2018). Participants were asked how often they had consumed 10 or more drinks (men) or 8 or more drinks (women) on one occasion in the year prior to assessment. Response options included: never; monthly or less; two to three times per week; or four or more times per day. Based on the participant’s biological sex, this variable was dichotomized to characterized participants as having engaged in high intensity drinking at least once per month versus never.

To assess illicit drug use in the past year, we asked participants to self-report which substances they had used in the past year, including: cannabis (e.g., marijuana, pot), cocaine (e.g., coke, crack); methamphetamine (e.g., speed, ice, crystal meth); inhalants (e.g., nitrous, glue); hallucinogens (e.g., LSD, acid, mushrooms); and/or street opioids (e.g., heroin, opium). Participants were characterized as having used illicit drugs in the past year if they answered affirmatively to any drug use, excluding those who reported only using cannabis (and no other drugs). Participants were also asked whether they had used any prescription medications recreationally—just for the feeling, using more than prescribed, or not as prescribed by a doctor—in the past 12 months. Those who answered ‘yes’ were coded as having engaged in past-year prescription drug misuse. These participants were then asked to self-report the type of prescription drugs they misuse: sedatives (e.g., Valium, Xanax); stimulants (e.g., Ritalin, Adderall); and/or painkillers or opioids (e.g., Vicodin, fentanyl, OxyContin). Finally, we created dichotomous variables for each type of drug used in the past year.

Analysis

All analyses were conducted using STATA v.15 statistical software. We first computed descriptive statistics to characterize our sample according to socio-demographics, immigration-related stressors, mental health status, and alcohol and drug use behaviors in the year past year. To test our first hypothesis, we estimated multivariable logistic regression models for each of the 4 substance use outcomes (i.e. heavy drinking, high intensity drinking, illicit drug use, prescription drug misuse), while controlling for socio-demographics, immigration-related stressors, and psychological distress. These models allowed us to evaluate the relationship of each individual immigration-related stressor with heavy drinking, high intensity drinking, illicit drug use, and prescription drug misuse. To test our second hypothesis, we replicated these multivariable logistic regression models and included our immigration-related stressor index variable (i.e., count variable representing the total number of immigration-related stressors reported by a given participant). These models allowed us to examine the change in odds of substance misuse for each additional immigration-related stressor reported by participants. Finally, to examine our exploratory aim, we conducted separate multivariable logistic regressions using the same procedures described above for each drug type. However, drugs with low sample sizes (e.g., less than a 5% prevalence) were excluded, given the lack of sufficient power to conduct meaningful statistical comparisons. Excluded drugs included: Inhalants, hallucinogens, street opioids (e.g., heroin), and prescription stimulants. Drugs that were examined separately in multivariable analyses included: Cannabis, cocaine, methamphetamine, sedatives, and prescription opioids.

Results

Sample characteristics

Of the 1,784 US-born Latinos in the sample, the majority (63%) were of Mexican-origin. The rest of the sample was primarily comprised of Latinos from the following countries or regions of origin: Puerto Rico (19%), Central America (6%), South America (5%), Cuba (4%), and the Caribbean (3%). The sample was almost evenly split by biological sex: 46% were male and 54% were female. On average, participants were 33 years of age, were employed and had at least a high school education.

Slightly less than half the sample (45%) earned less than \$35,000 annual household income. About half the sample reported having at least one immigrant parent (48%), whereas the remaining half (52%) reported that both their parents were US-born.

Within the context of immigration-related characteristics, US-born Latinos most commonly reported fearing or being worried about: having a close friend deported (23%; n=413); having a family member (other than a parent) deported (21%; n=383); being stopped or questioned by immigration officials regarding their immigration status (20%; n=378); having a parent deported as a child (18%; n=324); having a parent(s) deported (15%; n=265); and being detained (13%; n=238) or deported (12%; n=217) for immigration reasons. About a third (31%; n=553) of participants believed their home state policies are unfavorable towards immigrants, and 43% (n=768) and 36% (n=638) believed attitudes and sentiments are unfavorable or hostile towards immigrants in their home state and community of residence, respectively. Just under a quarter (21%; n=373) of US-born Latinos reported a personal anti-immigration experience. About 11% (n=191) of participants had ever witnessed or experienced an immigration raid and a third (33%; n=594) personally knew an immigrant who has been detained or deported. A minority of US-born Latinos reported having their parent(s) detained (6%; n=114) or deported (4%; n=72) as minors. On average, participants reported experiencing 3 immigration-related stressors.

