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Alcohol-related Social Problems among Mexican Americans Living in U.S.-Mexico Border and Non-border Areas

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Abstract

This paper examines alcohol-related social problems among Mexican Americans living along the U.S.-Mexico border and in non-border areas. Interviews were conducted among Mexican Americans in the border regions of California, Arizona, New Mexico, and Texas (N=1,307). Non-border respondents were interviewed primarily in Houston and Los Angeles (N=1,288) as part of the Hispanic Americans Baseline Alcohol Survey (HABLAS). Both the border and HABLAS surveys employed multistage cluster sample designs (response rates were 67% and 76%, respectively). In the bivariate analysis, there were no significant differences between border and non-border areas in the proportion of those with one or more social problem. In non-border areas, the prevalence of alcohol problems did not differ significantly by age. However, along the border the prevalence of alcohol problems was significantly different across age groups, with 18 to 29 year old men and women having the highest prevalence. The final models showed no residence effect on problem likelihood. Drinking was strongly associated with problems. Although young border residents had higher problem prevalence rates than older residents, the logistic regression models showed no effect of border residence on the likelihood of problems, indicating that problems are due to alcohol consumption, not the border environment. The border, however, did appear to influence more drinking among young people. Regardless of residence, alcohol treatment and preventive interventions tailored to Mexican Americans are essential and special attention should be focused on younger individuals near the border.

Keywords

Mexican Americans; U.S.-Mexico border; alcohol consumption; alcohol-related problems

1. Introduction

Twenty-six counties in four U.S. states (Arizona, California, New Mexico, and Texas) share common borders with Mexico. The proportion of Hispanics in these counties, composed mostly of Mexican Americans, is approximately 52% (La Fe Policy and Advocacy Center, 2006). In border areas, there are higher levels of poverty and unemployment, lower levels of education (Gerber, 2009; U.S./Mexico Border Counties Coalition, 2007), and higher rates of health problems such as tuberculosis, hepatitis A, and liver disease (CDC, 2008a; 2008b; PAHO, 2007).

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Rates of binge drinking are also higher in border areas. Data from the Texas-Mexico border show that 36% of men binged at least once per month, whereas nationally, 7% of Mexican Americans binged (Caetano, et al., 2008; Ramisetty-Mikler, et al., 2010). Unfortunately, most border alcohol studies focused on the Texas-Mexico border (Caetano, et al., 2008; Holck, et al., 1984; Wallisch, 1998; Wallisch & Spence, 2006), excluding other border states.

Analysis of our data from border regions of all four border states, and U.S. non-border areas also indicate that alcohol consumption is higher on the border (Caetano, et al., 2012). Border men consume a higher mean number of drinks per week compared to non-border men and 18-29 year old border men have higher rates of binge drinking (48%) than young non-border men (36%). Border women also drink more than non-border women, but the amount of drinking decreases more rapidly with age on the border than off the border. On the border, 18-29 year olds consume significantly more drinks per week than their older border counterparts as well as their younger and older non-border counterparts. In addition, the prevalence of binge drinking among 18-29 year olds on the border is 26% versus 14% off the border.

Alcohol-related social problems may be legal, interpersonal, job, or health-related. Such problems are linked to the drinker's social environment and may be shaped by where one resides. This paper describes and compares rates of such problems among Mexican Americans living in border and non-border areas. Because previous analyses of these data showed significant age differences in drinking both on and off the border (Caetano, et al., 2012), the prevalence of problems by age within location is compared. We hypothesize that 18-29 year old border residents will be more likely than both younger and older non-border residents to experience social problems.

2. Method

The non-border Mexican American respondents were interviewed as part of the 2006 Hispanic Americans Baseline Alcohol Survey (HABLAS; N=1,288). Respondents were interviewed in Los Angeles, Houston, New York, Philadelphia, and Miami. The border survey (N=1,307) interviewed Mexican Americans in urban areas in border counties of California, Arizona, New Mexico, and Texas between March 2009 and July 2010. Both surveys utilized a multistage cluster sampling methodology with weighted survey response rates of 76% (HABLAS) and 67% (border). Respondents signed written informed consents and the Committee for the Protection of Human Subjects of the University of Texas Health Science Center at Houston approved both studies.

