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Understanding barriers to specialty substance abuse treatment among Latinos



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ABSTRACT

Background: National studies have documented that Latinos are less likely to use specialty substance abuse treatment (e.g., rehabilitation programs, in/out-patient services) than other racial/ethnic groups. Disparities in treatment utilization are particularly pronounced between Latinos and Whites. Few national studies have explicitly examined barriers to treatment by race/ethnicity, and current results are inconclusive. The purpose of this study was to gain a better understanding of barriers to specialty substance abuse treatment among Latinos. Methods: In 2017–2018, in-depth qualitative interviews were conducted with 54 White, Black, and Latino participants who met eligibility criteria for a recent substance use disorder. Participants were recruited via online ads and screened for eligibility through an online survey. Interview questions were grounded in the Theory of Planned Behavior (TBP): Participants were asked about treatment-related barriers in the domains of attitudes, subjective norms, and perceived control. Interviews were transcribed verbatim and coded by two independent coders. Barriers were compared across all interviews and by race/ethnicity.

Results: Latinos were significantly more likely to report attitudinal and subjective norm barriers than their White and Black counterparts. Within the attitudes domain, results suggested that Latinos largely avoided specialty treatment due to barriers stemming from cultural factors, perceived treatment efficacy, recovery goals, and perceived treatment need. In the area of subjective norms, stigma and perceived lack of social support from family were more pervasive among Latinos' narratives. Lastly, in terms of perceived control, a minority of Latinos reported logistical barriers to treatment.

Conclusion: Specialty substance abuse treatment services have been found to be effective regardless of race/ethnicity. Understanding why Latinos use specialty treatment at low rates is key to reducing existing racial/ethnic disparities related to substance abuse. This study identified several malleable barriers that interventions can target to increase Latinos' utilization of treatment. These barriers may also be key to explaining Latino-White disparities in treatment utilization.

1. Introduction

Despite their high need for treatment, Latinos seek help for a substance use problem at very low rates (Chartier & Caetano, 2010; Guerrero, Marsh, Khachikian, Amaro, & Vega, 2013; Mulia, Ye, Greenfield, & Zemore, 2009; Mulia & Zemore, 2012; Pinedo et al., 2014; Pinedo, Zemore, Cherpitel, & Caetano, 2017; Vaeth, Wang-Schweig, & Caetano, 2017; Witbrodt, Mulia, Zemore, & Kerr, 2014). Latinos especially underutilize specialty substance abuse treatment services (i.e., formal programs such as rehabilitation and in/out patient services): only 3–7% of Latinos with substance abuse disorder (SUD) report ever using specialty substance abuse treatment (Guerrero et al., 2013; Le

Cook & Alegría, 2011; Mulia, Tam, & Schmidt, 2014; Schmidt, Greenfield, & Mulia, 2006; Wells, Klap, Koike, & Sherbourne, 2001; Witbrodt et al., 2014; Zemore et al., 2014). Importantly, Latinos are also less likely to use specialty treatment than other racial/ethnic groups (Chartier & Caetano, 2011; Schmidt, Ye, Greenfield, & Bond, 2007; Witbrodt et al., 2014), and disparities in treatment utilization are especially pronounced between Latinos and Whites (Guerrero et al., 2013; Le Cook & Alegría, 2011; Lundgren, Amodeo, Ferguson, & Davis, 2001; Mulvaney-Day, DeAngelo, Chen, Cook, & Alegría, 2012; Wells et al., 2001). Whites with lifetime SUD are ~1.42 to 2.33 more likely than Latinos to have ever obtained help from a specialty substance abuse treatment program (Chartier & Caetano, 2011; Cummings, Wen,

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& Druss, 2011; Grella, 2009; Guerrero et al., 2013; Le Cook & Alegría, 2011; Lundgren et al., 2001; Mulvaney-Day et al., 2012; Schmidt et al., 2007; Wells et al., 2001; Witbrodt et al., 2014). Notably, Latino-White disparities in the use of specialty substance abuse treatment remain statistically significant after accounting for critical socio-demographic and contextual factors (e.g., substance use severity; experiencing adverse consequences; and poor mental health status) (Chartier & Caetano, 2011; Mulia et al., 2014; Schmidt et al., 2007; Witbrodt et al., 2014). Underutilization of specialty treatment among Latinos is troublesome given that specialty substance abuse treatment services have been shown to be effective regardless of race/ethnicity (Alegria, Carson, Goncalves, & Keefe, 2011; Alvarez, Jason, Olson, Ferrari, & Davis, 2007; Arroyo, Westerberg, & Tonigan, 1998; Guerrero, Marsh, Cao, Shin, & Andrews, 2014).

Why Latinos underutilize specialty substance abuse treatment is poorly understood. Researchers have hypothesized, and widely accepted, that Latinos face greater barriers to treatment than Whites, thereby explaining racial/ethnic differences (Alegría et al., 2006; Guerrero et al., 2013). However, there are only 3 national studies that have explicitly examined barriers to substance abuse treatment by race/ ethnicity, and results are inconclusive. In the first study, Schmidt et al. (2007) used 1995 and 2000 National Alcohol Survey (NAS) data and focused on barriers to alcohol treatment. This study found that among those who considered but did not seek help for an alcohol problem, Latinos were more likely to report logistical concerns (e.g., concerns about paying, finding services, and issues with childcare) as reasons for not obtaining alcohol treatment than Whites and Blacks. No racial/ ethnic differences were found regarding stigma (e.g., I was afraid people would find out) or cultural barriers (e.g., concerns that providers would not understand or speak one's native language), though it should be noted that these findings were based on bivariate analyses.

In the second study, Verissimo and Grella (2017) analyzed data from the 2001–2002 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) to examine treatment barriers among those with an alcohol or drug problem, separately. In multivariate analyses, they found that compared to Whites, Latinos and Blacks were both more likely to report logistical barriers (e.g., health insurance did not cover treatment, did not have time, and couldn't arrange childcare) as reasons for not obtaining help for an alcohol problem. However, logistical barriers to drug treatment were unrelated to race/ethnicity. Further, Latinos and Blacks were *less* likely than Whites to endorse attitudinal barriers (e.g., was too embarrassed, was afraid of what family would think) and low readiness for change (e.g., wanted to keep drinking) as reasons for not seeking help for an alcohol or drug problem (Verissimo & Grella, 2017).

In the last study, Perron et al. (2009) used 2001–2002 NESARC data to examine 27 potential drug treatment barriers among those with a lifetime DUD. This study found that Latinos were twice as likely as Whites to report logistical barriers to treatment, including not having health insurance to cover expenses, not having time, and not knowing where to go for help. However, these differences were based on bivariate analyses and not statistically significant (Perron et al., 2009). From these three studies, we can broadly speculate that logistical barriers may have a greater impact on Latinos than Whites, particularly in relation to alcohol treatment. However, overall it is difficult to determine which *specific* barriers are responsible for low utilization rates because most of these studies grouped barriers into broad categories and/or relied on bivariate analyses.

