Patterns of Unhealthy Alcohol Use among Latino Day Laborers

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Abstract

Objective: We sought to describe patterns of unhealthy alcohol use among Latino immigrant day laborers and identify correlates of these behaviors.

Methods: Participants (N = 104) completed surveys on substance use, alcohol-related problems, mental health, and demographics. We assessed differences in unhealthy alcohol use by subject characteristic using chi-square tests of independence and 2-sample tests of proportions.

Results: Unhealthy alcohol use was common with 65% having an AUDIT score of 8 or higher. Living situation and income were significantly associated with unhealthy alcohol use and high levels of depression and anxiety were associated with increased alcohol-related problems.

Conclusions: Interventions to reduce unhealthy alcohol use should consider the role of stable housing, income and mental health.

Keywords

alcohol use; heavy episodic drinking; Latino health; immigrant health

Research suggests that Latino immigrant men are at increased risk for unhealthy alcohol use, which is defined as exceeding the average limits recommended by the National Institute for Alcohol Abuse and Alcoholism (NIAAA) of 14 drinks per week or 4 drinks per day.[1-5] Unhealthy alcohol use can lead to negative health and social consequences and Latino men are more likely than men in other racial/ethnic groups to experience work and legal problems as a result of their drinking.[6-9] Therefore, unhealthy drinking and its consequences among Latino immigrant men are serious public health concerns.

Heavy episodic drinking, defined as 5 or more drinks per occasion for men, is a form of unhealthy alcohol use.[10] Rates of heavy episodic drinking among Latino immigrant men are

much higher than men in the general United States (US) population, ranging from 44% to 58%.[11-14] Studies have shown that several factors contribute to unhealthy drinking in this population, including stressors associated with the immigration and adaptation process, such as poverty, undocumented immigration status, language barriers, and social isolation.[15,16] Latino immigrant men turn to alcohol as a way of coping with loneliness, depression, discrimination and social isolation.[12,16-18] Heavy drinking is also supported by cultural and gender norms for Latino men, who are often encouraged to initiate drinking at an early age.[19-22]

Due to immigration policies in the US, many Latino immigrants arrive to the US without legal documentation to work. Day labor, which refers to the informal labor market that takes place on street corners and through day labor worker centers that match workers with temporary jobs, can be an important source of income for these men.[23] Day labor is often unstable, unpredictable, and associated with low wages and risky work conditions.[24] Many Latino day laborers are single men, and represent one of the poorest segments of the Latino population due to their labor conditions and undocumented immigration status.[23] Day laborers also experience discrimination or harassment from their employers or other authorities while looking for work.[25] These work-related stressors, as well as other aspects of Latino day laborers' social context may contribute to their unhealthy drinking.[16,26-28]

Despite what is known about the challenging social context of Latino day laborers' daily lives, few studies have examined the risk for unhealthy alcohol use in this vulnerable population. Our study sought to describe patterns of alcohol use among Latino day laborers and identify correlates of these behaviors in order to identify and develop appropriate program and policy interventions for this population.

METHODS

Study Sample

Participants were recruited from a community-based day labor worker center where men waiting for employment opportunities were approached and screened for eligibility. Those who identified as Latino, spoke Spanish, were foreign-born, and over the age of 18 were invited to participate.

Data Collection

After obtaining consent from participants, trained bilingual and bicultural research staff administered surveys on iPads in private offices or classrooms at the day labor worker center. Surveys included measures of alcohol, tobacco and drug use, alcohol-related problems, mental health, and demographic characteristics. The survey took approximately 30 minutes to complete.

