Journal of Racial and Ethnic Health Disparities (2022) 9:1003–1011
https://doi.org/10.1007/s40615-021-01039-y

Help-Seeking Patterns and Barriers to Care Among Latino Immigrant Men with Unhealthy Alcohol Use

Cathea M. Carey[1] · Emily C. Williams[1,2] · Vanessa N. Torres[3,4] · India J. Ornelas[1]

Received: 7 January 2021 / Revised: 31 March 2021 / Accepted: 1 April 2021 / Published online: 8 April 2021
© W. Montague Cobb-NMA Health Institute 2021

Abstract

Latino immigrant men have high rates of unhealthy alcohol use, a wide range of behaviors, from drinking above the recommended limits to severe alcohol use disorder, yet have low levels of treatment-seeking. Little is known about their preferred sources of care and barriers to care. Using survey data from a community-based sample of Latino immigrant men (*N*=121) with unhealthy alcohol use (AUDIT≥6), we described help-seeking patterns and perceived barriers to care. The mean AUDIT score was 20 (SD 10; range 6–40), and 49% of men had severe levels of unhealthy alcohol use (AUDIT score ≥ 20). We observed low help-seeking rates and high levels of perceived internal and external barriers. Thirty percent reported having sought help for drinking. Most men reported wanting to solve their drinking problem on their own (65%). Our findings were consistent with previous research. Future studies should further describe barriers to treatment among low-income Latino immigrant men with unhealthy alcohol use and identify ways to increase access to low-cost, high-quality treatment options.

Keywords Latino immigrant men · Unhealthy alcohol use · Help-seeking · Perceived barriers to care

Introduction

A growing body of literature has focused on unhealthy alcohol use and treatment needs of immigrant men who identify as Latino. Latino immigrant men are at increased risk for unhealthy alcohol use, including the spectrum ranging from risky use (average use exceeding 14 drinks per week or heavy episodic drinking) to meeting diagnostic criteria for alcohol use disorders [1–3]. Latino immigrants face many economic and social stressors related to immigration, and Latino immigrant men may cope with these stressors through unhealthy alcohol use [2, 4–6]. Heavy episodic drinking, often defined as exceeding 5 drinks per day, is common but often unrecognized by Latino immigrant men as harmful [2]. Among low-income Latino immigrant men with high levels of alcohol use, there is also a high risk for alcohol use disorder [7]. Unhealthy alcohol use also increases with time in the USA for Latino immigrants [4].

Several evidence-based treatment options for unhealthy alcohol use exist. For those at low to moderate risk, brief interventions in primary care settings can effectively reduce unhealthy alcohol use [8–10]. For those with more severe alcohol use, behavioral interventions, generally delivered in specialty addictions treatment settings, and medication are both effective and recommended [11]. Self-help options (such as Alcoholics Anonymous) are also available and appear to improve outcomes among those who engage [12, 13].

Despite these options, rates of help-seeking and treatment receipt among men, Latino men, and Latino immigrant men remain low [14]. Findings from the National Epidemiological Survey of Alcohol and Related Consequences (NESARC) suggest that Latino immigrants with unhealthy alcohol use or alcohol use disorder report low treatment rates [15].

✉ India J. Ornelas
iornelas@uw.edu

Cathea M. Carey
cmc37@uw.edu

Emily C. Williams
Emily.Williams3@va.gov

Vanessa N. Torres
torresvn@g.ucla.edu

1 Department of Health Services, School of Public Health, University of Washington, Seattle, WA, USA

2 Health Services Research and Development (HSR&D) Seattle-Denver Center of Innovation (COIN), U.S. Department of Veteran Affairs (V.A.), Seattle, WA, USA

3 Department of Health Policy and Management, University of California, Los Angeles, CA, USA

4 Department of Behavioral and Policy Sciences, RAND Corporation, Santa Monica, CA, USA

According to one study, only 16% of Latino immigrants with an alcohol use disorder received treatment compared to 14% of whites [16, 17]. Some studies suggest that Latinos are more likely to seek help through peer-support or detox programs than other racial/ethnic groups [18, 19]. Also, Latino immigrant men are less likely to seek behavioral treatments offered in specialty addiction settings, such as rehabilitation or in/outpatient programs), than Whites or Blacks in part because they perceive them to be less effective [19].

One of the most significant barriers to care for Latino immigrants is lack of access [20, 21]. Due to low socioeconomic status and immigration status, Latinos are much less likely to have health insurance. Latino immigrants frequently report barriers to seeking treatment such as cost, not having time, inability to identify services, and childcare issues, than other racial/ethnic groups [21–25].