The mean psychological distress score for participants was 4.67 (standard deviation (SD): 3.74). With regard to problematic alcohol use, 42% (n=752) of US-born Latinos engaged in heavy drinking, and 33% (n=587) reported high intensity drinking at least monthly in the past year. About 20% of US-born Latinos reported illicit drug use and 20% reported prescription drug misuse in the past year. The most commonly used drugs included cannabis (41%; n=723), prescription opioids (8%; n=142), prescription sedatives (6%; n=110), methamphetamine (6%; n=106), and cocaine (5%; n=98).

Immigration-related stressors independently associated with alcohol and drug use outcomes

Table 2 displays variables independently associated with problematic alcohol use, illicit drug use, and prescription drug misuse. Being fearful or worried about being detained for immigration reasons was associated with increased odds of engaging in heavy drinking (Adjusted Odds Ratio (AOR): 1.58, 95% Confidence Interval (CI): 1.08-2.32), high intensity drinking (AOR: 1.48; 95% CI: 1.01-2.18), and illicit drug use (AOR: 1.54; 95% CI: 1.01-2.35) in the past year. Having ever feared or worried about being potentially deported for immigration reasons was strongly associated with high intensity drinking (AOR: 1.74; 95% CI: 1.13-2.67). Having ever feared or worried about having a close friend being deported was associated with increased odds of engaging in heavy drinking (AOR: 1.93; 95% CI: 1.43-2.62). Further, having ever witnessed or experienced an immigration raid was significantly associated with increased odds of high intensity drinking (AOR: 1.79; 95% CI: 1.27-2.52), illicit drugs use (AOR: 1.74; 95% CI: 1.20-2.51), and prescription drug misuse (AOR: 1.83; 95% CI: 1.27-2.64).

Regarding parental separation due to immigration enforcement issues, US-born Latinos who reported having their parent detained, but not deported, when they were minors were significantly more likely to report high intensity drinking (AOR: 1.95; 95% CI: 1.23-3.08), illicit drug use (AOR: 2.35; 95% CI: 1.46-3.80), and prescription drug misuse (AOR: 2.73; 95% CI: 1.71-4.37) as compared to US-born Latinos who were never separated from their parents as minors because of immigration issues. Alarming, having a parent deported as a minor was strongly and significantly associated with all of the substance use outcomes we examined. Parental deportation as a minor was associated with 1.97 and 2.78 times the odds of reporting heavy and high intensity drinking, respectively. Parental deportation as a minor was associated with 2.90 and 3.41 times the odds of engaging in illicit drug use and prescription drug misuse, respectively. Table 2 also displays results of

our Model 2 that included our immigration-related stressor index variable. Findings suggest that each additional immigration-related stressor experienced by participants was associated with an increased in odds of reporting alcohol and drug misuse.

Immigration-related stressors independently associated with specific types of drugs

Immigration-related stressors independently associated with past-year use of cannabis, cocaine, methamphetamine, prescription sedative misuse, and prescription opioid misuse are displayed in Table 3. Ever being fearful or worried about being detained for immigration reasons was associated with more than a two-fold increase in odds of past-year cocaine use (AOR: 2.37; 95% CI: 1.20-4.70), prescription sedative misuse (AOR: 2.53; 95% CI: 1.31-4.87), and prescription opioid misuse (AOR: 2.05; 95% CI: 1.08-3.89). US-born Latinos who reported ever fearing or worrying about having a close friend detained or deported were also more likely to report past-year cocaine use (AOR: 2.81; 95% CI: 1.61-4.90) as compared to their counterparts who did not report this fear or worry. Having ever witnessed or experienced an immigration raid was also independently associated with 2.18 times the odds of reporting past-year prescription drug misuse. Having a parent deported as a minor was significantly associated with methamphetamine use (AOR: 3.39; 95% CI: 1.71-7.97), prescription sedative misuse (AOR: 2.46; 95% CI: 1.07-1.20), and prescription drug misuse (AOR: 2.92; 95% CI: 1.31-6.51) in the past year. Results from Model 2, which included our immigration-related stressor index variable, suggest that more experiences of immigration-related stressor are associated with increased odds of past year cocaine and methamphetamine use. Having experienced 7-8 immigration-related stressors was significantly associated with prescription drug misuse. Notably, having experienced 9 or more immigration-related stressors was significantly associated with increased odds of cannabis, cocaine, methamphetamine, and prescription sedative misuse in the past year.