We assessed alcohol use with the Alcohol Use Disorders Identification Test (AUDIT) and Alcohol Timeline Followback (TLFB).[29-31] The AUDIT consists of 10 items that serve as indicators of recent alcohol use, dependence, and alcohol-related problems. Response options are on a 5-point scale ranging from "never" to "daily or almost daily." Items are summed to create a total score. Questions 1-3 identify hazardous alcohol use (frequency

of drinking, typical quantity, and frequency of heavy drinking), questions 4-6 correspond to dependence symptoms (impaired control over drinking, increased salience of drinking, morning drinking), and questions 7-10 assess harmful alcohol use (guilt after drinking, blackouts, alcohol-related injuries, and others concerned about drinking).[32] Heavy episodic drinking was measured using a question from the AUDIT, which asks the frequency of consuming 6 or more drinks per occasion.[33] A total of 8 or greater indicates a positive AUDIT score and alcohol use in excess of low-risk guidelines considered to be hazardous. The AUDIT has been translated previously into Spanish and used with Latino populations in both the US and in Spanish-speaking countries, including day laborers.[34,35]

We assessed the quantity and frequency of alcohol use using the TLFB, a calendar-based assessment measure where participants provide retrospective estimates of their daily drinking, including abstinent days, over a specified time period before the interview (in our study, 14 days). Memory aids were used to enhance recall. We created the following variables from this measure: number of drinks per day, days drank per week, total drinks per week, and drinks per drinking day. We also created variables of unhealthy alcohol use indicating whether the men exceeded NIAAA recommendations of 4 or more drinks per day and 14 or more drinks per week. A Spanish version of this measure has been used with Latino populations.[36]

Alcohol-related problems were measured with the lifetime consequences scale of the Short Inventory of Problems (SIP).[37] For the lifetime scale, participants report whether they have ever experienced any of 15 problems (yes/no responses). Scores from all 15 items are summed to calculate a total SIP score, with higher values indicating more alcohol-related problems. We also calculated lifetime scores for the 5 subscales: *physical* – consequences related to adverse physical states resulting from excessive drinking; *intrapersonal* – subjective perceptions of participants' self; *social responsibility* – role-fulfillment repercussions; *interpersonal* y0 impact of drinking on participants' relationships; and *impulse control* – consequences that do not readily fit into other categories. The SIP has been validated for Latinos.[38]

Tobacco use was measured using items similar to those in the National Adult Tobacco Survey.[39] Participants were asked 4 questions on lifetime cigarette use (yes/no responses), frequency of use ("every day," "some days," or "not at all") as well as average number of days and cigarettes smoked in the past 30 days. Past 30-day drug use (yes/no responses) also was assessed.

The Patient Health Questionnaire-9 (PHQ-9) is a 9-item measure developed to screen for the frequency of depressive symptoms in clinical settings.[40] Items assess how often persons experience various depressive symptoms over the previous 2 weeks. Symptoms are based on the 9 diagnostic criteria for major depressive disorder in the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV). Response options range from 0 ("not at all") to 3 ("nearly every day") with total scores ranging from $0 - 27$ and higher scores indicating more severe depression ($\alpha = 0.83$). The measure has been validated in Spanish-speaking Latino populations.[41] Total scores between 5 and 14 indicate mild/moderate depression whereas scores between 15 and 27 refer to moderately severe/severe depression.

The Generalized Anxiety Disorder-7 (GAD-7) scale consists of 7 items that assess anxiety-related symptoms over the past 2 weeks.[42] Response options range from 0 ("not at all") to 3 ("nearly every day") with total scores ranging from 0 – 21 and higher scores indicating more severe anxiety (α = 0.87). The measure has been shown to have internal consistency and validity in Spanish-speaking Latino populations.[43] Total scores between 0 and 9 indicate minimal/mild anxiety and scores between 10 and 21 refer to moderate/severe anxiety.[42]

Finally, we collected the following demographic information from participants: age; marital status; number of years living in the US; country of origin; level of education; languages spoken (English and Spanish); employment status; total hours worked per week; and weekly income.

Data Analysis

Initial analyses described the demographic characteristics and patterns of alcohol use in the study sample. To describe the relationship between participant characteristics and alcohol use, we calculated mean scores, standard deviations, and proportions. Differences in report of unhealthy/heavy episodic drinking were assessed using chi-square tests of independence for categorical measures and 2-sample tests of proportions. All analyses were conducted using Stata MP edition, v13.