A handful of other studies have focused on examining differences in hypothesized substance abuse treatment barriers by race/ethnicity (instead of using a treatment barriers scale). This body of work is also inconclusive. For instance, studies investigating insurance status and stigma by race/ethnicity have found negative, positive, and null associations with substance abuse treatment utilization (Chartier, Miller, Harris, & Caetano, 2016; Schmidt et al., 2006; Schmidt & Weisner, 2005; Smith, Dawson, Goldstein, & Grant, 2010; Weisner & Matzger,

2002). Further, a broader literature including health services research (e.g., studies of primary care and mental health services) and qualitative and regional studies among Latinos suggest that other factors (e.g., culture, migration experiences) may strongly influence their help-seeking behaviors (Alegría et al., 2006; Alvarez et al., 2007; Amaro, Nieves, Johannes, & Labault Cabeza, 1999; Berk & Schur, 2001; Delgado, 2002; Hacker et al., 2011; Mendoza, 2009; Pagano, 2014; Pagano, García, Recarte, & Lee, 2016; Pinedo, Sim, Giacinto, & Zuñiga, 2016). However, it remains to be determined how these factors relate to specialty substance abuse treatment and if they differ by race/ethnicity. Overall, it is difficult to determine which specific barriers are driving Latino-White disparities given the current knowledge base, highlighting the need for continued research in this area.

We undertook the present qualitative study to collect more in-depth data to enhance our understanding of specific barriers to specialty substance abuse treatment that may explain Latino-White disparities. This study was informed by the Theory of Planned Behavior (TBP) (Ajzen, 1985). The TPB posits that intention is the closest antecedent of a given behavior, and intention to engage in that behavior (here, treatment seeking) is predicted or influenced by an individual's attitudes, subjective norms, and perceived control toward the behavior. The TPB has a strong history of empirical support in the field of public health in predicting and explaining diverse behaviors across multiple health domains, including alcohol and drug abuse (Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Armitage, Armitage, Conner, Loach, & Willetts, 1999; Armitage & Conner, 2001; Collins & Carey, 2007; Conner & Armitage, 1998; Godin & Kok, 1996; Hardeman et al., 2002; Kam, Matsunaga, Hecht, & Ndiaye, 2009; Mcmillan & Conner, 2003; Painter, Borba, Hynes, Mays, & Glanz, 2008; Wall, Hinson, & McKee, 1998). We used the TPB to explore in depth how barriers within these domains may contribute to Latino's decisions to not seek specialty treatment for a substance abuse problem.

2. Methods

2.1. Study design and participants

From 2017 to 2018, 54 participants were recruited for in-depth telephone qualitative interviews. Eligible participants were ≥18 years old; were of White, Black, or Latino racial/ethnic descent (the three largest racial/ethnic groups in the US); and met diagnostic criteria for a recent (i.e., past 5-year) SUD. Participants were recruited via Craigslist ads posted in the cities of: Riverside, Los Angeles, San Diego, and Oakland, CA; Brooklyn, NY; Chicago, IL; Miami, FL; and San Antonio, TX. We specifically targeted major cities with diverse representation of racial/ethnic groups. Ads included basic information regarding the purpose of the study, procedures, incentive information, and a link to our study website where potential participants could access our online screening survey.

The screener survey was programed via Qualtrics software in English and Spanish, was self-administered online, and took approximately 10 min to complete. Potential participants provided informed consent electronically before beginning the survey. The survey elicited data on socio-demographic characteristics, past 5-year alcohol and drug use histories, and lifetime and past 5-year substance abuse treatment utilization. Recent SUD was measured using 22 items that assessed DSM-5 diagnostic criteria for AUD and DUD (Grant et al., 2015; Grant et al., 2016), using a past 5-year timeframe. SUD is defined as meeting eligibility criteria for AUD, DUD, or both. Participants who reported 2 or more AUD and/or 2 or more DUD symptoms were characterized as having a recent SUD. To calculate AUD and DUD severity, we used a continuous count of self-reported symptoms for each. Only those who met eligibility were prompted to provide their contact information (i.e., first name, email, and telephone number) and informed that they would be contacted to schedule a future interview if selected for the study.

A total of 341 potential participants completed the screener

Table 1
Socio-demographic and substance use characteristics among participants with past 5-year substance use disorders, 2017–2018, N = 54.

	Total Sample, N = 54	Whites, $n = 18$	Blacks, n = 16	Latinos, $n = 20$	P-value
	N (%) or Mean (SD)	N (%) or Mean (SD)	N (%) or Mean (SD)	N (%) or Mean (SD)	1)
Socio-demographic characteristics					
Mean age (SD)	39.44 (11.21)	37.78 (2.53)	41.75 (3.20)	39.10 (2.35)	0.588
Male gender	26 (48%)	9 (50%)	7 (44%)	10 (50%)	0.916
Completed high school or higher	52 (96%)	18 (100%)	15 (94%)	19 (95%)	0.584
Currently employed	43 (80%)	16 (89%)	11 (69%)	16 (80%)	0.019*
Country of origin (Latinos)					_
Mexico	_	_	_	4 (20%)	
Puerto Rico	_	_	_	4 (20%)	
Dominican Republic	_	_	_	1 (5%)	
Central America	_	_	_	1 (5%)	
South America	_	_	_	2 (10%)	
Unknown	_	_	_	8 (40%)	
Foreign-born	6 (11%)	0 (0%)	0 (0%)	6 (30%)	0.001*
Substance use behaviors (past 5-year)					
Alcohol use disorder (AUD)	51 (95%)	17 (94%)	15 (94%)	19 (95%)	0.987
Mean number of AUD symptoms	9.09 (3.15)	9.06 (3.2)	8.93 (3.4)	9.25 (3.0)	0.957
Drug use disorder (DUD)	41 (76%)	15 (83%)	13 (81%)	13 (65%)	0.351
Mean number of DUD symptoms	8.17 (0.63)	8.72 (1.00)	8.50 (1.62)	7.4 (1.13)	0.649
Co-occurring AUD and DUD	38 (70%)	14 (78%)	12 (75%)	12 (60%)	0.449
Treatment history (past 5-year)					
Any treatment use	33 (61%)	11 (61%)	10 (62%)	12 (60%)	0.445
Past 5-year treatment use					
Mutual help groups	18 (33%)	7 (39%)	5 (31%)	6 (30%)	0.911
Specialty alcohol or drug treatment	9 (17%)	3 (17%)	4 (25%)	2 (10%)	0.957
Hospital or clinic	15 (28%)	5 (28%)	5 (31%)	6 (30%)	0.907
Social services program	9 (17%)	2 (11%)	3 (19%)	4 (20%)	0.935
Medical group or physician	14 (26%)	6 (33%)	3 (19%)	5 (25%)	0.936

p > 0.05

questionnaire. Of these, 223 (65%) met study eligibility criteria. Eligible participants were then purposively sampled to ensure equitable distribution across race/ethnicity, gender, disorder type (AUD or DUD), and substance use severity. Given the objective of our study, participants who reported never using specialty treatment were specifically targeted. The interviewer first contacted selected participants via email to schedule an interview, and then followed up via telephone if necessary. Three unique attempts were made to contact the selected participant and conduct the interview before drawing a replacement, if necessary. A total of 74 participants were contacted to participate; 54 participants agreed to be interviewed.

