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Acceptability of pharmacotherapy for hazardous alcohol use among men who have sex with men: Findings from a qualitative study

Elaine Hsiang[a,*], Danielle Jennings[b], Tim Matheson[c], Jaclyn Hern[c], Jason Euren[d], Glenn-Milo Santos[c,e]

[a] University of California, San Francisco School of Medicine, San Francisco, CA 94143, USA
[b] Department of Family and Community Medicine, University of California, San Francisco, San Francisco, CA 94143, USA
[c] Substance Use Research Unit, Center for Public Health Research, San Francisco Department of Public Health, San Francisco, CA 94102, USA
[d] Metabiota, 425 California Street, San Francisco, CA 94104, USA
[e] Department of Community Health Systems, University of California, San Francisco School of Nursing, San Francisco, CA 94143, USA

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ABSTRACT

Introduction: Men who have sex with men (MSM) experience high rates of binge drinking, alcohol use disorder (AUD), and alcohol-related health issues. Pharmacotherapy for AUD can reduce hazardous drinking, yet remains underutilized among MSM. This qualitative study examined knowledge and perceptions regarding AUD medications among MSM, with an emphasis on naltrexone.

Methods: Three focus group discussions (FGDs) with MSM who consumed alcohol in the past year were conducted in February 2015 ($N = 39$) in the San Francisco Bay Area. The FGD guide generated discussions about hazardous drinking, the social contexts of drinking, and alcohol reduction and cessation options, including pharmacotherapy. Interviews were analyzed via directed content analysis to codify themes.

Results: For participants, drinking at LGBTQ bars was an important social activity. Many expressed interest in reducing alcohol use, but few had heard of pharmacotherapy for AUD. Potential uptake was limited by perceptions of disulfiram as the prototype medication, side effects associated with disulfiram, and concerns that medications do not address alcohol-related stigma or social drivers of drinking. Participants were more receptive to pharmacotherapy when presented with medication options that did not require abstinence. Participants reported being more likely to try pharmacotherapy as part of a peer group or treatment program.

Conclusions: Efforts to increase the knowledge and availability of naltrexone and harm reduction approaches, while addressing addiction- and medication-related stigma, might improve pharmacotherapy uptake for AUD and decrease hazardous drinking among MSM for whom alcohol holds social significance.

1. Introduction

Rates of hazardous alcohol use, including binge drinking (five or more standard drinks for men), are disproportionately high for men who have sex with men (MSM) in the United States (US), with binge drinking rates among MSM approaching 51%, compared to 27% of the general US population (Hess et al., 2015; National Institute of Alcohol Abuse and Alcoholism, 2017; Substance Use and Mental Health Administration, 2015). Hazardous drinking is associated with the development of alcohol use disorder (AUD) (Gowin, Sloan, Stangl, Vatsalya, & Ramchandani, 2017; World Health Organization, 2014), and has been proposed to increase the risk of HIV seroconversion via condomless anal sex among MSM who do not use HIV pre-exposure prophylaxis (PrEP) (Kahler et al., 2015; Koblin et al., 2006; Mimiaga et al., 2011). Hazardous drinking has also been independently linked to co-morbid psychiatric conditions and decreased HIV antiretroviral medication adherence in MSM (Ferro et al., 2015; Reisner, Mimiaga, Safren, & Mayer, 2009; Woolf & Maisto, 2009). As MSM and people of color — and thus especially MSM of color — all experience a greater burden of new HIV infections in the US, it is important to address hazardous alcohol use as a risk factor for HIV (Brooks, Rotheram-Borus, Bing, Ayala, & Henry, 2003; Centers for Disease Control and Prevention, 2018; Maulsby et al., 2014; Shoptaw & Frosch, 2000).