RESULTS

We recruited 104 day laborers, all of whom were Latino men; they were born outside of the US, and spoke Spanish based on the screening eligibility (Table 1). The mean age of the men was 46.6 and mean number of years in the US was 15.8. Most men reported Mexico as their country of origin (67%), followed by El Salvador (10%), Guatemala (7%), Honduras (6%), Cuba (4%), Peru (2%), Chile (2%), Venezuela (1%) and Colombia (1%). Most men were single or divorced (76%) and had low levels of education (39% reported primary education or less). A large percentage (41%) reported being homeless or living in temporary housing (eg, shelter, staying with a friend). Almost all men reported speaking more Spanish than English, with 32% speaking only Spanish. Men reported being paid for an average of 17 hours per week with most earning between $200 and $300 per week. Mental health measures revealed mild depression (PHQ-9 mean: 7.9) and anxiety (GAD-7 mean: 5.1).

Table 2 presents the patterns of alcohol use and related behaviors. We found that 65% of the population had a positive AUDIT score of 8 or more, indicating a hazardous level of alcohol use. The mean AUDIT score was 13.1. Based on the TLFB, men reported consuming a mean of 1.6 drinks per day and 11.5 drinks per week. On average, men drank 1.4 days per week and 7.4 drinks on days that they drank. Although 18% of the sample reported never drinking and 34% had no drinks in the past 2 weeks, 54% exceeded the NIAAA guidelines of 4 or more drinks per day or 14 or more drinks per week. Furthermore, almost half of the men (49%) reported heavy episodic drinking at least monthly over the last year and 27% reported heavy episodic drinking weekly or more. We found that that the sample experienced an average of 7 alcohol-related problems overall and an average of one problem in each of the given categories. The majority of the men (89%) reported having smoked in their lifetime and smoked an average of 6 cigarettes per day and 24 smoking days in the past month. Drug

use was less common, with 17% reporting marijuana consumption in the past 30 days and less than 6% of men reporting cocaine, heroin, or other drug use.

The data in Table 3 summarize patterns of alcohol use by participant characteristics. Although not statistically significant, men with lower levels of education, and those that were single or divorced reported higher levels of alcohol use. Further, alcohol use tended to increase with time in the US. Men that were homeless or living in temporary housing had a significantly higher mean AUDIT score (mean 16.2 vs 11.0; $p < .05$) and reported more alcohol-related problems (mean: 8.7 vs 5.7; $p < .05$) compared to men living in their own homes or apartments. Additionally, those with a weekly salary between $200 and $300 reported more alcohol-related problems than men making less than $200 a week or more than $300 a week (mean: 8.8 vs 6.8; $p < .05$). In regards to mental health, moderately severe to severe depression was significantly associated with higher AUDIT scores in comparison to mild/moderate depression (mean: 16.8 vs 11.7; $p < .05$). Men with moderate to severe levels of anxiety and depression also were more likely to report alcohol-related problems (mean: 9.5 vs 6.1; $p < 0.5$ and 8.9 vs 6.1; $p < .05$ respectively).

DISCUSSION

Our study is one of the first to describe patterns of alcohol use among Latino day laborers, a vulnerable and understudied population. The findings show that unhealthy alcohol use and alcohol-related problems are common in this population. A large percentage of the men met criteria for unhealthy alcohol use, across several indicators including the AUDIT, NIAAA guidelines, and frequent heavy episodic drinking.