More recent qualitative studies have identified additional barriers to treatment such as cultural barriers (e.g., services not available in the preferred language, providers unfamiliar with Latino culture), low perceived treatment efficacy, stigma about seeking services, and lack of social support [19, 26]. For some Latino immigrant men, their immigration status also serves as a barrier to treatment [19, 26]. Undocumented immigrants are unable to access health insurance or fear deportation if they seek services [20]. Very few studies have explored help-seeking patterns and barriers to care among Latino immigrant men. Our study sought to build on existing literature in this area by describing patterns of help-seeking and barriers to care in a sample of Latino immigrant men with unhealthy alcohol use. Because the need for treatment varies by severity of alcohol use, we also sought to describe help-seeking and barriers to care across levels of severity.

Methods

Study Population

The present study represents a secondary analysis of data collected for the Vida PURA study a pilot randomized control trial testing the efficacy and feasibility of a culturally adapted brief intervention for Latino immigrant men with unhealthy alcohol use [7]. The Vida PURA study included Latino immigrant men recruited from a community organization providing employment and education opportunities to Latino immigrants in King County, Washington State. To participate in the study, men had to identify as Latino, speak Spanish, be born outside of the USA, have a score of six or higher from the Alcohol Use Disorders Identification Test (AUDIT), and consent to participate. This study used baseline data collected prior to randomization from all participants recruited for the Vida PURA present study.

Data Collection

Baseline data collection occurred between July 2015 and October 2016. Surveys were administered in-person by a trained community health worker in Spanish in a community organization's private location. The survey included questions on demographics, discrimination, social support, acculturation stress, alcohol use, help-seeking, barriers to care, and alcohol-related consequences. Previous studies have also described participants' mental health and social support [27]. Surveys took an average of 40 min to complete, and participants received $30 for their time. The University of Washington's Institutional Review Board approved all study activities.

Measures

Demographic Characteristics

Participant demographic measures included age, country of origin, length of time in the USA (in years), education (primary or less, high school diploma or GED, secondary school), weekly income (in USD 100 increments ranging from 200 to 400 or more), living situation (house/apartment, homeless/temporary housing, and staying with a friend/family), and marital status (single, married or living with a partner, and divorced or widowed).

Severity of Unhealthy Alcohol Use, Help-Seeking Patterns, and Perceived Barriers to Care

Severity of Unhealthy Alcohol Use The severity of unhealthy alcohol use was measured using the Alcohol Use Disorder Identification Test (AUDIT), a validated, self-report 10-item measure with total scores ranging from 0 to 40. For this study, participants were screened and enrolled in the study only if they had an AUDIT score of 6 or more to include a broader range of unhealthy alcohol use [28]. While this cutoff is slightly lower than levels recommended for treatment, we wanted to include all men that might benefit from screening or treatment. Higher AUDIT scores indicate an increased risk for unhealthy alcohol use [29, 30]. We categorized participants into two groups: those with scores of 6-19 indicating less severe risk and scores of 20-40 indicating more severe risk [30].

Help-Seeking Patterns To understand help-seeking patterns, we adapted a measure used in previous national epidemiological studies to assess help-seeking for health services among American Indian and Alaskan Native populations [31–33]. The instrument includes 12 items assessing three domains: (1) help-seeking, (2) preferred sources of help, and (3) types of treatment sought. We assessed help-seeking using a single yes/no question, "Have you ever sought help for your drinking?" Of those who endorsed ever seeking help, we also asked

Table 1 Characteristics of recruited Latino immigrant men with unhealthy alcohol use by severity level (*N*=121)

Participant characteristics	Less severe[a] (*n*=61)		More severe[a] (*n*=60		Total (*N*=121)	
	Mean/*N*	SD/%	Mean/*N*	SD/%	Mean/*N*	SD/%
Age (mean, SD)	48.0	11.69	47.6	11.6	47.8	11.6
Marital status						
Single	26	42.6	40	66.6	66	54.6
Married or living with partner	23	37.7	11	18.4	34	28.1
Divorced or widowed	12	19.7	9	15.0	21	17.4
Living situation						
House/apartment	41	67.2	28	46.7	69	57.0
Homeless/temporary housing	11	18.0	22	36.7	33	27.3
Staying with friends/family	9	14.8	10	16.6	19	15.7
Education						
Primary or less	29	47.5	38	63.3	67	55.4
High school diploma or more	32	52.5	22	36.7	54	44.6
Country of origin						
Mexico	37	60.7	42	70.0	79	65.3
Other	24	39.3	18	30.0	42	34.7
Weekly income[b]						
$200 or less	14	22.9	22	36.6	36	30.8
$200–$300	15	24.5	15	25.0	30	25.6
$300–$400	12	19.7	14	23.3	26	22.2
$400 or more	18	29.5	7	11.6	25	21.4
Years living in the USA (mean, SD)	18.2	11.3	22.15	11.2	20.1	11.4
Alcohol-related characteristics						
Total AUDIT score (mean, SD)	11.8	4.4	28.3	5.7	20.0	9.7