Discussion

The present study investigated how immigration-related stressors stemming from immigration policies relate to alcohol and drug misuse among a national sample of US-born Latino adults. Overall, findings suggest that immigration-related stressors may increase vulnerability to substance misuse. These findings add to a growing evidence base suggesting that detentions and deportations of family and friends, including the fear of these events occurring, may exert spillover effects on the mental health and substance-using behaviors of US-born Latinos (Gulbas et al., 2016; Pinedo, 2020a, b; Roche et al., 2020; Zayas et al., 2015). Our study also extends this prior literature by identifying novel immigration-related stressors that have not been previously examined in relation to alcohol and drug use among US-born Latinos. Additionally, experiencing greater numbers of immigration-related stressors may further intensify susceptibility to hazardous alcohol use and substance misuse. In our study, US-born Latinos reported experiencing an average of 3 immigration-related stressors; participants who reported 3 or more immigration-related stressors account for over 46% (n=837) of our sample. These statistics speak to the pervasive role that immigration-related stressors play in the life course of US-born Latinos.

Our study identified several specific immigration-related stressors that were associated with alcohol and drug misuse. Ever fearing or worrying about being detained for immigration reasons was linked with an increased likelihood of engaging in heavy drinking, high intensity drinking, and illicit drug use in the past year. Fear and worry about being detained was also associated with cocaine use and prescription sedatives and opioid misuse. Fearing being potentially deported was independently associated with high intensity drinking. Though legally safeguarded from deportation proceedings, US-born Latinos are highly aware of racialized immigration enforcement practices and that they

Table 2
Immigration-related stressors independently associated with alcohol and drug use outcomes among US-born Latinos, n=1,771, 2021.

Variables	Heavy Drinking		High Intensity Drinking		Illicit Drug Use		Prescription Drug Misuse	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
<i>Model 1^a</i>								
Ever feared or worried about:								
Being stopped or questioned regarding immigration status by immigration officials	0.91	0.65-1.28	0.95	0.66-1.36	1.27	0.85-1.88	1.09	0.73-1.63
Being detained for immigration reasons	1.58*	1.08-2.32	1.48*	1.01-2.18	1.54*	1.01-2.35	1.35	0.88-2.06
Being deported for immigration reasons	1.01	0.67-1.55	1.74*	1.13-2.67	1.14	0.72-1.82	1.25	0.79-1.99
Having parent(s) deported	0.71	0.48-1.05	0.63*	0.42-0.93	0.75	0.48-1.16	0.80	0.51-1.24
Having a family member (e.g., sibling, uncle, aunt, cousin) deported	0.69*	0.49-0.98	0.91	0.64-1.29	1.28	0.86-1.90	1.22	0.82-1.80
Having a close friend deported	1.93***	1.43-2.62	1.21	0.88-1.66	1.20	0.84-1.72	0.93	0.65-1.35
Having a parent deported as a child	1.35	0.95-1.92	0.96	0.66-1.37	0.89	0.59-1.34	0.78	0.52-1.18
Believe home state policies are unfavorable towards immigrants	1.10	0.87-1.39	1.02	0.79-1.30	0.96	0.72-1.28	0.96	0.72-1.29
Believes attitudes and sentiments towards immigrants in home state are unfavorable or hostile	1.15	0.88-1.50	1.03	0.78-1.37	0.90	0.62-1.26	1.03	0.74-1.43
Believes attitudes and sentiments towards immigrants in community of residence	0.85	0.65-1.11	1.06	0.80-1.41	1.38*	1.00-1.92	1.35	0.98-1.87
Has ever encountered a personal anti-immigration experience	1.05	0.81-1.35	0.81	0.61-1.06	0.86	0.62-1.18	1.04	0.76-1.41
Has ever witnessed or experienced an immigration raid	1.16	0.82-1.63	1.79***	1.27-2.52	1.74**	1.20-2.51	1.83***	1.27-2.64
Ever separated from parent(s) as a minor because of immigration issues								
No (Ref)	—	—	—	—	—	—	—	—
Yes, parent(s) was detained, but not deported	1.47	0.93-2.32	1.95**	1.23-3.08	2.35***	1.46-3.80	2.73***	1.71-4.37
Yes, parent(s) was deported	1.97*	1.14-3.40	2.78***	1.60-4.83	2.90***	1.64-5.15	3.41***	1.95-5.97
<i>Model 2^a</i>								
Number of immigration-related stressors experienced								
None (ref)	—	—	—	—	—	—	—	—
1-2	1.14**	0.86-1.50	1.26	0.93-1.71	1.34	0.90-1.98	1.61*	1.09-2.38
3-4	1.57***	1.62-2.12	1.47*	1.06-2.04	1.67*	1.10-2.52	1.91**	1.27-2.88
5-6	1.82***	1.28-2.60	1.46*	1.00-2.13	2.39***	1.51-3.76	1.85*	1.15-2.97
7-8	1.96***	1.33-2.90	2.50***	1.67-3.74	3.49***	2.18-5.60	3.21***	2.00-5.16
9 or more	2.45***	1.59-3.75	2.96***	1.92-4.57	5.75***	3.54-9.35	6.06***	3.74-9.83