Few studies have assessed levels of unhealthy alcohol use among Latino day laborers. One exception is a study of Latino day laborers in Los Angeles, in which the average AUDIT score was 6.5, much lower than the average score of 13.1 in our sample.[35] Interestingly, this study also recruited participants from a day labor worker center who had demographic characteristics similar to our sample in terms of age, country of origin, and length of residence in the US. Differences in findings may indicate that there is some variation in levels of drinking among day laborers by region or social context. Overall, AUDIT scores in our sample were much higher than levels found in previous national studies.[32] Whereas 65% of our sample met the criteria for hazardous drinking, in the National Epidemiological Survey of Alcohol and Other Conditions (NESARC), 46% of men reported AUDIT-C scores that indicated hazardous drinking and only 18% of Hispanics/Latinos met that criterion.[44]

More than half the men were drinking above the NIAAA limits of 4 drinks per day or 14 drinks per week. All of the men met the criteria for unhealthy alcohol use by drinking more than 4 drinks per day, as opposed to exceeding the weekly limit. Rates of daily drinking were much higher than what has been reported in other Latino samples, and also higher than the US general population.[45,46] In a study of emergency department patients who were young adults of Mexican ancestry, 38% met the criteria for unhealthy alcohol use compared to 54% in our study.[47] Patterns of drinking in our sample were consistent with heavy weekend drinking among Latino men that has been noted in other studies.[27,48] Men in our study reported drinking 2 days per week or less on average; however, they consumed

an average of 7 drinks on the days that they drank. A large proportion of men also reported either never drinking and/or no drinking in the past 2 weeks. Other studies have noted large percentages of non-drinkers in samples of Latino men. For example, in a study of Latino male farmworkers in North Carolina, 25% reported no drinking.[49]

Rates of monthly heavy episodic drinking in our sample (49%) were similar to those reported in previous studies of Latino immigrant men.[11,50,51] In studies of Latino immigrant men in North Carolina, between 48% and 53% reported heavy episodic drinking in the past month.[11,50] Similarly, a study of Latino migrant workers in south Florida found that 50% reported monthly heavy episodic drinking.[51] Rates of weekly heavy drinking in that study (35%) were also similar to those we found (27%). The consistency across studies suggests that heavy episodic drinking is a common form of unhealthy alcohol use for Latino immigrant men, even across different regions of the US. It is also important to note that these rates of monthly heavy episodic drinking are much higher than rates reported by Latino men (36%) and by men of all racial/ethnic groups (33%) in recent national studies.[52]

Our findings suggest that Latino day laborers commonly experience problems related to their drinking. The most frequently reported problems were spending and losing money and having feelings of guilt and shame due to their alcohol use (57%). Vaeth, Caetano, Ramisetty-Mikler and Rodriguez[53] also found that financial problems were a common social consequence of alcohol use in a sample of Latino men. Previous studies have shown that Latino men are more likely to experience negative alcohol-related consequences than Latina women and men in other racial/ethnic groups.[9,53]

We assessed which characteristics were associated with unhealthy alcohol use. There was little variation in unhealthy drinking by age, years in the US, marital status, education level, country of origin, or language spoken. This is in contrast to previous studies that have shown that unhealthy drinking is higher among younger men, men that are single or separated from their partners, men of Mexican descent, and that alcohol use increases with time in the US.[8,51,53] We did find that men who were homeless or living in temporary housing reported higher AUDIT scores and higher levels of alcohol-related problems than those living in their own home or apartment. Men without permanent housing may have increased stressors in their lives, as well as a social and physical environment that encourages drinking. Previous studies have shown that housing arrangements have an important impact on drinking behaviors.[51] In their study of Latino day laborers in the San Francisco Bay area, Worby and Organista[27] reported that shared housing arrangements can lead to increased risk for unhealthy drinking because men often choose to drink at home and are encouraged by their peers to drink.