Interviews were on average 41 min in length (41 min among Whites and Blacks; 42 min among Latinos), audio-recorded, and conducted via telephone by a trained qualitative interviewer using a semi-structured interview guide. A trained and bilingual interviewer conducted interviewers in Spanish with Latinos who were Spanish-dominant (n = 6). Verbal informed consent was obtained from the participant before beginning the interview. The interviewer also confirmed that the participant was in a private setting before conducting the interview. The semi-structured interview guide was grounded in the TBP: participants were asked about treatment-related barriers in the domains of attitudes, subjective norms, and perceived control. The guide included approximately 15 open-ended questions and probes for interviewers to use. Example open-ended questions and probes by domains of the TPB were as follows. Attitudes: "Have you ever considered getting help for a drinking or drug use problem?" (Probes: "What are some reasons why you have or haven't considered getting help? Do you think treatment would be helpful?"). Subjective norms: "How would your family and friends react if they knew you were seeking treatment for a drinking or drug use problem?" (Probes: "Would your family and friend be supportive if you decided to seek help?") Perceived control: "Are there any circumstances that would make it difficult for you to seek treatment for a drinking or drug use problem, if you wanted help?" (Probes: "Could you easily get to treatment? Would you be able to pay for treatment?").

Importantly, interviewers ensured that participants understood that for the purposes of this interview, 'treatment' referred specifically to specialty substance abuse treatment. Participants were provided with a definition of specialty treatment, examples, and clarified (if needed) how specialty treatment differed from other services such as mutual help groups. Briefly, participants were told specialty alcohol and drug treatment services referred to services such as in/out patient or rehabilitation services—services that specialize in treating substance abuse problems and not general services (e.g., primary care, hospitals, or general therapy). Audio-recordings were then transcribed verbatim. Participants received a \$50 Amazon Gift Card as compensation for their time. The Institutional Review Boards of the Public Health Institute and the University of Texas at Austin approved all study protocols.

2.2. Analyses

Transcripts of interviews were coded in NVivo v11 software. We employed a thematic analytic approach to identify themes (i.e., barriers) within the domains of the TPB (Creswell, 2009; Creswell & Creswell, 2013). Preliminary analysis consisted of an iterative process of 'open' coding to analyze key themes in participants' narratives in order to create an initial coding scheme for key barriers. To develop the coding scheme, the first author and a graduate, PhD-level, research assistant (RA) read 2 interviews independently and recorded initial interpretation of the texts. Emergent barriers were discussed, and a codebook was developed. This process was repeated until key barriers were established and the codebook was finalized. Next, the first author and RA independently coded the same 11 interviews and met regularly to compare coded transcripts. Discrepancies were resolved through discussion and consensus (Onwuegbuzie, 2003). When new codes emerged, the coding scheme was updated, and transcripts were re-read and re-coded. This process ensured that all coders shared the same understanding of the coding scheme, thereby safeguarding the consistency and validity of the results. After the first author and RA reached

a 90% consistency in applying the coding scheme, subsequent transcripts were coded by one independent coder. Any complexities in coding schemes that emerged were discussed and resolved during regular on-going meetings. Once the coding was complete, frequencies of coded themes (i.e., barriers) were compared across all interviews and by race/ethnicity to elucidate differences and similarities. For the present analysis, we focused on barriers that were more prominent among Latinos (vs. other racial/ethnic groups) and provide illustrative and representative text segments.

3. Results

3.1. Participant characteristics

Sample characteristics are described in Table 1. On average, participants were 39 years old, half were males (49%), and the majority had at least a high school education and were currently employed. About one third of participants made up each racial/ethnic group: 33% (n = 18) were White, 31% (n = 16) were Black, and 36% (n = 20)were Latino. Latinos were from diverse subgroups, including Mexican, Puerto Rican, Dominican, Central American, and South American participants. Approximately 11% (n = 6) were foreign-born; all those who reported being foreign-born were of Latino origin. Within the context of substance use, participants were more likely to report AUD (95%) than DUD (76%); 71% reported co-occurring AUD-DUD. Participants reported high severity of alcohol and drug problems: A mean of 9 AUD symptoms and 8 DUD symptoms. In terms of treatment history, the 61% reported using some form of treatment in the past 5 years; the majority had never used a specialty alcohol or drug program. The most common form of treatments was AA (33%), a hospital or clinic (28%), and a medical group or physician (26%). We found no statistically significant difference between disorder type, problem severity, and treatment utilization by race/ethnicity.

3.1.1. Qualitative findings

We identified several important barriers within the domains of attitudes, subjective norms, and perceived control that influence Latinos' decisions to not use specialty substance abuse treatment services (Table 2). Importantly, Latinos were more likely to report attitudinal and subjective norm barriers than their White and Black counterparts. Within the attitudes domain, results suggested that Latinos largely avoided specialty treatment due to barriers stemming from cultural factors, perceived treatment efficacy, recovery goals, and perceived treatment need. In the area of subjective norms, stigma and perceived lack of social support from family were more pervasive among Latinos' narratives. Lastly, in terms of perceived control, a minority of Latinos reported logistical barriers to treatment. In the following sections, we review these findings in greater detail and provide illustrative quotes from Latinos' narratives.

Table 2 Frequencies of coded themes among participants with past 5-year substance use disorders by race/ethnicity, 2017-2018, N = 54.

	Whites	Blacks	Latinos
Attitudes			
Cultural factors	0	0	24
Perceived treatment efficacy	17	16	26
Recovery goals	4	3	16
Subjective norms			
Stigma	10	15	32
Lack of social support	1	6	25
Perceived controls			
Logistical barriers	11	10	9

3.2. Attitudes toward specialty treatment

3.2.1. Cultural factors

Cultural barriers were the prominent reason for not using treatment among Latinos. Notably, Latinos were the only racial/ethnic group to describe cultural factors in relation to treatment utilization. Treatment was commonly framed as not being culturally tailored. Many perceived providers as being unfamiliar with Latino culture and never having experienced important social contexts (e.g., immigration and discrimination experiences). Thus, many believed that providers would be unable to relate to their own personal experiences, including their alcohol and drug use. Ultimately, these sentiments were linked to perceptions that treatment services would not be effective. As one Latina participant described:

"I think like earlier I was talking to you about the culture thing and I think that's just what it comes down to [...] I feel like there is like a consensus among my family at least that getting help is for not our race, it's for White people [...] and aside from having to pay, you're not gonna be able to really relate to anybody else because nobody else is, you know, like you." (Participant 1)