Both surveys utilized identical questionnaires with the exception of questions regarding drinking in Mexico, which were asked only in the border survey. The questionnaire was pre-tested in English, translated into Spanish, and back-translated to English. Bilingual interviewers conducted hour-long Computer Assisted Personal Interviews in respondents' homes.

2.1 Measures

2.1.1. Alcohol-related social problems—Respondents reported the experience of the following problems within the previous year: belligerence, police problems, accidents, health-related problems, spousal problems, problems with one's children, and work-related problems (see Hilton, 1991). Items were coded "1" for "yes" and "0" for "no" and respondents were categorized as follows: 1) ex-drinkers, lifetime abstainers, and current drinkers who experienced no problems in the previous year; and 2) current drinkers who experienced one or more problem in the previous year.

2.1.2. Average number of drinks per week—This was assessed by combining the self-reported frequency and quantity of drinking wine, beer, liquor, and mixed drinks in the previous year (12 ounces of beer, five ounces of wine, or 1½ ounces of liquor). We report the risk associated with an increase in drinking five drinks per week.

2.1.3. Binge drinking—This was defined as drinking four or more (women) and five or more (men) drinks per occasion within a two hour period in the previous year. Men were categorized as: 1) current drinkers who did not binge in the previous year/ex-drinkers/ abstainers; 2) current drinkers who binged 1-11 times in the previous year; and 3) current drinkers who binged one or more times a month. For women, the two binge drinking categories were combined because of the small number in the highest binge category (N=15).

2.1.4. Demographic variables—*Location:* Border versus non-border. *Birthplace*: Foreign versus U.S. *Age:* Measured continuously (multivariate analyses) and categorically (bivariate analyses): 18-29, 30-39, 40-49, and 50+ years. *Marital status:* 1) married/ cohabitating, 2) separated/divorced/widowed, and 3) never married/never lived with someone. *Education:* 1) less than high school, 2) high school diploma/general equivalency diploma (GED), 3) some college/technical/vocational school, or beyond. *Employment status:* Men, 1) full/part-time employment, 2) unemployed/temporary illness/in school, 3) retired/disabled/never worked/other. For women, a homemaker category was included. *Religion*: 1) Protestant, 2) Catholic, 3) other, and 4) no preference. *Income:* Total household income with 12 possible responses (< $4,000 to > $100,000). Because 15.2% of income data were missing, the log-transformed variable was multiply imputed for the analyses (see Caetano & Mills, 2011).

2.2. Analysis

To account for the multistage cluster sample design of both surveys, Stata 11.1 (StataCorp., 2009) was used. Weighted data were analyzed to correct for unequal probabilities of selection into the sample. A post-stratification weight also corrected for nonresponse and adjusted the sample to known population demographic distributions. Bivariate associations were assessed with chi-square statistics. Correlates of alcohol-related problems were assessed with multivariate logistic regression. Preliminary models were fit using the average of the 10 imputed income values, and final model estimates were obtained by combining estimates from analyses on each of the 10 imputed datasets using Rubin's rules (Carlin, et al., 2008; Rubin, 1987). Because drinking practices vary by gender, gender-specific models were run. Because previous analyses of this sample detected interactions involving location, gender, and age (Caetano, et al., 2011), age by location interactions were tested in the models. Since the interactions were not statistically significant, they are not reported.

3. Results

3.1. Sociodemographics

The mean age off the border was 37.8 years (± 0.6) versus 41.3 years (± 1.0) on the border. Off the border, 48% were women versus 53% on the border. Off the border the mean annual income was 26.0K (± 1.2) versus 28.5K (± 2.0) on the border. The proportion of those with less than a high school education was comparable off and on the border (48% and 49%, respectively), as was the proportion of married or cohabitating individuals (60% and 58%, respectively).

3.2. Problem prevalence

Among non-border men, approximately 24% had one or more social problem versus 20% of border men. Among non-border women, approximately 5% reported one or more problem versus approximately 7% of border women (data not shown, differences not statistically significant).