[a] Audit score ranging between 6 and 19 is less severe, and a score ranging from 20 to 40 is more severe

[b] Weekly income characteristics totals are less than columns total due to missing responses; less severe (*n*=59) and more severe (*n*=58)

whether they had sought help in the past 12 months. This measure consisted of a single yes/no question "If yes [to Help-Seeking History], was it in the last year?" We assessed preferred sources of help with a single item—"Where would you go if you felt you needed help with your alcohol use?"—with response options: family, doctor, church/pastor, friend, agency, and no one. We assessed types of treatment sought among those reporting any help-seeking by offering a list of types of treatment and response options, including health provider/counselor, other community agency, and Alcoholics Anonymous (A.A.) [32, 34]. Participants could select all responses that applied, and responses were grouped into three (3) categories: health provider/counselor, alcoholics anonymous, or other.

Perceived Barriers to Care To understand perceived barriers to care, we adapted the barriers to care measure of the American Indian Services Utilization, Psychiatric Epidemiology, Risk, and Protective Factors Projects (AI-SUPERPFP) health services survey [31–33]. This measure includes 20 items; participants could select all for the first six items and check yes to as many as were relevant for the last 14 items. We categorized responses into two domains: (1) barriers to care and (2) problems when seeking services. We assessed barriers to care with the question, "What reasons would keep you from seeking help for alcohol abuse?" followed by five response options: do not know whom to call; do not think the problem is bad enough; cost; do not believe treatment works; and, other. Perceived problems when seeking services were assessed by asking participants to "indicate if you (or someone you know) have had the following problems when seeking services for alcohol abuse or other physical, mental, or behavioral health concerns in the past 12 months." We grouped the 14-item responses into categories relating to the healthcare system ("Quality of Care"), stigma ("Wanted to solve the problem on your own, thinking the problem was not serious enough, and being concerned about what others might think"), access/availability ("Interfered with home, work, or school"), and perceived efficacy ("Previous treatment did not help"). Perceived efficacy of treatment was asked of all participants regardless of whether they had previously sought treatment, because the question asks about "you (or someone you know)."

Analysis

We calculated descriptive statistics on all study measures in the overall sample. We then described demographic characteristics, help-seeking patterns, perceived barriers to care across alcohol severity levels, and perceived barriers to care across help-seeking patterns. We conducted all analyses in Stata S.E. Edition v14 [35].

Results

Table 1 presents the participants' demographic characteristics (*N*=121), both overall and by the severity of unhealthy alcohol use. The sample's average age was 48 years, and the average length of time in the USA was 20 years. Income and education levels were low overall, and many were in unstable housing. The mean AUDIT score was 20 (SD = 10), with just over half having AUDIT scores indicating less severe unhealthy alcohol use (51%; *n*= 61), and just under half (49%; *n*=60) indicating more severe unhealthy alcohol use. Among men with more severe unhealthy alcohol use, many were single, had low levels of education and income, and were homeless or living in temporary housing use (Table 1).

Table 2 shows patterns of help-seeking and preferred sources of help. Overall, 30% (*n*=36) of participants reported ever seeking help for drinking, and 19% (*n*=23) reported seeking help within the past year. Among those reporting help-seeking, Alcoholics Anonymous (59%) was the most common type of help sought. With regard to preferred sources of help, 32% of men (*N*=121) preferred an agency, 27% preferred family, and 25% preferred their church or pastor. Men with more severe unhealthy alcohol use most often sought help from Alcoholics Anonymous (63%), followed by health providers or counselors (44%). Men with more severe unhealthy alcohol use preferred seeking help from an agency (37%) or a doctor (30%). In contrast, men with less severe unhealthy alcohol use preferred help from family (31%) or an agency (28%).

Table 3 shows the barriers to care and problems when seeking services for all participants stratified by prior help-seeking. The most commonly reported problem when seeking services for all men (*N*=121) was that they wanted to solve the problem on their own (65%), followed by feeling the problem was not serious enough to warrant help (55%). Among those who had sought help for drinking (*n*=36), 51% thought treatment would not help, compared to 17% among those that had not sought help for their drinking (*n*=85).