Psychosocial interventions (e.g. Alcoholics Anonymous, behavioral

* Corresponding author at: University of California, San Francisco School of Medicine, 513 Parnassus Avenue, Medical Student Center, S-245, San Francisco, CA 94143, USA.
E-mail addresses: elaine.hsiang@ucsf.edu (E. Hsiang), danielle.jennings@ucsf.edu (D. Jennings), tim.matheson@sfdph.org (T. Matheson), jeuren@metabiota.com (J. Euren), glenn-milo.santos@ucsf.edu (G.-M. Santos).

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therapy) are effective in treating AUD, but relapse rates are as high as 79% when used alone (Weiss, O'Malley, Hosking, LoCastro, & Swift, 2008). Pharmacotherapy may help with the management and treatment of hazardous drinking. Disulfiram (Antabuse) is a medication whose mechanism of action involves unpleasant, punitive physiological effects (e.g. facial flushing, chest pain, palpitations, nausea) should the user consume alcohol (Skinner, Lahmek, Pham, & Aubin, 2014). Naltrexone, an opioid receptor antagonist, is a newer medication available in oral and injectable depot forms that has been demonstrated to decrease alcohol cravings, heavy drinking days, and rates of relapse (Anton et al., 2006; Garbutt et al., 2005). Although the US Food and Drug Administration (FDA) has approved these and other medications for AUD, it is estimated that fewer than 10% of people with AUD in the US have ever received medications for alcohol use (Jonas et al., 2014).

While pharmacotherapy for AUD is considered underutilized in the US despite clinical guidelines for first-line use in those with moderate to severe AUD (Jonas et al., 2014; Mark, Kassed, Vandivort-Warren, Levit, & Kranzler, 2009; Reus et al., 2018), data specific to MSM remain scarce. In a cross-sectional study conducted by our research group, only 6.9% of MSM with hazardous alcohol use received medications for alcohol treatment (Santos et al., 2018). Several studies have documented health care provider barriers to medication-assisted treatment, including inadequate knowledge of medication options and concerns about adherence, cost, efficacy, and side effects (Lee, Kresina, Campopiano, Lubran, & Clark, 2015; Thomas, Wallack, Lee, McCarty, & Swift, 2003). However, few studies have looked at barriers to and facilitators of taking AUD medications among MSM. Limited data for MSM with AUD suggest low disulfiram acceptability among those who frequent lesbian, gay, bisexual, transgender, and queer (LGBTQ) bars, and lower acceptability of abstinence as a treatment goal when compared to the general population (Brown et al., 2017; Bux, 1996; Morgenstern et al., 2007). It is unclear whether acceptability among MSM differs for medications such as naltrexone, which can be initiated when the user is still drinking.

To expand the use of pharmacotherapy to reduce hazardous alcohol use and its health sequelae among MSM, this qualitative study was designed to assess knowledge, behaviors, and attitudes among MSM surrounding AUD pharmacotherapy, with an emphasis on naltrexone.

2. Methods

As part of a broader project to explore the knowledge and acceptability of current treatment options to reduce hazardous drinking (including pharmacotherapy) among MSM, three focus group discussions (FGDs) were conducted in February 2015 with a total of 39 participants at the San Francisco Department of Public Health (SFDPH). Focus groups are well-suited for research topics where group dynamics and interactive discussions may draw a wider range of ideas and experiences through “collective remembering” (Guest, Namey, Taylor, Eley, & McKenna, 2017; Kitzinger, 1994). Focus group methodology was especially appropriate for this study due to the social contexts of alcohol use within MSM communities. All focus group participants provided written informed consent. The Institutional Review Board at University of California, San Francisco reviewed and approved the study procedures.

2.1. Recruitment

Participants were recruited through community-based organizations that provide services for MSM, previous research participation at SFDPH, research staff members' MSM networks, internet posts on Craigslist.com, and flyers in MSM venues. Participants were eligible if they identified as male, reported having had sex with at least one male-identified partner, consumed alcohol in the past year, and lived in the San Francisco Bay Area.

Across the FGDs, participants had a mean age of 39.1 years (median = 34.5 years; range = 23–66) and were racially and ethnically diverse, with the majority (N = 29, 74.4%) identifying as a participant of color. Table 1 displays participant characteristics by FGD. HIV status and other demographics were not collected during these FGDs.