In addition to treatment services not being culturally tailored, this quote also illustrates another important theme: treatment is not culturally accepted. Latinos emphasized that in their culture, treatment was negatively perceived. As a result, many decided against seeking help for their alcohol or drug use. One participant explained:

"I think it's just like a culture thing. It's part of the Hispanic culture that you don't talk about your problems. You don't talk about your feelings and you just kind of move it along and that's just the way it is. Everybody got beat up. Everybody drinks. That's what it is. I see it. I still see it today and that's the way things are. It's kind of hard to change when everybody has the same mentality." (Participant 2)

3.2.2. Perceived treatment efficacy

Compared to Whites and Blacks, Latinos were also significantly more likely to perceive specialty treatment services as ineffective. Perceived treatment efficacy was closely linked to perceptions regarding providers' ability to treat a substance abuse problem. Latinos frequently expressed concerns that providers lack 'real world' experiences and have never personally experienced an alcohol or drug problem. Such perceptions ultimately led many to conclude that treatment would not be useful. Relatedly, those wanting to get help often sought other forms of treatment (e.g., mutual help groups). This finding is illustrated in the following quote, where one Latino male explains why he decided to go to Alcoholic Anonymous (AA) for his drinking instead of specialty treatment:

"Yeah, well you know what, I just decided that AA...I mean AA was really the only thing for me that was rigorous enough that really... because in a room full of people who are experiencing what you're experiencing and are going through what you're going through, I can identify with them, and I'm older now, so it makes sense. If I'm talking to a therapist or a clinician, if they have never experienced or have been an alcoholic... I think former alcoholics are the best, best, best sponsors because they get it, they understand the nature of the disease. Therapists, of course, but if you've never been an alcoholic it's hard to really truly understand how we think and how we process things [...] And I thought, I don't need a bunch of people standing over me, judging me and evaluating me and wanting me to get better. I need people who are at my level helping me because they've been there and they know. That's what I wanted." (Participant 3)

3.2.3. Recovery goals

Not wanting to be abstinent, especially from alcohol, emerged as an

important reason for not using specialty treatment services. Latinos were more likely to report not wanting to be abstinent than their White and Black counterparts. Many expressed interest in reducing or 'taking control' of their drinking by addressing underlying issues (e.g., trauma, coping with loss), without necessarily giving up drinking. Hence, many Latinos thought that specialty treatment would not be appropriate because of its focus on abstinence and would be ineffective. One participant expressed:

"I feel like for me, I enjoy my glass of wine, and for example, I had it a couple of days back, but I don't want to feel guilty if I do decide to have a glass of wine. I don't want alcohol to have control of me. I want to have control over it. So, I want to reach a point and if I do want to take that step to not ever drink again in my life I want it to be an option. I don't want someone to make that decision for me. That decision should be made by me. Do you understand? Sometimes these programs they like tell you, you cannot drink anymore and I think that's the scary part because it's a lot of pressure." (Participant 4)

Others feared being judged by providers for not wanting to be abstinent or relapsing, which influenced their decision to avoid treatment. One participant described leaving treatment once she had gained control over her drinking. She explained:

"Cutting back was my goal and taking control again of my life, basically. So, since I kind of got that control back, I just gradually stopped going [to treatment]. I felt I didn't really need... not that I didn't need it, but I felt it was more the control and I just kind of wanted to be independent [...] Basically not letting my emotions and my thoughts take over and get the best of me and actually make decisions like by using both my mind and my heart and just like knowing common sense and basically like reevaluating my thinking [...] I feel like the majority of the people wanted to quit completely. I was one of the few that wanted to cut back." (Participant 5)

3.2.4. Perceived treatment need

An important theme among Latinos' narratives was a notion of 'being functional' (i.e., being able to meet important obligations) in relation to perceived treatment need. Latinos regularly described not needing treatment because they were still able to meet work and family responsibilities, regardless of their problem severity. For example, when asked if she has ever considered treatment, one Latina responded:

"What I'm gonna say might sound a little bit weird, but I, no I haven't, but I also don't feel like I need it [...] I don't feel like I have that much of a problem because I can still go to work and I still do things and function [...] I have a full-time job and stuff so I try to limit like the amount I drink during the week. I have days that I drink too much and the next day I feel bad but I still have to go to work, but I feel like I just maybe Monday through Thursday I generally don't drink maybe more than like five drinks a night and then maybe on the weekend I probably do double that." (Participant 6)

Similarly, another male participant described:

"Me drinking alcohol I never missed work because I drank. I mean there was times where I would work on Saturdays and Sundays [...] we would go out and drink Friday and we would drink til like maybe 5:00 in the morning, go home, take a shower, eat breakfast and be back to work at 9:00 in the morning and work another 12 hours." (Participant 7)

Participants also highlighted family life in relation to this notion of 'being functional':

"There is also this normalcy thing, like where they kind of try to make it normal. Well this person drank, and that person drank, and they're fine or everybody does it and so it just kind of has become a thing where as long as you function kind of like what I do, you are fine. You are still married, you still have your kids, you still can function and you're fine. I mean what's the problem? You are creating a problem by talking about it now, by talking about it. Stop talking about it. That's kind of what it is. What it's always been." (Participant 2)

3.3. Subjective norms toward specialty treatment

3.3.1. Stigma

Stigma was a strong theme among all racial/ethnic groups, but was more pronounced among Latinos' narratives. Latinos frequently described treatment as a personal failure and defeat. Fears of being negatively perceived discouraged many from seeking treatment, even in cases where participants expressed being open to and interested in getting help. For example, one participant described:

"Me needing help was like me saying they're right, I am a loser [...] It's looked at as weakness, you're admitting weakness. That's what the pervasive thought is. That when you say 'Hey! I'm not making it, I need your help.' That's considered weak and we as a society, we kick that out of the gate if you will, the gate of society. 'Hey, you can't come in the gate, because you're not one of us, you're weak' [...] and nobody wants that weak link." (Participant 8)

Similarly, another Latina participant expressed her trepidation of seeking help after recognizing she had a problem:

"Hey, you acknowledge [that you have a problem] which is the first step, that you have an issue. So, how do we go about fixing the issue? But it is very scary to take that next step. I think that's one of the scariest things, 'cause how do you move from point A to B without... like it's almost you don't want to lose your self-confidence or acknowledge... it's almost like you would acknowledge that you let yourself down." (Participant 4)

Latinos also feared being stigmatized and labeled as an 'alcoholic' or 'drug addict' for being seen using treatment by people they knew. Many described specialty treatment services as being very conspicuous. Latinos explained that if anyone they knew saw them at a specialty treatment center, it would be immediately evident that they had a substance abuse problem, resulting in being stigmatized by others. When asked the reason for not using specialty treatment, one participant explained:

"I think it was a mix between being busy and just procrastinating and me being embarrassed I would bump into somebody that I know and feel ashamed. I think I would have preferred to go somewhere far, so then I know for sure I wouldn't bump into someone [...] Because I put on that persona that I am doing so well even if I am not doing well. So, like things are going great with me and I have like no problems, and then just bumping into somebody that knows how I portray myself being in this type of situation. I didn't want them to talk about me to other people or judge me and look at me in a different way." (Participant 5)

3.3.2. Lack of social support

Perceived lack of social support from family was an important treatment barrier for Latinos. Many expressed worries that using treatment would *confirm* to their family that they had a substance abuse problem, which would not be positively perceived. Ultimately, many expressed that their family members would not be in favor of them being in treatment.