Our study also confirmed previous research suggesting that mental health is associated with unhealthy drinking. Men with moderate to severe depression reported higher AUDIT scores and those with moderate to severe depression or anxiety also reported higher levels of alcohol-related problems. Previous qualitative studies have found that Latino immigrant men drink to cope with feelings of loneliness, sadness and social isolation.[15,18] Our study is one of the first quantitative studies to show this association, and suggests that future research should examine the relationship between mental health and alcohol use in this population.[51]

Whereas our study makes an important contribution towards understanding patterns of alcohol use in a vulnerable and high-risk population, there are some limitations. We used self-reported measures; men may have under-reported some stigmatized behaviors, such as alcohol use and mental health status. We assessed several demographic characteristics that have been shown to be related to alcohol use among Latino men in previous studies; however, there may be other unmeasured contextual variables, such as social norms about drinking, specific work-related stressors, and discrimination that also contributed to their drinking.[54,55] Given the cross-sectional study design, we can only report associations between variables. We do not know, for example, if depression leads men to increase their alcohol use or whether high levels of alcohol use and its consequences contribute to depressive symptoms. In terms of recruitment, although we approached all men at the day labor worker center, some non-drinkers may have chosen not to participate after learning that the study was about alcohol use. Due to this sampling strategy, the findings have limited generalizability beyond the day laborer population seeking employment at a day labor worker center.

IMPLICATIONS FOR HEALTH BEHAVIOR OR POLICY

Our results corroborate previous research showing that unhealthy alcohol use, particularly in the form of heavy episodic drinking, is common in this population. Future research should focus on identifying which social and environmental factors increase the risk for this type of alcohol use. In our study, the association between anxiety and depression with unhealthy drinking and alcohol-related problems demonstrates the need for screening and targeted interventions focused on preventing and reducing unhealthy alcohol use, as well as any co-occurring mental health conditions. Furthermore, given that their risk for unhealthy alcohol use is compounded by Latino day laborers' limited access to healthcare and stable housing, reducing these health behaviors may require interventions offering alcohol-related services to Latino immigrant men in community settings, as well as policies that increase access to healthcare and housing.[9,56]

Acknowledgements

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Table 1

Characteristics of Study Sample (N=104)

	Mean/N[a]	(SD)/%
Age	46.6	(10.6)
Age		
20-34	14	13.5
35-49	47	45.2
50+	43	41.4
Marital Status		
Single or divorced	79	76.0
Married or living with partner	25	24.0
Household Size		
0-1	13	12.5
2-4	48	46.2
5-9	19	18.3
10 or more	16	15.4
Living Situation		
House/Apartment	61	58.7
Homeless or temporary housing	43	41.4
Education		
Primary or less	40	38.5
Middle	22	21.2
High school graduate or GED	23	22.1
Some college or more	19	18.3
Weekly Salary		
$200 or less	32	30.8
$200-$300	36	34.6
$300-$400	17	16.4
$400 or more	19	18.3
Hours per Week at Worker Center	16.10	(15.2)
Paid Hours per Week	17.05	(12.9)

	Mean/N[a]	(SD)/%
Country of Origin		
Mexico	69	67
Other	34	33
Years Living in the US	15.8	(10.7)
Years Living in the US		
0-5	17	16.4
6-10	22	21.2
11-20	28	26.9
21+	35	33.7
Language		
Only Spanish	33	31.7
Spanish and English	71	68.3
Depression (PHQ-9)		
Total score	7.9	(6.1)
Mild/moderate depression	62	62.0
Moderately severe /severe depression	38	38.0
Anxiety (GAD-7)		
Total score	5.1	(5.4)
Minimal/mild anxiety	76	73.1
Moderate/severe anxiety	28	26.9

Note.

[a]Not all categories add up to 104 due to missing data for some variables

Table 2

Alcohol Use and Related Behaviors (N= 104)