Table 4 describes barriers to care and problems when seeking services by the severity of alcohol use. Men with more severe alcohol use reported more barriers to care than men with less severe unhealthy alcohol use. Men with more severe alcohol use (*n*=60) reported problems when seeking services, such as cost (55%), quality of care (50%), and interference with home, work, or school (52%), compared to men with less

Table 2 Help-seeking and preferred sources of help by alcohol use severity level (*N* = 121)

	Less severe[a] (*n*=61)		More severe[a] (*n*=60)		Total (*N*=121)	
	N	%	*N*	%	*N*	%
Help-seeking patterns						
Has sought help for drinking	9	14.8	27	45.0	36	63.8
Sought help for drinking within the past year[b]	3	33.3	20	74.0	23	19.0
Types of treatment sought[b c]						
Alcoholics Anonymous	5	59.2	17	62.9	22	61.1
Health provider/counselor	2	22.2	12	44.4	14	38.8
Other[d]	6	66.6	5	18.5	11	30.5
Preferred sources of help						
Agency	17	27.9	22	36.7	39	32.2
Family	19	31.1	14	23.3	33	27.3
Church/pastor	16	26.2	14	23.3	30	24.8
Doctor	11	18.0	18	30.0	29	24.0
Friend	11	18.0	10	16.7	21	17.4
No one	11	18.0	9	15.0	20	16.5

[a] Audit score ranging between 6 and 19 is less severe, and a score ranging from 20 to 40 is more severe

[b] Help-seeking within past year and type of treatment sought was assessed only for those who reported ever seeking help (*n*=36)

[c] Participants selected all; response may sum greater than 100%

[d] Other type of treatment include community agencies, anexos, in-/outpatient treatment, or friends/family

Table 3 Barriers to care and problems seeking services by help-seeking patterns of recruited Latino immigrant men with unhealthy alcohol use (N=121)

	Sought help for drinking		Total (N=121)	
	No (n=85)	Yes (n=36)		
	%	%	N	%
Barriers to care				
Do not believe treatment works	18.8	38.9	30	24.8
Do not think the problem is bad enough	35.3	36.1	43	35.5
Do not want others to find out	14.1	33.3	24	19.8
Do not know whom to call	23.5	30.6	31	25.6
Cost	12.9	27.8	21	17.4
Other	20.0	16.7	23	19.0
Problems when seeking services				
Healthcare system				
Cost	41.2	57.1	55	45.5
Quality of care	31.0	51.4	44	36.4
Lack of privacy	32.1	50.0	45	37.2
Lack of trust in staff	29.8	44.4	41	33.9
Problems communicating with staff	24.7	45.7	37	30.6
Concerns about racial prejudice or discrimination	35.7	48.6	47	38.8
Stigma				
Wanted to solve the problem on your own	60.0	77.8	79	65.3
Problem was not serious enough	51.8	65.7	67	55.4
Concerned about what others might think	35.7	52.8	49	40.5
Access/availability				
Interfered with home, work, or school	41.2	48.6	52	43.0
Did not have transportation to get care	27.1	35.3	35	28.9
Kind of care you needed was not available	23.8	37.1	33	27.3
Perceived efficacy				
Previous treatment did not help	32.9	54.3	32	26.4
Thought treatment would not help	16.5	51.4	47	38.8

severe alcohol use. In addition, men with more severe unhealthy alcohol use reported that treatment would not help.

Discussion

Our study describes the help-seeking patterns and perceived barriers to care among Latino immigrant men with unhealthy alcohol use and compares these patterns across unhealthy alcohol use severity levels. Over half the participants in our sample reported drinking at very severe unhealthy levels, yet few sought treatment for their alcohol use. Most cited multiple barriers to care indicative of stigma related to treatment seeking, including low perceived need for treatment and low perceived efficacy of treatment.

Levels of unhealthy alcohol use identified in our sample indicated that most participants would benefit from some kind of alcohol treatment or intervention. However, rates of treatment-seeking were low even among men with the most severe alcohol use. Alcoholics Anonymous (A.A.) was the most common source of treatment received. A.A. can be effective for those who attend, especially among those with less severe unhealthy alcohol use [30]. A.A. meetings are often available in Spanish, held on evenings and weekends, and free or low cost (and thus may be more accessible to Latino immigrant men). Treatment options with stronger evidence of efficacy, such as behavioral treatment or FDA-approved medications, were less commonly sought. Preferred sources of help for future treatment-seeking included more formal sources (agency, doctor) and informal sources (family, church), which may also reflect barriers such as access and stigma. Overall, our findings suggest that this population could benefit from better linkages to effective, evidence-based alcohol treatment.