*p < 0.05. **p < 0.01. ***p < 0.001.

^a Controlling for Latino subgroup, sex, age, parental nativity, employment status, educational attainment, total annual family income, and psychological distress

too are vulnerable to being scrutinized over their citizenship status (Asad, 2020; Pinedo et al., 2021; Viruell-Fuentes et al., 2012). One qualitative study with a community sample of US-born Latinos following increased immigration enforcement activities in their community found that worries about being targeted by immigration officials (e.g., constant surveillance by Immigration and Customs Enforcement), the potential threat of a surprise immigration raid, and the possibility of not having legal identification documents (e.g., driver’s license) if stopped by immigration officials were common everyday fears (Pinedo et al., 2021). These fears are not unfounded, as there has been a growing awareness of US-born Latinos being placed in detention centers and in some instances actually being deported to Mexico or Central America (Asad, 2020; Flynn, 2019; Olive, 2020). In fact, a 2021 national survey found that 28% of US-born Latinos worry a lot or some that they or someone they know could be deported (Moslimani, 2022). As such, the fear of the possibility of being detained or deported may generate psychological stressors that then increase risk for hazardous drinking and illicit drug use as a form of coping.

Relatedly, having ever witnessed or experienced an immigration raid was independently associated with high intensity drinking, illicit drug use, prescription drug misuse, and prescription opioid misuse. Community and workplace immigration raids, including traffic checkpoints, have long served as a source of chronic stress and fear for immigrant communities, especially Latinos (Golash-Boza, 2015; Lopez et al., 2017). Raids have also increased substantially in recent years in frequency and number of arrests – for example, the single largest workplace immigration raid in the past decade occurred in 2018 (National Immigration Law Center, 2020). Immigration raids are unannounced, chaotic, violent, and described by social workers as being comparable to war zones or natural disasters that exert long lasting emotional impacts on immigrant com-

munities (Fleming et al., 2019). During an immigration raid, US-born Latinos are subjected to having to prove their citizenship status, which represents a stress-inducing incident and creates feelings of discrimination and racism (Almeida et al., 2016; Pinedo et al., 2021). Further, during a raid, US-born Latinos are commonly present and are forced to bear witness to their family, friends, and fellow community members being detained and treated like criminals (Capps, 2007; Capps et al., 2015). Much research has documented the mental health consequences of immigration raids on individuals and communities. Our findings extend this prior work by underscoring that the traumatic impacts of immigration raids may also have implications for substance misuse among US-born Latinos. Importantly, although the current Biden administration has halted workplace raids (Aguilar, 2021), the fear that previous raids have caused will likely linger and continue to exert long-term health effects for individuals who have experienced a raid.

We also found that parental detentions and deportations are associated with alcohol and drug misuse among US-born Latinos. Our findings indicate that having had a parent detained when one was a minor, regardless of whether or not the detention resulted in deportation, may cause considerable harms that may predispose US-born Latinos to substance misuse in adulthood. Notably, among all immigration-related stressors that were investigated in this study, parental detentions and deportations in childhood evidenced the strongest associations across all outcomes. US-born Latinos who had a parent deported in childhood were far more likely than other participants to report all of the substance use outcomes we examined. Specific drugs that were associated with parental deportations included methamphetamine, prescription sedative misuse, and prescription opioid misuse. These findings add to the evidence base documenting mental health harms of parental detentions and deportations among US-born Latinos, including increased

Table 3
Immigration-related stressors independently associated with specific types of drugs among US-born Latinos, n=1,771, 2021.