For example, one participant described:

"My mother comes from a very strong like, Hispanic heritage. My father is from a similar, strong, Caribbean heritage and they're very proud people. Plus, to hear that their son is thinking of seeking outside therapy or outside help, I think would be disheartening to them [...] My parents, although they love me, I know, completely, they would see it as almost like a stain against the whole family tree." (Participant 9)

Similarly, another participant explained:

"When it comes to like, if it's a negative thing that you want to fix, they [family] don't want anything to do with it. In my experience, they'd rather like gossip about you, and they get pleasure out of that rather than say 'hey you know what? I helped my cousin or my brother or my sister get help.' I don't know it's like something they don't want to be a part of. They're like 'hey go be an alcoholic by yourself.'" (Participant 8)

3.4. Perceived control over specialty treatment

3.4.1. Logistical barriers

Overall, perceived control barriers were the least reported barriers among participants of all racial/ethnic groups, with Latinos reporting the least. A minority of Latinos described logistical barriers to treatment stemming from cost, lack of health insurance, and long wait times. One participant described:

"I think for this community, the Latinos where I live that you know, I think maybe insurance might be a big part of it. A lot of people don't have insurance. A lot of people feel like they're going to these places and they're charging them an arm and a leg. They want to get help, but they don't have it or maybe some of these places are just overpopulated where there are just too many people and you spend a lot of time waiting and not enough time getting these services that you're supposed to be getting, because you know that does happen a lot where people go and they're in a clinic and they're waiting a long time. You wait an hour and you're seen by these people for like five minutes, which is not, you know. For myself when I go to the doctor and I wait a long time, I kind of get turned off. Especially if I'm waiting a long time and I go in and you see me for five minutes and I'm like okay I just waited an hour, hour and a half and you're seeing me five minutes." (Participant 10)

4. Discussion

This is the first qualitative study that examined barriers to specialty treatment by race/ethnicity among a sample of White, Black, and Latino participants with recent SUD. We identified important barriers that may influence Latinos' decisions to avoid specialty treatment. Latinos were the only racial/ethnic group to report cultural barriers as reasons for not seeking help for an alcohol or drug problem. Many barriers—and particularly those within the areas of attitudes and subjective norms-were also more pronounced in Latinos' narratives than in those of Black and White participants. Interestingly, although some studies have found that logistical barriers (i.e., perceived control) have a stronger impact on Latinos than other racial/ethnic groups, we found the opposite to be true. Barriers related to attitudes and subjective norms toward treatment overwhelmingly shaped Latinos' decisions to not use treatment. This study extends our knowledge of why Latinos with SUD underutilize specialty treatment. Our findings underscore key barriers that may be critical in explaining Latino-White disparities in treatment utilization, which can be used to inform intervention strategies.

Within the attitudes domain, key barriers to specialty treatment among Latinos were related to culture, treatment efficacy, recovery goals, and perceived treatment need. Latinos may feel discouraged from using health services that are perceived as not being culturally appropriate even if Spanish language services are provided (Alegría et al., 2006; Pagano, 2014). Researchers have suggested that incorporating

prominent Latino cultural values (e.g., famialismo – importance placed on the family over the individual, respeto – respect based on an individual's age and social position, personalismo – preference for personalized attention and interpersonal relations) and acknowledging important social contexts (e.g., immigration and discrimination experiences) in the delivery of specialty alcohol and substance abuse services may increase utilization (Alegría et al., 2006; Castro & Alarcon, 2002; Documét & Sharma, 2004; Gannotti, Kaplan, Handwerker, & Groce, 2004; Guerrero et al., 2013; Lee et al., 2011; Pagano, 2014). For instance, in one intervention study aimed at curbing heavy drinking, 95% of Latinos reported that having the counselor understand their culture (e.g., discussing cultural life/upbringing, cultural norms) helped them talk about their drinking (Lee et al., 2011). Developing culturally-tailored treatment services may be a critical and viable strategy to increase utilization among Latinos.

Further, Latinos questioned the efficacy of specialty treatment services. Many expressed doubts that providers could effectively treat a substance abuse problem or relate to them culturally. Thus, some who wanted treatment instead preferred mutual help groups for recovery support. This finding is concerning, as it suggests that specialty treatment services may be overlooked, even among those who are seeking help and despite their effectiveness (Alegria et al., 2011; Alvarez et al., 2007; Arroyo et al., 1998; Guerrero et al., 2014). Additionally, many described avoiding specialty treatment because their goal was not to be abstinent, and this was particularly common among those with an alcohol problem. This finding is in line with other research highlighting that not all people struggling with a substance abuse problem define recovery as abstinence (Kaskutas et al., 2014; Witbrodt, Kaskutas, & Grella, 2015). For instance, a study with individuals who self-identified as being in recovery found that recovery-oriented outcomes extended beyond being sober. Being honest with oneself, not using alcohol or drugs to cope with negative feelings, being able to enjoy life and contribute to society, and being spiritually connected were other important elements of how participants defined recovery (Kaskutas et al., 2014; Witbrodt et al., 2015). Thus, specialty treatment programs should consider incorporating harm reduction strategies and emphasizing other recovery-oriented outcomes beyond abstinence. Several studies have documented that programs using harm reduction approaches can be as effective as abstinence-based approaches in reducing alcohol consumption and adverse alcohol-related consequences; these programs may also be preferred over abstinence-only programs (Marlatt & Witkiewitz, 2002). Such programs may be key for reaching a significant subset of people in need of treatment, including Latinos, who do not associate recovery with abstinence.

We also found that Latinos who were able to meet work and home responsibilities (i.e., were 'functional') were less likely to perceive a need for treatment. This is a novel finding that has not been previously documented and warrants further investigation. Latinos tend to hold strong cultural and traditional views surrounding family obligations (e.g., providing for the family financially, caring for the household and children) (Duncan, Korwin, Pinedo, González-Fagoaga, & García, 2009; Phinney & Flores, 2002). It may be that Latinos who are able to meet financial and home expectations or integrate their substance use in a way that does not impact their responsibilities (e.g., only drinking on the weekends) may be less likely to recognize having a problem. However, this claim remains to be empirically assessed and merits more

Within the subjective norms domain, we found that stigma and perceived lack of family support were significant treatment barriers for Latinos. Interestingly, Latinos emphasized the importance of anonymity (i.e., not being seen using treatment) as a means of avoiding being stigmatized. This finding suggests that novel ways of delivering specialty substance abuse treatment that are less conspicuous may increase utilization, such as integrating services with primary care services. Another strategy may include providing services via the web to decrease fears of being seen in treatment. Several studies suggest that

web-based treatment may be effective in treating alcohol and drug problems (Copeland & Martin, 2004; Kypri, Langley, Saunders, Cashell-Smith, & Herbison, 2008; Riper et al., 2014). Web-based treatment also has the advantage of expanding access and reducing logistical barriers (e.g., transportation, long wait times, etc.) among treatment-seekers. Culturally adapting an evidence-based intervention that is delivered online may be especially appealing to Latinos. Further, increasing feelings of social support from family members among Latinos could be important to increasing the likelihood of seeking treatment. Studies with other populations have documented that the inclusion of family members through the course of treatment can increase engagement and either match or improve outcomes as compared to individualized treatment (Copello, Copello, Velleman, & Templeton, 2005; Copello & Orford, 2002; Copello, Templeton, & Velleman, 2006; Kumpfer, Alvarado, & Whiteside, 2003; Liddle, 2004). Including Latino's family members in treatment may likewise help increase feelings of social support and improve recovery-oriented outcomes.