Regardless of prior help-seeking, the most common perceived problems when seeking services were stigma-related. For example, despite high levels of severe alcohol use, many men felt a low perceived need for treatment. Many reported that they preferred to solve their drinking problems

Table 4 Barriers to care and problems seeking services of recruited Latino immigrant men with unhealthy alcohol use by severity level (*N*=121)

	Less severe[a] (*n*=61)		More severe[a] (*n*=60)		Total (*N*=121)	
	N	%	*N*	%	*N*	%
Barriers to care						
Do not believe treatment works	11	18.0	19	31.7	30	24.8
Do not think the problem is bad enough	26	42.6	17	28.3	43	35.5
Do not want others to find out	13	21.3	11	18.3	24	19.8
Do not know whom to call	14	23.0	17	28.3	31	25.6
Cost	8	13.1	13	21.7	21	17.4
Other	12	19.7	11	18.3	23	19.0
Problems when seeking services						
Healthcare system						
Cost	22	36.1	33	55.0	55	45.5
Quality of care	14	23.0	30	50.0	44	36.4
Lack of privacy	17	27.9	28	46.7	45	37.2
Lack of trust in staff	20	32.8	21	35.0	41	33.9
Problems communicating with staff	13	21.3	24	40.0	37	30.6
Concerns about racial prejudice or discrimination	18	29.5	29	48.3	47	38.8
Stigma						
Wanted to solve the problem on your own	40	65.6	39	65.0	79	65.3
Problem was not serious enough	27	44.3	40	66.7	67	55.4
Concerned about what others might think	20	32.8	29	48.3	49	40.5
Access/availability						
Interfered with home, work, or school	21	34.4	31	51.7	52	43.0
Did not have transportation to get care	15	24.6	20	33.3	35	28.9
Kind of care you needed was not available	13	21.3	20	33.3	33	27.3
Perceived efficacy						
Previous treatment did not help	9	14.8	23	38.3	32	26.4
Thought treatment would not help	18	29.5	29	48.3	47	38.8

[a] Audit score ranging between 6 and 19 is less severe, and a score ranging from 20 to 40 is more severe

independently, did not think their problem was serious enough, or had concerns about what others would think if they sought treatment. Consistent with multiple studies in other populations [15, 36], these findings suggest that Latino immigrant men may have stigma about seeking help for their drinking. Other studies among Latino immigrant men have found that it can be difficult for them to accept that they need help and that not being able to handle their drinking is a sign of weakness [37]. A recent qualitative study of barriers to treatment among Latinos found a low perceived need for treatment, especially among those with family and work obligations [19]. In addition, many in the study were embarrassed to seek treatment or saw it as a sign of failure.

In our study, another barrier was the low perceived efficacy of treatment. Previous studies among Latinos with alcohol use disorder have identified similar barriers to treatment, including the fact that providers are unfamiliar with Latino culture and may not relate to their unique experiences [19, 21, 25]. Several men (including those with severe unhealthy alcohol use) reported that their previous attempts at treatment had not worked. These attitudes may reflect that men sought help from informal sources, such as A.A., family, and church. Latino immigrant men may benefit from knowing more about different types of evidence-based alcohol treatment services to enhance their treatment options' perceived efficacy. While sources such as family and church may provide needed social support, they may not be enough to sustain long-term changes in alcohol use.

Other commonly cited barriers reflect a lack of access to effective treatment. For example, participants noted cost, lack of transportation, and treatment availability as common barriers, particularly among those who had previously sought help for their drinking. Many also noted concerns about communication with staff or experiencing racial discrimination when seeking services. Previous studies have shown that Latino immigrant men are receptive to community-based programs to reduce alcohol use, especially when offered in Spanish with trusted providers [7, 38, 39]. Interventions in

community organizations that serve Latino immigrants may be particularly useful in addressing the structural barriers that prevent Latino immigrant men from receiving treatment in healthcare settings [20, 26]. Also, community-based programs can work to destigmatize unhealthy alcohol use and treatment-seeking in this population. Research also suggests that culturally adapting evidence-based interventions for men with more severe unhealthy alcohol use can help address stigma and structural barriers to care [40].

Further research in larger populations is needed to inform intervention development to increase access to needed treatments among Latino immigrant men who report multiple barriers. Our results are consistent with previous research indicating unmet needs for treatment and treatment barriers among Latino immigrants [6, 41]. However, given that we identified both internal and external barriers to care, there may be a need for multilevel interventions that address both individual barriers (such as stigma and perceived efficacy) and more system level barriers (such as cost and provider competency). Our findings suggest that interventions may need to vary by severity level, including providing greater access to evidenced-based treatment among those with more severe unhealthy alcohol use.