	Mean/ N	(SD)/ %
AUDIT		
Non-drinker	19	18.3
Alcohol education (0-7)	36	34.6
Simple advice (8-15)	26	25.0
Advice and brief counseling/monitoring (16-19)	14	13.5
Diagnostic evaluation and treatment (20-40)	28	26.9
Hazardous drinking (8 - 40)	68	65.4
Total AUDIT	13.1	(9.8)
Drinking frequency and quantity		
No drinks in past 2 weeks	35	33.7
Drinks per day	1.6	(2.8)
Days drank per week	1.4	(1.9)
Total drinks per week	11.5	(19.3)
Drinks per drinking day	7.4	(5.4)
Unhealthy alcohol use (4 or more drinks per day)	56	53.9
Unhealthy alcohol use (14 or more drinks per week)	28	26.9
Unhealthy alcohol use (using either criteria)	56	53.9
Heavy episodic drinking monthly or more	51	49.0
Alcohol-related problems		
Physical problems	1.4	(1.2)
Interpersonal problems	1.4	(1.2)
Intrapersonal problems	1.5	(1.3)
Impulse control problems	1.2	(1.2)
Social responsibility problems	1.5	(1.3)
Total score	7.0	(5.4)
Tobacco		
Ever smoked	92	88.5
Number of days smoked in past month	24.4	(10.9)
Number of cigarettes smoked/day in past month	6.1	(17.3)
Drug Use (in past 30 days)		
Marijuana	18	17.3
Cocaine	3	2.9
Heroin	1	1
Other drugs	2	1.9

Table 3

Frequency of Alcohol Use by Participant Characteristics

	Total AUDIT		Unhealthy Alcohol Use		Heavy Episodic Drinking		Alcohol-related Problems	
	Mean	SD	N	%	N	%	Mean	SD
Age								
20-34	16.9	11.7	8	57.1	5	35.7	7.6	5.9
35-49	11.7	8.1	19	45.2	21	50.0	6.4	5.4
50+	13.4	10.3	27	62.8	23	53.5	7.2	5.3
Marital Status								
Single or divorced	13.9	10	44	55.7	39	49.4	7.2	5.3
Married or living with partner	10.8	8.8	12	48.0	12	48.0	6.3	5.8
Living Situation								
House or apartment	11.0	9.0	32	52.5	26	42.6	5.7	5.5
Homeless or temporary housing	16.2**	10.1	24	55.8	25	58.1	8.7**	4.9
Education								
Primary or less	13.8	10.6	21	52.5	22	55.0	6.9	5.3
Middle	13.7	8.2	14	63.6	13	59.1	8.2	5.3
High school graduate or GED	13.3	8.9	11	47.8	10	43.5	6.7	5.8
Some college or more	10.8	10.9	10	52.6	6	31.6	6.1	5.4
Weekly Salary								
$200 or less	12.1	11.3	13*	40.6	13	40.6	6.8	5.7
$200-$300	16.5	9.5	24	66.7	23	63.9	8.8**	5.3
$300-$400	10.6	8.4	7	41.2	8	47.1	6.1	4.2
$400 or more	10.8	7.2	12	63.2	7	36.8	4.6	5.2
Country of Origin								
Mexico	12.8	9.5	34	49.3	34	49.3	7.1	5.3
Other	14.1	9.9	22	64.7	17	50.0	7.0	5.6
Years Living in the US								
0-5	10.8	9.3	7	41.2	4	23.5	5.7	6.3
6-10	13.1	8.9	13	59.1	12	54.6	6.3	5.4

	Total AUDIT		Unhealthy Alcohol Use		Heavy Episodic Drinking		Alcohol-related Problems	
	Mean	SD	N	%	N	%	Mean	SD
11-20	13.5	8.4	17	60.7	14	50.0	8.0	5.4
21+	14.1	11.7	17	48.6	20	57.1	7.4	4.9
Language								
Only Spanish	13.3	10.6	19	57.6	15	45.5	7.9	5.4
Spanish and English	13.1	9.4	37	52.1	36	50.7	6.6	5.4
Depression (PHQ-9)								
Mild/moderate depression	11.7	8.8	31	50.0	26	41.9	6.1	5.4
Moderately severe/severe depression	16.8**	10.3	25	65.8	25	65.8	8.9**	4.8
Anxiety (GAD-7)								
Minimal/mild anxiety	12.3	9.1	41	54.0	35	46.1	6.1	5.3
Moderate/severe anxiety	15.5	11.2	15	53.6	16	57.1	9.5**	5.1

*
p < .10

**
p < .05

Note.

Percentages equal percentage meeting alcohol-related criteria within row category.