Several limitations should be considered when interpreting our findings. Participants were recruited via online ads, which may have introduced bias in our pool of eligible participants; we most likely missed those with no access to a computer or internet. Findings may not be generalizable to all Latinos or persons with SUD, and may be biased toward those in urban settings and with more access to resources. We also did not ask about participants' prior experiences with mandated treatment by the justice system. Such information may have helped contextualized our findings, particularly participants attitudes and subjective norms toward treatment. Further, participants were interviewed via telephone. Telephone interviews provide some unique challenges as compared to face-to-face interviews, such being unable to respond to participants' visual cues. Nonetheless, studies have suggested that qualitative interviews conducted via telephone are an effective approach to collecting high-quality data (Sturges & Hanrahan, 2004). Studies comparing qualitative results from telephone vs. face-toface interviews have documented no significant differences between methodologies (Sturges & Hanrahan, 2004). Interviews by telephone may have the added advantage of reducing biases (e.g., social desirability) associated with divulging sensitive information due to increased feelings of anonymity, and they can capture hard-to-reach and diverse populations, regardless of geographical location (Drabble & Trocki, 2014; Drabble, Trocki, Salcedo, Walker, & Korcha, 2016; Novick, 2008; Opdenakker, 2006; Waterman, Leatherbarrow, Slater, & Waterman, 1999).

5. Conclusions

Protecting the health of Latinos in the US is imperative to the public health of the country, given their growing presence in the national population. In the US, Latinos represent the largest and the fastestgrowing minority group, accounting for about 17% (~54 million persons) of the total population (Lopez, 2015). Latinos are also disproportionally impacted by alcohol and drug problems, as compared to other racial/ethnic groups (Alvarez et al., 2007; Chartier & Caetano, 2010; Galea et al., 2003; Guerrero et al., 2013; Mulia et al., 2009; Mulia & Zemore, 2012; Pinedo et al., 2017; Vaeth et al., 2017; Witbrodt et al., 2014). Thus, there is a critical need to identify specific barriers that discourage Latinos with SUD from seeking help, especially compared to other racial/ethnic groups. This knowledge is critical to the development of effective intervention strategies to help reduce existing health disparities related to substance abuse among this population. This study identified several malleable barriers that may help explain Latino-White disparities in treatment utilization and that interventions can target to increase Latinos' utilization of treatment. Importantly, many of these barriers have been documented little or not at all in national studies investigating barriers to treatment utilization by race/ethnicity. Building on these findings, large, representative studies should be conducted to confirm our findings.

Conflict of interest

None.

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References

- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. Action control (pp. 11–39). Springer.
- Albarracin, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of reasoned action and planned behavior as models of condom use: A meta-analysis. *Psychological Bulletin*, 127(1), 142.
- Alegria, M., Carson, N. J., Goncalves, M., & Keefe, K. (2011). Disparities in treatment for substance use disorders and co-occurring disorders for ethnic/racial minority youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(1), 22–31.
- Alegría, M., Page, J. B., Hansen, H., Cauce, A. M., Robles, R., Blanco, C., ... Berry, P. (2006). Improving drug treatment services for Hispanics: Research gaps and scientific opportunities. *Drug and Alcohol Dependence*, 84, S76–S84.
- Alvarez, J., Jason, L. A., Olson, B. D., Ferrari, J. R., & Davis, M. I. (2007). Substance abuse prevalence and treatment among Latinos and Latinas. *Journal of Ethnicity in Substance Abuse*, 6(2), 115–141.
- Amaro, H., Nieves, R., Johannes, S. W., & Labault Cabeza, N. M. (1999). Substance abuse treatment: Critical issues and challenges in the treatment of Latina women. *Hispanic Journal of Behavioral Sciences*, 21(3), 266–282.
- Armitage, C. J., Armitage, C. J., Conner, M., Loach, J., & Willetts, D. (1999). Different perceptions of control: Applying an extended theory of planned behavior to legal and illegal drug use. *Basic and Applied Social Psychology*, 21(4), 301–316.
- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
- Arroyo, J. A., Westerberg, V. S., & Tonigan, J. S. (1998). Comparison of treatment utilization and outcome for Hispanics and non-Hispanic whites. *Journal of Studies on Alcohol*, 59(3), 286–291.
- Berk, M. L., & Schur, C. L. (2001). The effect of fear on access to care among undocumented Latino immigrants. *Journal of Immigrant Health*, 3(3), 151–156.
- Castro, F. G., & Alarcon, E. H. (2002). Integrating cultural variables into drug abuse prevention and treatment with racial/ethnic minorities. *Journal of Drug Issues*, 32(3), 783–810.
- Chartier, K., & Caetano, R. (2010). Ethnicity and health disparities in alcohol research. Alcohol Research & Health, 33(1–2), 152.
- Chartier, K. G., & Caetano, R. (2011). Trends in alcohol services utilization from 1991–1992 to 2001–2002: Ethnic group differences in the US population. *Alcoholism: Clinical and Experimental Research*, 35(8), 1485–1497.
- Chartier, K. G., Miller, K., Harris, T. R., & Caetano, R. (2016). A 10-year study of factors associated with alcohol treatment use and non-use in a US population sample. *Drug and Alcohol Dependence*, 160, 205–211.
- Collins, S. E., & Carey, K. B. (2007). The theory of planned behavior as a model of heavy episodic drinking among college students. *Psychology of Addictive Behaviors*, 21(4), 408
- Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429–1464.
- Copeland, J., & Martin, G. (2004). Web-based interventions for substance use disorders: A qualitative review. *Journal of Substance Abuse Treatment*, 26(2), 109–116.
- Copello, A., & Orford, J. (2002). Addiction and the family: Is it time for services to take notice of the evidence? *Addiction*, 97(11), 1361–1363.
- Copello, A. G., Copello, A. G., Velleman, R. D., & Templeton, L. J. (2005). Family interventions in the treatment of alcohol and drug problems. *Drug and Alcohol Review*, 24(4), 369–385.
- Copello, A. G., Templeton, L., & Velleman, R. (2006). Family interventions for drug and alcohol misuse: Is there a best practice? *Current Opinion in Psychiatry*, 19(3), 271–276.
- Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed.). Thousand Oaks, Calif.: Sage Publications.
- Creswell, J. W., & Creswell, J. W. (2013). Qualitative inquiry and research design: Choosing among five approaches (3rd ed.). Los Angeles: SAGE Publications.
- Cummings, J. R., Wen, H., & Druss, B. G. (2011). Racial/ethnic differences in treatment for substance use disorders among US adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50(12), 1265–1274.
- Delgado, M. (2002). Latinos and alcohol: Treatment considerations. Alcoholism Treatment Quarterly, 20(3–4), 187–192.
- Documét, P. I., & Sharma, R. K. (2004). Latinos' health care access: Financial and cultural barriers. *Journal of Immigrant Health*, 6(1), 5–13.
- Drabble, L., & Trocki, K. (2014). Alcohol in the life narratives of women: Commonalities and differences by sexual orientation. Addiction Research & Theory, 22(3), 186–194.
- Drabble, L., Trocki, K. F., Salcedo, B., Walker, P. C., & Korcha, R. A. (2016). Conducting qualitative interviews by telephone: Lessons learned from a study of alcohol use among sexual minority and heterosexual women. *Qualitative Social Work*, 15(1),