Limitations

There are some limitations to our study. First, this is a small sample of men recruited from a community-based organization that serves Latino immigrants, who may have had more access to services than Latino immigrant men not already connected to community resources. Our measures were all self-reported and therefore subject to recall bias or underreporting of unhealthy alcohol use severity due to social desirability. Nevertheless, because these samples can often be hard to recruit into research studies, our paper makes a significant contribution. The majority of the men recruited in our sample were from Mexico; therefore, we were unable to assess differences in severity or treatment seeking by country of origin. Future studies should include larger samples of Latino immigrant men with unhealthy alcohol use in different social contexts to examine differences in help-seeking patterns and barriers to care, by country of origin and history of alcohol use.

Implications

Our findings examined the help-seeking patterns and barriers to care for Latino immigrant men with unhealthy alcohol use. We found high rates of unhealthy alcohol use and low rates of help-seeking patterns in this recruited sample. The majority of men in our sample reported barriers consistent with stigma and other structural barriers (e.g., treatment conflicting with prior work family commitments), which may be limiting their help-seeking for unhealthy alcohol use. Further research is needed to understand the societal and individual factors associated with help-seeking patterns and perceived barriers to care for Latino immigrant men with unhealthy alcohol use and to address barriers via culturally appropriate interventions.

Author's Contribution India Ornelas, Ph.D., MPH, and Cathea M. Carey, MPH, conceived the study. Cathea M. Carey, MPH, designed and performed the analysis and wrote the paper. Vanessa Torres, Ph.D., MPH, contributed to the literature review and contributed to data tools. Emily C. Williams, Ph.D., MPH, and India J. Ornelas, Ph.D., MPH, contributed to implications and interpretation of findings.

Funding This work was supported by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) under Grants 1R34AA022696-01A1 and 3R34AA022696-02S1; computation support was provided by the National Center of Translational Science of the National Institute of Health (KL2TR000421) and Shanahan Endowment Fellowship and a Eunice Kennedy Shriver National Institute of Child Health and Human Development training Grant (T32 HD007543).

Availability of Data and Material N/A

Code Availability N/A

Declarations

Ethics Approval University of Washington Institutional Review Board approved

Consent to Participate N/A

Consent for Publication N/A

Competing Interests The authors declare no competing interests.

Disclaimer The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

References

1. Grzywacz JG, Quandt SA, Isom S, Arcury TA. Alcohol use among immigrant Latino farmworkers in North Carolina. Am J Ind Med. 2007;50:617–25. https://doi.org/10.1002/ajim.20482.
2. Ornelas IJ, Torres VN, Serrano SE. Patterns of unhealthy alcohol use among Latino day laborers. Health Behav Policy Rev. 2016;3(4):361–70. https://doi.org/10.14485/HBPR.3.4.7.
3. Saitz R. Unhealthy Alcohol Use. N Engl J Med. 2005;352(6):596–607. https://doi.org/10.1056/NEJMcp042262.
4. Cano MÁ, Sánchez M, Trepka MJ, Dillon FR, Sheehan DM, Rojas P, et al. Immigration stress and alcohol use severity among recently immigrated Hispanic adults: examining moderating effects of gender, immigration status, and social support. J Clin Psychol. 2017;73(3):294–307. https://doi.org/10.1002/jclp.22330.
5. Worby PA, Organista KC, Kral AH, Quesada J, Arreola S, Khoury S. Structural vulnerability and problem drinking among Latino migrant day laborers in the San Francisco Bay area. J Health Care Poor