3.3. Problem prevalence in relation to age

Previous analyses of these data showed significant age differences in drinking, both on and off the border (Caetano, et al., 2011). In the current analysis, an examination of a similar association revealed no age differences in problem prevalence among men or women in non-border areas (Table 1). On the border, however, a significantly higher proportion of young men and women reported one or more problem than older border residents. Among border men, more than one third of 18-29 year olds had one or more problem compared to less than 10% of 50+ year olds. Among border women, the prevalence of problems among 18-29 year olds was more than twice that of 30-39 and 40-49 year olds and more than 12 times that of 50+ year olds.

3.4. Correlates of alcohol-related social problems

The final model for men showed no effect of border residence status on the likelihood of problems (Table 2). Only the drinking variables were associated with problems for men. The likelihood of problems increased as the mean number of drinks consumed per week increased. The risk for problems associated with binge drinking increased more than three- and four-fold for binge drinking less than once per month and one or more time per month, respectively.

The multivariate logistic regression model for women showed no association between the likelihood of problems and border residence status (Table 2). A higher mean number of drinks consumed per week and binge drinking were associated with a greater likelihood of experiencing problems. In addition, women who were separated, divorced, or widowed were at greater risk for problems than those who were married or cohabitating. In contrast, homemakers were at an approximately three-fold higher risk for problems than employed women. Finally, women without a high school diploma/GED were at decreased risk for problems than women with at least some post-high school education.

4. Discussion

The bivariate analysis showed that 18-29 year old men and women on the border had dramatically higher problem prevalence rates than those in older age groups. Further testing of interactions between age and border location in logistic regression analyses, however, was not significant. In both gender-specific models, drinking was strongly associated with the likelihood of problems; indicating that drinking influences problems, not the social environment of the border. But given our previous analyses, the border environment does appear to influence the amount of alcohol consumed (Caetano et al., 2011), and thus, the likelihood of problems. Our previous analyses showed that young border women go to Mexico to drink more frequently than young men (Caetano, et al., 2011). Lange and colleagues (2002) similarly found that approximately 50% of the 18-20 year old women in their San Diego, California sample of young adults had crossed the border to drink in the previous year. This, they suggest, is due to the greater drinking opportunities for women in Mexico (i.e., 18 year old legal drinking age and less expensive alcohol). In our border sample, place of drinking may not be as important for men as for women, since norms for men's drinking are more liberal than for women's (Caetano & Clark, 1999; Mills & Caetano, 2010).

Our findings for women indicate that not having a high school diploma was a protective factor. This is in contrast to reports that lower education is a risk factor for alcohol-related problems (Hilton, 1991), and driving while intoxicated (Riala, et al., 2003). Our findings regarding homemakers are counterintuitive since a previous analysis (Caetano, et al., 2011) demonstrated that homemakers who drank consumed fewer drinks per week and were less likely to be binge drinkers. The current findings indicate that, at equal levels of consumption, homemakers were more likely to have problems than their employed counterparts; reflecting perhaps more liberal attitudes toward, and acceptance of drinking among women in the work force compared to homemakers (Parker & Harford, 1992). In contrast, women who were separated, divorced, or widowed were more likely to experience problems than married or cohabitating women. These women may have lifestyles that create more opportunities for drinking.

A strength of this study is that our representative sample included Mexican Americans on the border in all four U.S.-Mexico border states, not just Texas. Our study also utilized bilingual interviewers, thus allowing for inclusion of Spanish and English speakers. In addition, sample selection and data collection in both surveys employed identical methodologies, allowing for border and non-border comparisons. A limitation of this study is the lower response rate on the border (67% versus 76% off the border). Finally, the non-border survey did not assess drinking in Mexico. If non-border residents also went to Mexico frequently to drink, our results would be attenuated, therefore explaining our null findings regarding differences in problems between border and non-border areas.

Our findings are important given the growing Mexican American population in the U.S. From the years 2000 to 2010, this group grew by 7.2 and 4.2 million due to births and immigration, respectively (Pew Hispanic Center, 2011). Mexican Americans, relative to other Hispanic groups, with the exception of Puerto Ricans, drink more on average and engage in more binge drinking (Ramisetty-Mikler, et al., 2010), and young Mexican Americans on the border drink still more (Caetano, et al., 2011). Continued alcohol prevention and treatment interventions tailored to Mexican Americans, regardless of border residence status, are important, but particularly, special attention must be focused on younger border residents.