Table 1
Basic demographics of focus group participants (N = 39).

Focus group	Mean age (range)	Race/ethnicity N (%)				
		API	AA	Latino	Mixed	White
All	39.1 (23–66)	10 (25.6)	9 (23.1)	6 (15.4)	4 (10.3)	10 (25.6)
FGD1 (N = 17)	40.9 (25–62)	5	3	2	2	5
FGD2 (N = 10)	35.7 (27–58)	1	2	3	1	3
FGD3 (N = 12)	40.8 (23–66)	4	4	1	1	2

FGD, Focus Group Discussion. API, Asian and Pacific Islander. AA, Black or African-American.

2.2. Study procedures

A discussion guide was developed to assess patterns and motivators of hazardous drinking, consequences of alcohol consumption and intoxication, and perceived acceptability of treatment for hazardous drinking, focusing on pharmacologic interventions. Participants were asked to speak on behalf of themselves and MSM-identifying friends, and were not required to individually quantify their own alcohol intake. Two staff members of the research group conducted the FGDs. Each group lasted approximately 2 h and was audio-recorded in the presence of a scribe who documented additional nonverbal information (Kitzinger, 1994). Portions of the audio recordings specific to the study question were transcribed verbatim.

2.3. Analysis

Partial FGD transcriptions of the participants' responses were analyzed using directed content analysis (Hsieh & Shannon, 2005). In directed content analysis, theory and previous research guide the initial selection of key concepts and variables (Hsieh & Shannon, 2005; Mayring, 2000). This approach to content analysis was selected based on study goals to extend existing research on AUD pharmacotherapy acceptability among MSM, by relying on social constructionist frameworks of alcohol use to nuance discussions surrounding different AUD medications. Two members of the research team (EH and DJ) independently coded and analyzed the transcripts to create a formative matrix of key concepts influenced by those found in the literature. Using the FGD script and transcripts, the key concepts were grouped into themes, and reconciled with a third research member (GMS) to compare themes and resolve discrepancies. Illustrative anchor quotations were then selected to represent the themes and evaluated for inclusion of all participant perspectives using voice recognition (i.e. identification of a distinct number of voices commensurate with the FGD size) and facilitator observations. The authors conferred to discuss group dynamics not verbalized in the recordings, additional insights from a final working of the text, and the overall interpretation of the data.

3. Findings

Four overarching themes were identified across the FGDs: an interest in alcohol reduction, rather than elimination; limited knowledge of treatment options for AUD; barriers to uptake of pharmacotherapy; and facilitators of pharmacotherapy uptake. Since participants did not

routinely identify themselves, quotes are attributed to their respective focus groups (e.g. FGD1).

3.1. Interest in alcohol reduction, rather than elimination

Alcohol use varied among participants, but binge drinking was ubiquitous among participants and their MSM peers. Participants readily discussed the desire to limit binge drinking, commonly described as a form of "social drinking," and its consequences. One participant expressed his interest in joining the study to learn healthier drinking practices, with others following in agreement:

> *I've been social drinking all my life. I enjoy it, but it leads to excess at times.*
>
> (FGD1)

Participants cited unpleasant hangovers, memory loss associated with "blacking out," daytime responsibilities, chronic health consequences, money spent on alcohol, and traffic violations as reasons for alcohol moderation. In two of the three FGDs, participants discussed reducing alcohol use as a way to decrease sexual risk. While participants shared laughter over awkward sexual encounters involving alcohol, all recognized that intoxication and blacking out pose health and safety concerns. One individual described an experience engaging in condomless sex while drunk, noting that alcohol had changed his own perception of HIV risk:

> *I was actually thinking about it. I was going to be a top, and I thought, these guys seem okay (laughter), so I probably only had a 10% risk… but if I was sober, I'd just be like, fuck [no]."*
>
> (FGD2)