Underserved. 2014;25(3):1291–307. https://doi.org/10.1353/hpu.2014.0121.
6. Finch BK, Catalano RC, Novaco RW, Vega WA. Employment frustration and alcohol abuse/dependence among labor migrants in California. J Immigr Health. 2003;5(4):181–6. https://doi.org/10.1023/A:1026119226083.
7. Ornelas IJ, Doyle S, Torres V, Serrano S, Durran B, Donovan D. Vida PURA: results from a pilot randomized trial of a culturally adapted screening and brief intervention to reduce unhealthy alcohol use I. Transl Behav Med. 2019;9:1233–43.
8. Jonas DE, Garbutt JC, Amick HR, Brown JM, Brownley KA, Council CL, et al. Behavioral counseling after screening for alcohol misuse in primary care: s systematic review and meta-analysis for the U.S. preventive services task force. Ann Intern Med. 2012;157(9):645–54. https://doi.org/10.7326/0003-4819-157-9-201211060-00544.
9. Kaner EFS, Dickinson HO, Beyer FR, Campbell F, Schlesinger C, Heather N, et al. Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database Syst Rev. 2007;2:CD004148. https://doi.org/10.1002/14651858.CD004148.pub3.
10. Whitlock EP, Green CA, Polen MR, Orleans T, Klein J, U.S. Preventive Services Task Force. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med. 2004;140(7):557–568. https://doi.org/10.7326/0003-4819-140-7-200404060-00017.
11. Warren KR, Hewitt BG. NIAAA: advancing alcohol research for 40 years. Alcohol Res Health. 2010;33(1-2):5–17 http://www.ncbi.nlm.nih.gov/pubmed/23579932. Accessed February 18, 2020.
12. Cunningham JA, Koski-Jännes A, Wild TC, Cordingley J. Treating alcohol problems with self-help materials: a population study. J Stud Alcohol. 2002;63(6):649–54. https://doi.org/10.15288/jsa.2002.63.649.
13. Sullivan LE, Tetrault JM, Braithwaite RS, Turner BJ, Fiellin DA. A Meta-analysis of the efficacy of nonphysician brief interventions for unhealthy alcohol use: implications for the patient-centered medical home. Am J Addict. 2011;20(4):343–56. https://doi.org/10.1111/j.1521-0391.2011.00143.x.
14. Field CA, Cochran G, Caetano R. Treatment utilization and unmet treatment need among Hispanics following brief intervention. Alcohol Clin Exp Res. 2013;37(2):300–7. https://doi.org/10.1111/j.1530-0277.2012.01878.x.
15. Szaflarski M, Klepinger DH, Cubbins LA. Alcohol use/abuse and help-seeking among U.S. adults: the role of racial-ethnic origin and foreign-born status. J Ethn Subst Abus. 2017;18:1–28. https://doi.org/10.1080/15332640.2017.1333476.
16. Cohen E, Feinn R, Arias A, Kranzler HR. Alcohol treatment utilization: findings from the National Epidemiologic Survey on Alcohol and Related Conditions. Drug Alcohol Depend. 2007;86:214–21. https://doi.org/10.1016/J.DRUGALCDEP.2006.06.008.
17. Grant BF, Stinson FS, Hasin DS, Dawson DA, Chou SP, Anderson K. Immigration and lifetime prevalence of DSM-IV PsychiatricDisorders Among Mexican Americans and Non-Hispanic Whites in the United States. Arch Gen Psychiatry. 2004;61(12):1226–33. https://doi.org/10.1001/archpsyc.61.12.1226.
18. Pagano A, García V, Recarte C, Lee JP. Sociopolitical contexts for addiction recovery: Anexos in U.S. Latino communities. Int J Drug Policy. 2016;37:52–9. https://doi.org/10.1016/j.drugpo.2016.08.002.
19. Pinedo M, Zemore S, Rogers S. Understanding barriers to specialty substance abuse treatment among Latinos. J Subst Abus Treat. 2018;94:1–8. https://doi.org/10.1016/j.jsat.2018.08.004.
20. Alcalá HE, Chen J, Langellier BA, Roby DH, Ortega AN. Impact of the affordable care act on health care access and utilization among Latinos. J Am Board Fam Med. 2017;30(1):52–62. https://doi.org/10.3122/jabfm.2017.01.160208.
21. Saloner B, Cook BL. Blacks and hispanics are less likely than whites to complete addiction treatment, largely due to socioeconomic factors. Health Aff. 2013;32(1):135–45. https://doi.org/10.1377/hlthaff.2011.0983.
22. Perron BE, Mowbray OP, Glass JE, Delva J, Vaughn MG, Howard MO. Differences in service utilization and barriers among Blacks, Hispanics, and Whites with drug use disorders. Subst Abuse Treat Prev Policy. 2009;4(1):3. https://doi.org/10.1186/1747-597X-4-3.
23. Schmidt LA, Ye Y, Greenfield TK, Bond J. Ethnic disparities in clinical severity and services for alcohol problems: results from the National Alcohol Survey. Alcohol Clin Exp Res. 2007;31(1):48–56. https://doi.org/10.1111/j.1530-0277.2006.00263.x.
24. Verissimo ADO, Grella CE. Influence of gender and race/ethnicity on perceived barriers to help-seeking for alcohol or drug problems. J Subst Abus Treat. 2017;75:54–61. https://doi.org/10.1016/j.jsat.2016.12.013.
25. Zemore SE, Mulia N, Yu Ye Y, Borges G, Greenfield TK. Gender, acculturation, and other barriers to alcohol treatment utilization among Latinos in three National Alcohol Surveys. J Subst Abus Treat. 2009;36(4):446–56. https://doi.org/10.1016/j.jsat.2008.09.005.
26. Pagano A. Barriers to drug abuse treatment for Latino Migrants: treatment providers' perspectives. J Ethn Subst Abus. 2014;13(3):273–87. https://doi.org/10.1080/15332640.2014.886320.
27. Hill CM, Williams EC, Ornelas IJ. Help wanted: mental health and social stressors among Latino day laborers. Am J Mens Health. 2019;13(2). https://doi.org/10.1177/1557988319838424.
28. Babor TF, Higgins-Biddle JC,Saunders JB, Monteiro MG. AUDIT: The alcohol use disorders identification test guidelines for use in primary care. 2nd ed. Geneva: World Health Organization; 2001.
29. Babor TF, Robaina K. The Alcohol Use Disorders Identification Test (AUDIT): a review of graded severity algorithms and national adaptations. Int J Alcohol Drug Res. 2016;5(2):17–24. https://doi.org/10.7895/ijadr.v5i2.222.
30. Donovan DM, Kivlahan DR, Doyle SR, Longabaugh R, Greenfield SF. Concurrent validity of the Alcohol Use Disorders Identification Test (AUDIT) and AUDIT zones in defining levels of severity among out-patients with alcohol dependence in the COMBINE study. Addiction. 2006;101(12):1696–704. https://doi.org/10.1111/j.1360-0443.2006.01606.x.
31. Beals J, Novins DK, Whitesell NR, Spicer P, Mitchell CM, Manson SM, et al. Prevalence of mental disorders and utilization of mental health services in two American Indian reservation populations: mental health disparities in a national context. Am J Psychiatry. 2005;162(9):1723–32. https://doi.org/10.1176/appi.ajp.162.9.1723.
32. Duran BM, Magarati M, Parker M,Egashira L, Kipp BJ. Working Together: Wellness and Academic Achievement at Tribal Colleges and Universities. In: Tribal College. Journal of American Indian Higher Education. 2013. https://tribalcollegejournal.org/working-together-wellness-academic-achievement-tribal-colleges-universities/. Accessed 24 Apr 2019.
33. Novins DK, Beals J, Croy C, Manson SM, AI-SUPERPFP Team. Methods for measuring utilization of mental health services in two epidemiologic studies. Int J Methods Psychiatr Res. 2008;17(3):159–73. https://doi.org/10.1002/mpr.255.
34. Beals J, Novins DK, Spicer P, Whitesell NR, Mitchell CM, Manson SM. Help seeking for substance use problems in two American Indian reservation populations. Psychiatr Serv. 2006;57(4):512–20. https://doi.org/10.1176/ps.2006.57.4.512.
35. StataCorp. Stata Statistical Software: Release 14. 2015.
36. Glass JE, Williams EC, Bucholz KK. Psychiatric comorbidity and perceived alcohol stigma in a nationally representative sample of