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Highlights

- U.S.-Mexico border residence status and alcohol-related problems were examined.
- On the border, 18-29 year olds were more likely to have problems than older groups.
- Off the border, alcohol problems did not differ significantly by age.
- The final models showed no residence effect on problem likelihood.
- Drinking was strongly associated with problems.

Table 1

Proportion of the number of endorsed alcohol-related social problems off the border and on the border by age and gender.

	18-29 %	30-39 %	40-49 %	50+ %	Total	Significance
Off the Border						
Men						
Alcohol problems	(n=226)	(n=179)	(n=130)	(n=101)	(n=636)	0.439
0	71.2	77.9	81.5	73.7	75.9	
1+	28.8	22.1	18.5	26.3	24.1	
Women						
Alcohol problems	(n=190)	(n=221)	(n=126)	(n=107)	(n=644)	0.789
0	95.4	95.6	97.0	93.4	95.4	
1+	4.6	4.4	3.0	6.6	4.6	
On the Border						
Men						
Alcohol problems	(n=171)	(n=100)	(n=101)	(n=190)	(n=562)	<0.001
0	65.8	86.4	82.1	92.3	80.3	
1+	34.2	13.6	18.0	7.8	19.7	
Women						
Alcohol problems	(n=152)	(n=150)	(n=140)	(n=284)	(n=726)	0.001
0	85.4	94.8	93.9	98.8	93.3	
1+	14.7	5.2	6.1	1.2	6.7	

Notes: Reporting unweighted sample sizes and weighted proportions.

Table 2

Odds ratios and 95% confidence intervals from multiple logistic regression models predicting alcohol-related social problems among men and women.

	Men OR (CI)	Women OR (CI)
Location (Ref = Non-border)	0.57 (0.30 - 1.08)	1.10 (0.32 - 3.79)
Age[a]	0.99 (0.97 - 1.01)	0.98 (0.94 - 1.03)
U.S.-Born	1.12 (0.65 - 1.93)	1.06 (0.34 - 3.36)
Education (Ref = Some college, technical/vocational school or beyond)		
No high school diploma	1.06 (0.56 - 1.97)	0.23 ** (0.08 - 0.63)
High school diploma/GED	0.61 (0.32 - 1.15)	0.43 (0.17 - 1.11)
Income[a]	0.99 (0.98 - 1.00)	1.00 (0.98 - 1.02)
Employment Status (Ref = Full/part time)		
Unemployed & looking/not looking/temporary illness/in school	0.49 (0.20 - 1.19)	1.79 (0.50 - 6.36)
Retired/disabled/never worked	0.82 (0.32 - 2.08)	2.65 (0.54 - 12.97)
Homemaker	N/A	3.02 * (1.02 - 8.96)
Marital Status (Ref = Married/living with spouse, living with someone)		
Married not living with spouse/separated/divorced/widowed	0.73 (0.31 - 1.72)	2.50 * (1.02 - 6.16)
Never married/lived with someone	1.03 (0.57 - 1.89)	1.58 (0.37 - 6.80)
Religion (Ref = Catholic)		
Protestant	0.94 (0.41 - 2.18)	0.74 (0.34 - 1.64)
Jewish/other	0.85 (0.28 - 2.59)	2.64 (0.55 - 12.82)
No religious preference	1.78 (0.56 - 5.67)	3.83 (0.75 - 19.60)
Drinks per Week[a] (By 5 drinks per week)	1.39 *** (1.25 - 1.55)	1.97 *** (1.52 - 2.56)
Binge Drinking (Ref = Non-binger)		
Binge < 1 time per month	3.33 *** (1.91 - 5.81)	N/A
Binge 1+ time per month	4.69 ** (1.63 – 13.47)	N/A
Binge 1+ times per year	N/A	6.77 *** (2.93 - 15.66)

Notes: OR = Odds ratio; CI = Confidence interval; Ref = Reference group; a = continuous variable; GED = general equivalency diploma; N/A = Not applicable;

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$.