Variables	Cannabis		Cocaine		Methamphetamine		Prescription sedative misuse		Prescription opioid misuse	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Model 1 ^a										
Ever feared or worried about:										
Being stopped or questioned regarding immigration status by immigration officials	0.93	0.61-1.11	1.22	0.64-2.33	1.38	0.72-2.65	1.28	0.69-2.38	0.76	0.41-1.39
Being detained for immigration reasons	1.12	0.77-1.63	2.37*	1.20-4.70	1.58	0.79-3.13	2.53**	1.31-4.87	2.05**	1.08-3.89
Being deported for immigration reasons	0.79	0.53-1.20	0.90	0.42-1.95	1.57	0.73-3.37	0.52	0.24-1.12	0.80	0.39-1.66
Having parent(s) deported	0.73	0.50-1.06	0.46	0.22-0.98	0.62	0.29-1.30	0.71	0.35-1.43	0.65	0.32-1.30
Having a family member (e.g., sibling, uncle, aunt, cousin) deported	1.11	0.79-1.54	0.94	0.48-1.82	1.04	0.54-2.03	1.00	0.53-1.87	1.21	0.66-2.22
Having a close friend deported	1.30	0.97-1.75	2.81***	1.61-4.90	1.56	0.88-2.77	1.27	0.73-2.22	1.00	0.59-1.69
Having a parent deported as a child	1.25	0.89-1.77	1.11	0.55-2.24	0.45*	0.22-0.93	0.77	0.40-1.50	0.72	0.38-1.36
Believe home state policies are unfavorable towards immigrants	1.05	0.84-1.33	1.13	0.70-1.83	1.19	0.75-1.90	0.88	0.56-1.39	1.18	0.78-1.77
Believes attitudes and sentiments towards immigrants in home state are unfavorable or hostile	1.11	0.85-1.44	0.91	0.52-1.60	0.62	0.35-1.08	1.12	0.66-1.89	0.98	0.61-1.58
Believes attitudes and sentiments towards immigrants in community of residence	0.94	0.72-1.23	1.16	0.67-2.02	1.97	1.14-3.42	1.58	0.95-2.64	1.00	0.63-1.60
Has ever encountered a personal anti-immigration experience	0.87	0.67-1.12	0.54*	0.30-0.97	0.98	0.59-1.64	0.71	0.42-1.19	0.75	1.47-1.20
Has ever witnessed or experienced an immigration raid	1.27	0.91-1.78	1.44	0.78-2.67	1.10	0.58-2.08	1.05	0.56-1.94	2.18**	1.33-3.59
Ever separated from parent(s) as a minor because of immigration issues										
No (Ref)	—	—	—	—	—	—	—	—	—	—
Yes, parent(s) was detained, but not deported	0.81	0.52-1.28	1.62	0.75-3.51	1.88	0.85-4.14	0.83	0.35-1.96	1.47	0.70-3.09
Yes, parent(s) was deported	1.13	0.67-1.92	0.86	0.24-3.14	3.39*	1.33-8.62	2.46*	1.07-1.20	2.92**	1.31-6.51
Model 2 ^a										
Number of immigration-related stressors experienced										
None (ref)	—	—	—	—	—	—	—	—	—	—
1-2	1.33*	1.01-1.76	1.56	0.77-3.13	1.82	0.90-3.69	1.84	0.98-3.48	1.56	0.92-2.64
3-4	1.34	0.99-1.82	1.47	0.68-3.19	1.69	0.79-3.60	1.78	0.91-3.49	1.23	0.68-2.24
5-6	1.08	0.99-1.55	3.63***	1.69-7.80	3.69***	1.71-7.97	1.64	0.75-3.59	1.68	0.86-3.25
7-8	1.26	0.85-1.87	5.07***	2.33-11.00	4.54***	2.04-10.12	1.69	0.73-3.91	2.28*	1.16-4.47
9 or more	1.58*	1.04-2.42	3.22**	1.32-7.84	3.32*	1.34-8.24	2.95**	1.36-6.41	1.89	0.89-3.98

*p <0.05. **p < 0.01. ***p <0.001.