- 118-133.
- Duncan, W., Korwin, L., Pinedo, M., González-Fagoaga, E., & García, D. (2009). Lucharle por la Vida: The impact of migration on health. In W. A. Cornelius, D. Fitzgerald, J. Hernández-Díaz, & S. Borger (Eds.). Migration from the Mexican Mixteca: A transnational community in Oaxaca and California (pp. 165–205). San Diego, Estados Unidos: Lyinne Rienner Publishers.
- Galea, S., Ahern, M. J., Tardiff, K., Leon, A., Coffin, M. P. O., Derr, M. K., & Vlahov, D. (2003). Racial/ethnic disparities in overdose mortality trends in New York City, 1990–1998. *Journal of Urban Health*, 80(2), 201–211.
- Gannotti, M. E., Kaplan, L. C., Handwerker, W. P., & Groce, N. E. (2004). Cultural influences on health care use: Differences in perceived unmet needs and expectations of providers by Latino and Euro-American parents of children with special health care needs. *Journal of Developmental & Behavioral Pediatrics*, 25(3), 156–165.
- Godin, G., & Kok, G. (1996). The theory of planned behavior: A review of its applications to health-related behaviors. *American Journal of Health Promotion*, 11(2), 87–98.
- Grant, B. F., Goldstein, R. B., Saha, T. D., Chou, S. P., Jung, J., Zhang, H., ... Huang, B. (2015). Epidemiology of DSM-5 alcohol use disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry*, 72(8), 757–766
- Grant, B. F., Saha, T. D., Ruan, W. J., Goldstein, R. B., Chou, S. P., Jung, J., ... Huang, B. (2016). Epidemiology of DSM-5 drug use disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions–III. *JAMA Psychiatry*, 73(1), 39–47.
- Grella, C. (2009). Treatment seeking and utilization among women with substance use disorders. Women and addiction: A comprehensive handbook (pp. 307–322).
- Guerrero, E. G., Marsh, J. C., Cao, D., Shin, H.-C., & Andrews, C. (2014). Gender disparities in utilization and outcome of comprehensive substance abuse treatment among racial/ethnic groups. *Journal of Substance Abuse Treatment*, 46(5), 584–591.
- Guerrero, E. G., Marsh, J. C., Khachikian, T., Amaro, H., & Vega, W. A. (2013). Disparities in Latino substance use, service use, and treatment: Implications for culturally and evidence-based interventions under health care reform. *Drug and Alcohol Dependence*, 133(3), 805–813.
- Hacker, K., Chu, J., Leung, C., Marra, R., Pirie, A., Brahimi, M., ... Marlin, R. P. (2011). The impact of immigration and customs enforcement on immigrant health: Perceptions of immigrants in Everett, Massachusetts, USA. Social Science & Medicine, 23(4), 586–594.
- Hardeman, W., Johnston, M., Johnston, D., Bonetti, D., Wareham, N., & Kinmonth, A. L. (2002). Application of the theory of planned behaviour in behaviour change interventions: A systematic review. *Psychology and Health*, 17(2), 123–158.
- Kam, J. A., Matsunaga, M., Hecht, M. L., & Ndiaye, K. (2009). Extending the theory of planned behavior to predict alcohol, tobacco, and marijuana use among youth of Mexican heritage. *Prevention Science*, 10(1), 41–53.
- Kaskutas, L. A., Borkman, T. J., Laudet, A., Ritter, L. A., Witbrodt, J., Subbaraman, M. S., ... Bond, J. (2014). Elements that define recovery: The experiential perspective. *Journal of Studies on Alcohol and Drugs*, 75(6), 999–1010.
- Kumpfer, K. L., Alvarado, R., & Whiteside, H. O. (2003). Family-based interventions for substance use and misuse prevention. Substance Use & Misuse, 38(11-13), 1759-1787
- Kypri, K., Langley, J. D., Saunders, J. B., Cashell-Smith, M. L., & Herbison, P. (2008). Randomized controlled trial of web-based alcohol screening and brief intervention in primary care. Archives of Internal Medicine, 168(5), 530–536.
- Le Cook, B., & Alegría, M. (2011). Racial-ethnic disparities in substance abuse treatment: The role of criminal history and socioeconomic status. *Psychiatric Services*, 62(11), 1273–1281.
- Lee, C. S., López, S. R., Hernández, L., Colby, S. M., Caetano, R., Borrelli, B., & Rohsenow, D. (2011). A cultural adaptation of motivational interviewing to address heavy drinking among Hispanics. Cultural Diversity and Ethnic Minority Psychology, 17(3), 317.
- Liddle, H. A. (2004). Family-based therapies for adolescent alcohol and drug use: Research contributions and future research needs. Addiction, 99(s2), 76–92.
- Lopez, G. (2015). Hispanics of Mexican origin in the United States, 2013. Pew Research Center. available at: http://www.pewhispanic.org/2015/09/15/hispanics-ofmexican-origin-in-the-united-states-2013/.
- Lundgren, L. M., Amodeo, M., Ferguson, F., & Davis, K. (2001). Racial and ethnic differences in drug treatment entry of injection drug users in Massachusetts. *Journal of Substance Abuse Treatment*, 21(3), 145–153.
- Marlatt, G. A., & Witkiewitz, K. (2002). Harm reduction approaches to alcohol use: Health promotion, prevention, and treatment. *Addictive Behaviors, 27*(6), 867–886.
- Mcmillan, B., & Conner, M. (2003). Applying an extended version of the theory of planned behavior to illicit drug use among students1. *Journal of Applied Social Psychology*, 33(8), 1662–1683.
- Mendoza, F. S. (2009). Health disparities and children in immigrant families: A research agenda. *Pediatrics*, 124(Supplement 3), S187–S195.
- Mulia, N., Tam, T. W., & Schmidt, L. A. (2014). Disparities in the use and quality of alcohol treatment services and some proposed solutions to narrow the gap. *Psychiatric Services*, 65(5), 626–633.
- Mulia, N., Ye, Y., Greenfield, T. K., & Zemore, S. E. (2009). Disparities in alcohol-related problems among White, Black, and Hispanic Americans. Alcoholism: Clinical and Experimental Research, 33(4), 654–662.
- Mulia, N., & Zemore, S. E. (2012). Social adversity, stress, and alcohol problems: Are racial/ethnic minorities and the poor more vulnerable? *Journal of Studies on Alcohol*