Participants made it clear that an interest in alcohol reduction did not mean they wanted to stop drinking entirely, as alcohol cessation was perceived to suggest AUD. A few individuals described personal experiences with "drinking problems," but most had introduced themselves as "social drinkers" or some variation thereof to signal their distance from AUD. This was demonstrated when one participant commented on potential social supports for cutting down on alcohol:

> *I've found that there's a good number of sober gay men in San Francisco… and I always turn to them whenever either myself or a friend that needs some advice. Obviously we don't think of ourselves as alcoholics, but they have some skill sets that help at least reduce the amount that you're going out or the dependence that you feel to alcohol.*
>
> (FGD1)

Another distinguished himself from friends who became sober after seeking treatment for AUD:

> *My intention is to cut down on the abusive drinking, not the total drinking.*
>
> (FGD3)

Participants felt strongly about the benefits of drinking, and the importance of alcohol in facilitating social and sexual interactions by reducing inhibitions, boosting confidence, and alleviating anxiety:

> *It's kind of anxiety inducing to go out, but I still want to go out… [alcohol] definitely gets me out of my hood.*
>
> (FGD2)

To further illustrate the social value of alcohol, many drew upon the culture of drinking in the Castro District of San Francisco, where LGBTQ bars, clubs, and parties were the mainstay of social gatherings among MSM:

> *One of the hardest things about being an LGBT person in San Francisco is that almost every event revolves around alcohol… and it gets overwhelming, it gets expensive.*
> (FGD1)

3.2. Limited knowledge of treatment options for AUD

Through knowledge of friends who had sought professional help for AUD, or less commonly, by personal experience, participants were familiar with treatment modalities such as Alcoholics Anonymous (AA), individual therapy or counseling, and residential treatment programs. The idea that sobriety was the end goal of treatment dominated conversations about treatment options. Many participants did not know of options supporting alcohol reduction as opposed to abstinence. One expressed his confusion:

> *I know a lot of people who are in AA or work in support groups, but I feel like a lot of that conversation is around quitting and stopping, but this is asking, "cut down," so it's a weird question for me.*
>
> (FGD2)

In response, another individual described the concept of harm reduction with respect to its more well-known applications among MSM who use methamphetamine (Carrico et al., 2014):

> I'm a big pusher of harm reduction, but I only know about harm reduction groups in the city that apply to crystal meth. And I imagine for alcohol it would be like, rather than drink hard liquor, drink beer or drink wine, you know. Find a safer alternative, which I feel works a lot better, personally, than abstinence. (FGD2)

Some participants connected the use of PrEP as a form of harm reduction, not as AUD-specific medication, but as effective HIV chemoprevention (Grant et al., 2010) should the user have condomless sex while drinking:

> *I have friends that are very prudish about their sexual activities and are simply on PrEP because they've had problems overdrinking and putting themselves at risk, and they're mortified that they've done so.*
>
> (FGD1)

Associations between drinking, PrEP, and HIV risk among MSM were well understood, but most participants had not heard of medications that directly target hazardous drinking. Some recognized disulfiram and its "negative" side effects based on friends' experiences. Only one participant had personally tried disulfiram, reporting the medication to be:

> *Pretty effective, I mean, you can still drink, you just get really sick.*
>
> (FGD3)

Of the few individuals who had heard of naltrexone, most recognized the medication by name only and did not know how the medication was used. Naltrexone was often confused with Narcan (naloxone) or Wellbutrin (bupropion). One participant, who had joined this study based on prior participation in studies by this research group, stood out for his understanding of naltrexone's mechanism of action:

> *It's an opiate receptor blocker so it was used for, like, heroin addicts, but it's supposed to have the same effect, sort of, on alcohol.*
>
> (FGD2)

Notably, none had cited these FDA-approved medications when previously asked about AUD treatment modalities.

3.3. Acceptability of pharmacotherapy: Barriers to uptake

There was a pronounced hesitance regarding the use of pharmacotherapy for AUD. All FGDs received information about the different AUD medications, but only FGD1 was prompted of these options before participants discussed pharmacotherapy acceptability. Consequently, participants in FGD2 and FGD3 focused their discussions on the more familiar disulfiram, and appeared less willing to try pharmacotherapy than their FGD1 peers.