individuals with DSM-5 alcohol use disorder. Alcohol Clin Exp Res. 2014;38(6):1697–705. https://doi.org/10.1111/acer.12422.

37. Organista KC, Arreola SG, Neilands TB. Depression and risk for problem drinking in Latino migrant day laborers. Subst Use Misuse. 2017;52(10):1320–7. https://doi.org/10.1080/10826084.2016.1276599.
38. Torres VN, Williams EC, Ceballos RM, Donovan DM, Ornelas IJ. Participant satisfaction and acceptability of a culturally adapted brief intervention to reduce unhealthy alcohol use among Latino immigrant men. Am J Mens Health. 2020;14(3). https://doi.org/10.1177/1557988320925652.
39. Torres, VN, Williams EC, Ceballos, R, Donovan, DM, Duran, BM, Ornelas I. Participant Engagement in a Community Based Participatory Research Study to Reduce Alcohol Use among Latino Immigrant Men. Health Educ Res. 2020;35(6):627–636. https://doi.org/10.1093/her/cyaa039.
40. Valdez LA, Garcia DO, Ruiz J, Oren E, Carvajal S. Exploring structural, sociocultural, and individual barriers to alcohol abuse treatment among Hispanic men. Am J Mens Health. 2018;12(6):1948–57. https://doi.org/10.1177/1557988318790882.
41. Reingle Gonzalez JM, Caetano R, Mills BA, Vaeth PAC. An assessment of individual-level factors associated with alcohol treatment utilization among Mexican Americans. J Subst Abus Treat. 2014;47(5):347–52. https://doi.org/10.1016/j.jsat.2014.06.011.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.