^a Controlling for Latino subgroup, sex, age, parental nativity, employment status, educational attainment, total annual family income, and psychological distress

risk of alcohol and drug misuse (Capps et al., 2015; Gulbas et al., 2016; Pinedo, 2020a, b; Pinedo & Valdez, 2020; Zayas et al., 2015). Importantly, studies investigating the health impacts of parental detentions and deportation have largely concentrated on US-born Latino children. Studies examining the substance use consequences of parental or family detentions and deportations among US-born Latino adults are limited in that they generally have not assessed when the detention or deportation occurred—i.e., in childhood versus adulthood. Our finding is novel in that it is the first to document that parental detentions and deportations during childhood are associated with substance misuse in adulthood. The detention or deportation of a parent results in multiple adverse consequences (e.g., emotional, psychological, economic) that likely predispose individuals toward substance misuse.

Lastly, a notable finding from this study was the dose-like association between the number of immigration-related stressors experienced and the strength of association with substance use outcomes. As US-born Latinos reported a greater number of immigration-related stressor experiences, the odds of engaging in hazardous alcohol use, illicit drug use, and prescription drug misuse increased exponentially. This was especially the case for cocaine and methamphetamine use. This finding is novel in that no prior study has investigated the cumulative associations of immigration-related stressors with substance misuse. Experiencing 7-8 immigration-related stressors was associated with prescription opioid use, whereas experiencing 9 or more of these stressors was associated with a significantly increased likelihood of using cannabis, cocaine, methamphetamine, and misusing prescription sedatives. Results

suggest that US-born Latinos who have experienced greater amounts of stress resulting from immigration-related enforcement may be an at-risk population for problematic alcohol and drug use.

Findings must be interpreted within the context of at least four important limitations. First, the cross-sectional study design does not allow us to draw directional or causal inferences between associations documented. Nonetheless, our study documented multiple novel associations between specific immigration-related stressors and substance misuse among US-born Latino adults that merit further investigation. Findings can provide scientific rationale for future studies attempting to establish directional or causal relationships using a longitudinal study design. Second, participants were recruited through online web-panels, which may have introduced sampling bias. Findings may not be generalizable to individuals who do not have access to the Internet access and/or who lack digital literacy. However, web and mobile devices have become increasingly common and accessible among the general population. In 2021, about 85% of all Latinos owned a smartphone and 93% reported using the internet, comparable to other racial/ethnic groups (Pew Research Center, 2022). Web-panels are also comprised of participants who have already agreed to participate in survey research, and thus, participants may differ from individuals who have not agreed to take part in, are not interested in, or mistrust research. Further, our sample of US-born Latinos reported a higher educational attainment than the general US-born Latino population: 29% of participants reported graduating from college compared to 20% in the general population. Thus, findings may be biased towards higher educated US-born Latinos (Pew

Research Center, 2019). Fourth, the sensitive nature of topics covered in our study (i.e., immigration-related issues and substance use) may have resulted in participants underreporting their experiences. However, the study questionnaire was anonymous and self-administered, which likely reduce social desirability bias.

Conclusion

The role that immigration policies play on the health of US-born Latinos is understudied, especially in the area of substance use. Punitive immigration and enforcement policies give rise to multiple stressors that may render individuals vulnerable to misusing substances as a way of coping. Our study calls attention to the fact that US-born Latinos, who are not immigrants, are not universally protected from adverse experiences and stressors resulting from immigration-related issues. Immigration-related stressors may also potentially represent critical drivers of existing substance use-related disparities that disproportionately impact Latinos relative to other racial/ethnic groups (Mulia et al., 2009; Schmidt et al., 2007) and that may help explain increases in rates of opioid use and overdoses among Latinos that have been recently documented (Bebinger, 2018; Valdez et al., 2022). Importantly, Latinos in the US are experiencing a dynamic transition from a predominantly immigrant group to an emerging US-born racial/ethnic minority population. Currently, the majority (67%) of all US Latinos are US-born (Noe-Bustamante, 2019), and many of these individuals have at least one immigrant parent. Immigration-related stressors therefore have strong potential to impact not only immigrant Latinos, but also those born in the United States. Our results underscore that immigration-related stressors need to be considered when designing intervention and policies strategies aimed at reducing substance misuse and related harms among Latinos, irrespective of immigration or nativity status. We hope that the present study will inspire additional empirical, intervention, and policy work in this direction.

Contributors

MP conceptualized the original study, conducted the analyses, and wrote the original draft of the manuscript. PM, KP, and SS guided the analyses, assisted in interpretation of the findings, and provided critical feedback on the manuscript. All authors approved the final manuscript.

Declaration of Competing Interest

None.

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