- and Drugs, 73(4), 570-580.
- Mulvaney-Day, N., DeAngelo, D., Chen, C.-N., Cook, B. L., & Alegría, M. (2012). Unmet need for treatment for substance use disorders across race and ethnicity. *Drug and Alcohol Dependence*, 125, S44–S50.
- Novick, G. (2008). Is there a bias against telephone interviews in qualitative research? Research in Nursing & Health, 31(4), 391–398.
- Onwuegbuzie, A. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori, & C. Teddlie (Eds.). *Handbook of mixed methods in social and behavioral research*. Thousand Oaks: Sage.
- Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. Forum Qualitative Sozialforschung/Forum: Qualitative Social Research. 7.
- Pagano, A. (2014). Barriers to drug abuse treatment for Latino migrants: Treatment providers' perspectives. Journal of Ethnicity in Substance Abuse, 13(3), 273–287.
- Pagano, A., García, V., Recarte, C., & Lee, J. P. (2016). Sociopolitical contexts for addiction recovery: Anexos in US Latino communities. *International Journal of Drug Policy*, 37, 52–59.
- Painter, J. E., Borba, C. P., Hynes, M., Mays, D., & Glanz, K. (2008). The use of theory in health behavior research from 2000 to 2005: A systematic review. *Annals of Behavioral Medicine*, 35(3), 358.
- Perron, B. E., Mowbray, O. P., Glass, J. E., Delva, J., Vaughn, M. G., & Howard, M. O. (2009). Differences in service utilization and barriers among Blacks, Hispanics, and Whites with drug use disorders. Substance Abuse Treatment, Prevention, and Policy, 4(1), 3.
- Phinney, J. S., & Flores, J. (2002). "Unpackaging" acculturation: Aspects of acculturation as predictors of traditional sex role attitudes. *Journal of Cross-Cultural Psychology*, 33(3), 320–331.
- Pinedo, M., Campos, Y., Leal, D., Fregoso, J., Goldenberg, S. M., & Zúñiga, M. L. (2014). Alcohol use behaviors among indigenous migrants: A transnational study on communities of origin and destination. *Journal of Immigrant and Minority Health*, 16(3), 348–355.
- Pinedo, M., Sim, D. E. K., Giacinto, R. E., & Zuñiga, M. L. (2016). An exploratory study of internal migration and substance use among an indigenous community in Southern Mexico. Family & Community Health, 39(1), 24.
- Pinedo, M., Zemore, S., Cherpitel, C., & Caetano, R. (2017). Acculturation and alcohol use: The role of environmental contexts. The Oxford Handbook of Acculturation and Health. 239.
- Riper, H., Blankers, M., Hadiwijaya, H., Cunningham, J., Clarke, S., Wiers, R., ... Cuijpers, P. (2014). Effectiveness of guided and unguided low-intensity internet interventions for adult alcohol misuse: A meta-analysis. *PLoS One*, 9(6), e99912.
- Schmidt, L., Greenfield, T., & Mulia, N. (2006). Unequal treatment: Racial and ethnic disparities in alcoholism treatment services. *Alcohol Research and Health.* 29(1), 49.
- Schmidt, L. A., & Weisner, C. M. (2005). Private insurance and the utilization of chemical dependency treatment. *Journal of Substance Abuse Treatment*, 28(1), 67–76.
- Schmidt, L. A., Ye, Y., Greenfield, T. K., & Bond, J. (2007). Ethnic disparities in clinical severity and services for alcohol problems: Results from the National Alcohol Survey. *Alcoholism: Clinical and Experimental Research*, 31(1), 48–56.
- Smith, S. M., Dawson, D. A., Goldstein, R. B., & Grant, B. F. (2010). Examining perceived alcoholism stigma effect on racial-ethnic disparities in treatment and quality of life among alcoholics. *Journal of Studies on Alcohol and Drugs*, 71(2), 231–236.
- Sturges, J. E., & Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: A research note. *Qualitative Research*, 4(1), 107–118.
 Vaeth, P. A., Wang-Schweig, M., & Caetano, R. (2017). Drinking, alcohol use disorder,
- Vaetn, P. A., Wang-Schweig, M., & Caetano, R. (2017). Drinking, alcohol use disorder, and treatment access and utilization among US racial/ethnic groups. Alcoholism: Clinical and Experimental Research, 41(1), 6–19.
- Verissimo, A. D. O., & Grella, C. E. (2017). Influence of gender and race/ethnicity on perceived barriers to help-seeking for alcohol or drug problems. *Journal of Substance Abuse Treatment*, 75, 54–61.
- Wall, A.-M., Hinson, R. E., & McKee, S. A. (1998). Alcohol outcome expectancies, attitudes toward drinking and the theory of planned behavior. *Journal of Studies on Alcohol*, 59(4), 409–419.
- Waterman, H., Leatherbarrow, B., Slater, R., & Waterman, C. (1999). Post-operative pain, nausea and vomiting: Qualitative perspectives from telephone interviews. *Journal of Advanced Nursing*, 29(3), 690–696.
- Weisner, C., & Matzger, H. (2002). A prospective study of the factors influencing entry to alcohol and drug treatment. The Journal of Behavioral Health Services and Research, 29(2), 126–137.
- Wells, K., Klap, R., Koike, A., & Sherbourne, C. (2001). Ethnic disparities in unmet need for alcoholism, drug abuse, and mental health care. *American Journal of Psychiatry*, 158(12), 2027–2032.
- Witbrodt, J., Kaskutas, L. A., & Grella, C. E. (2015). How do recovery definitions distinguish recovering individuals? Five typologies. *Drug & Alcohol Dependence*, 148, 109–117.
- Witbrodt, J., Mulia, N., Zemore, S. E., & Kerr, W. C. (2014). Racial/ethnic disparities in alcohol-related problems: Differences by gender and level of heavy drinking. *Alcoholism: Clinical and Experimental Research*, 38(6), 1662–1670.
- Zemore, S. E., Murphy, R. D., Mulia, N., et al. (2014). A moderating role for gender in racial/ethnic disparities in alcohol services utilization: Results from the 2000 to 2010 national alcohol surveys. Alcoholism: Clinical and Experimental Research, 38(8), 2286–2296.