Despite these intergroup differences, the primary barrier across FGDs was a concern over side effects, particularly those produced by

disulfiram when combined with alcohol:

> *I've had friends who've used Antabuse. They said if I drank I'd become violently ill… the last thing I want to do is start throwing up in public.*
> (FGD2)

It was observed that FGD1 participants still used their knowledge of disulfiram's side effects to inform comparisons of the other medications. For example, one participant questioned whether naltrexone reduces cravings via a similar mechanism as disulfiram:

> *I think how it works is important: is it just reducing your cravings for alcohol, or what is the actual physiological effect on your body when you take it?*
> (FGD1)

Participants held reservations that even pharmacotherapy options that could be used while drinking might suppress the "buzz" from alcohol, effectively lowering the user's mood or ability to enjoy going out:

> *It's more a lifestyle of going out and socializing… being in that tipsiness or drunkenness or the "buzzedness," would [medication] deter from your level of having fun?*
> (FGD1)

Discussions also highlighted a preference to exhaust alternative treatments (e.g. AA) for AUD before using pharmacotherapy. This was most noticeable in FGD3, where by show of hands, none were interested in any type of pharmacotherapy as first-line treatment. One participant summarized this idea:

> *The only way I would really consider it is if I have actually tried everything else to try to reduce my drinking and I couldn't.*
> *(FGD3)*

When asked to comment on the low desirability of pharmacotherapy, another participant juxtaposed AUD medications with alcohol:

> *I just feel like you're replacing one drug with the other so I never really was too interested.*
> *(FGD2)*

The interchangeability of medication and alcohol as "drugs" reflected an additional, important barrier of addiction and medication stigma. Participants explained that because pharmacotherapy was perceived as a measure of "last resort" for AUD, taking medication could be visibly stigmatizing:

> *The stigma behind taking something… it implies you're an alcoholic and lots of people don't like being labeled that.*
> (FGD3)

Another theme was that medication alone would be insufficient to address the full complexity of AUD:

> *A pill doesn't address the social reasons that people choose to drink in the first place.*
> (FGD3)

Other barriers included the financial cost-to-benefit ratio, potential drug-drug interactions (e.g. with PrEP), and the burden of having a medication regimen. One participant anticipated suboptimal adherence among his friends:

> *A lot of people I know aren't big on having to take anything that's regular, a lot of my friends will say, "I can't even take a multivitamin."*
> (FGD1)

3.4. Acceptability of pharmacotherapy: Facilitators of uptake

Despite many reservations about pharmacotherapy, participants also identified facilitators of medication use. It became clear that participants' disinterest in disulfiram did not necessarily extend to medication options that can be used while drinking. Knowledge of the options itself was a facilitator of uptake. This was particularly evident in FGD2 and FGD3, when participants began listing benefits of medication once informed of the alternatives to disulfiram. For example, one participant suggested that by reducing cravings and number of drinks per session, medications such as naltrexone would aid users to avoid drinking until blackout:

> *You could still enjoy the night, but still be in control.*
> (FGD3)

Several participants agreed and expanded on this idea of control, stating that the ability to take a medication as needed, rather than on a regular regimen, would make pharmacotherapy more appealing.

Participants in FGD1 took more quickly to naltrexone, but even those who remained uninterested in pharmacotherapy provided opportunities to change their mind:

> *I would have to have more information on the success rate from some study group or something. I mean, if it's obvious that it's going to help, I'm not in denial about my drinking problem: 3 or 4 times a week socially, I, I think it's worth a shot.*
> (FGD1)

This individual stood out for his unique characterization of his "drinking problem," but the call for more information on the risks, benefits, and efficacy of naltrexone was echoed across FGDs. Another participant commented that providing information about side effects and drug interactions is necessary to be inclusive of transgender MSM on hormone therapy:

> *What about the trans community? A lot of questions would be, "I'm taking hormones. How would this pill affect my hormones?" Because I have a lot of friends who would say, "well that's for 'gay men,' but what about me?" So we have to touch the whole gay community.*
> (FGD1)

Several participants suggested changing the language of AUD pharmacotherapy to better reflect the principles of harm reduction. Many felt that reframing pharmacotherapy as a way to address common consequences of hazardous drinking, rather than as treatment for an individual's "alcohol problem," would reach more of the MSM population:

> *It's coming off as telling people, "you drink too much, let me fix you"… but you can gear it towards like, "you can't handle your drinks like the way you used to? Here's a way to manage it." And just redirecting it from, "you have an alcohol problem" to, "you're gonna have a hangover if you have four drinks."*
> (FGD2)

Participants also saw value in combining naltrexone with psychosocial interventions, such as therapy or formal alcohol reduction programs. Many agreed they were more likely to consider pharmacotherapy as part of a peer group or treatment cohort:

> *I think we have a very big group mentality. When people said swishing coconut oil in your mouth would get rid of all of the germs and it was totally disproven, we all still did it together. It just goes hand in hand if you're planning to reduce your drinking, your friends are probably having the same issues as you, so they're more likely to participate.*
> (FGD3)

Drawing from personal and friends' experiences with PrEP, one participant elaborated on the importance of mobilizing social networks to increase the acceptability of health interventions:

> *The social aspect is really intriguing, right? Similar to PrEP, PrEP is a community-based drug in that we talk about PrEP a lot, we encourage each other. So here, it's interesting this study focuses on the social aspect, because earlier, we identified we drink a lot, a lot of times due to our*

social structures, so here it's the reverse, using social structures to enable healthy habits.

(FGD1)

This sentiment was emphasized multiple times throughout FGDs:

As much as drinking is a social activity, reducing drinking is also a social activity.

(FGD3)

4. Discussion

MSM in this study were highly attuned to the impact of binge drinking on decision-making capacity and their risks of undesired negative consequences. Participants were overall interested in reducing binge drinking frequency. However, our sample varied with respect to alcohol use patterns, and while many identified binge drinking as a problem, there was a pervasive normalization of alcohol use among participants. This observation prompts a comparison of when participants used "problematic drinking" to endorse "social" binge drinking behaviors, and when they spoke of a "drinking problem," a phrase perceived to approximate AUD (Brown et al., 2017). While we did not formally assess alcohol use or screen for AUD among our participants, our results provide important implications for marketing treatment for a condition individuals do not identify with. Approaches targeting the stigma around AUD will be fundamental to increase the acceptability of AUD pharmacotherapy.

Pharmacotherapy to reduce drinking was initially framed in a way that drew little interest from our participants, and depended on participants' understandings of the prototype medication, their own alcohol use, and treatment goals. Our participants expressed interest in moderating, but not stopping, their drinking, and the vast majority were unaware of medications for AUD. Across FGDs, participants cited negative side effects commonly associated with disulfiram as their primary concern. Participants demonstrated greater acceptability of pharmacotherapy that would reduce binge drinking but not require abstinence. These results suggest that public perceptions of disulfiram as the only medication for AUD can set up assumptions that pharmacotherapy is purely abstinence-based, and highlight the need for more efforts to understand and recognize harm reduction as an alternative strategy to abstinence (Marlatt & Witkiewitz, 2002), in order to improve uptake of medications such as naltrexone.

It has been suggested that interventions to reduce drinking must acknowledge the social contexts in which alcohol is used (Emslie, Lennox, & Ireland, 2017; Vagenas et al., 2017). Similarly, social support plays an integral role in health-related behaviors with profound social contexts. Given that bars and clubs provide important public refuge for LGBTQ communities (Emslie et al., 2017), a non-abstinence approach would allow individuals to continue to access a social resource embedded in LGBTQ culture. However, emerging evidence linking LGBTQ bars to increased rates of AUD and other substance use disorders among MSM indicates a potential need for interventions to address drinking norms in the community (Cochran, Grella, & Mays, 2012; Stall et al., 2001). As our participants noted, future studies on people who use substances should also consider distinct concerns of transgender individuals and other groups typically obscured in the MSM or broader literature (Parker, Aggleton, & Perez-Brumer, 2016). For example, concerns over pharmacotherapy's interactions with hormone replacement therapy remain underexplored, yet may pose as a potential barrier for uptake in medication-assisted treatment for AUD.

The discursive parallels drawn between AUD pharmacotherapy and PrEP during the FGDs merit further comparison in light of the evolving public perceptions of PrEP. The shaming of MSM on PrEP as "Truvada whores" (Calabrese & Underhill, 2015) during the introduction of PrEP is analogous to the stigmatization of AUD pharmacotherapy and the fear of being labeled an "alcoholic," both of which result in barriers to their broader use. Public health campaigns to destigmatize PrEP have led to its wider, yet still limited, acceptability among MSM in the US (Calabrese & Underhill, 2015; Parsons et al., 2017); similar efforts may be needed to shift the discourse for AUD medications such as naltrexone and explore the dynamic relationships between naltrexone, PrEP, and condomless sex. Additional research is encouraged to identify risks of stereotyping MSM populations and assess outcomes of screening beyond those of HIV sexual risk reduction, given our participants' diverse reasons for cutting down on alcohol.

For participants with low motivation to change drinking habits or the belief that pharmacotherapy should be a "last resort" for people with AUD, prior studies suggest that interventions to inform MSM about hazardous drinking and the continuum of AUD can reach potential pharmacotherapy candidates (Brown et al., 2017; Kaner et al., 2007). A recurrent theme that medications do not address underlying psychosocial drivers of hazardous drinking reinforces the need to assure patients that pharmacotherapy is utilized as part of multilevel, multimodal approaches (i.e. medication-assisted treatment), rather than standalone therapy (Anton et al., 2006). Our findings thus support ongoing structural and behavioral interventions to address co-occurring factors such as sexual minority stress, depression, and trauma among MSM as triggers for hazardous alcohol use (Carrico, Zepf, Meanley, Batchelder, & Stall, 2016; Charlebois et al., 2017).

4.1. Limitations

Our study included MSM that use alcohol, but may not all have AUD or hazardous drinking patterns, thus additional studies are required for the target MSM population. As a study design, FGDs tend to produce normativity and may obscure contrary, minority opinions. With 17 participants in a relatively small space, FGD1 had lively conversation with fewer breaks compared to the other FGDs. While the facilitators took care to prevent the emergence of dominant speakers, this large FGD size could have increased the risk of apparent conformity (Sim, 1998). Study themes may not be generalizable despite age and racial diversity as demographic information regarding income, housing status, education, and so forth were not obtained. In addition, participants primarily frequented the Castro District of San Francisco and may not reflect the broader MSM community in the San Francisco Bay Area or across the US, nor are they representative of MSM internationally. Despite these limitations, our findings provide rich, detailed illustrations of one particular MSM subpopulation and extend the literature on the social contexts of alcohol use among MSM, as well as the potential for pharmacologic therapies to reduce hazardous drinking in those not interested in abstinence.

5. Conclusions

MSM in the San Francisco Bay Area exhibit high rates of hazardous drinking and alcohol-related health consequences. As few evidence-based interventions that focus on reducing rather than eliminating alcohol use exist, it becomes vital to evaluate their acceptability and relevance to the MSM community. Disulfiram is frequently perceived as the prototype pharmacotherapy for AUD, but disagreeable side effects and its requirement for abstinence render it unacceptable among individuals who do not wish to quit. In contrast, the lesser-known naltrexone has been demonstrated to reduce cravings while allowing continued alcohol use. Efforts to reduce hazardous drinking among MSM must address medication and addiction stigma while considering the social importance of alcohol use among LGBTQ populations. Communicating the harm reduction goals of naltrexone may significantly increase acceptability of pharmacotherapy.

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Declarations of interest

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