Experimental and Clinical Psychopharmacology

Remote Alcohol Administration: A Qualitative Study of Barriers and Facilitators to Potential Participation

Abigail P. Masterson, Claire Wilhelm, Deepthi S. Varma, Drew A. Westmoreland, James B. Moran, Sarah Chance, Robert F. Leeman, and Liana S. E. Hone

Online First Publication, December 4, 2025. https://dx.doi.org/10.1037/pha0000810

AMERICAN PSYCHOLOGICAL ASSOCIATION

Experimental and Clinical Psychopharmacology

ISSN: 1064-1297

https://doi.org/10.1037/pha0000810

Remote Alcohol Administration: A Qualitative Study of Barriers and Facilitators to Potential Participation

Abigail P. Masterson[1], Claire Wilhelm[1], Deepthi S. Varma[1], Drew A. Westmoreland[2], James B. Moran[3], Sarah Chance[1], Robert F. Leeman[4], and Liana S. E. Hone[1]

[1] Department of Health Education and Behavior, University of Florida
[2] Department of Epidemiology, University of Florida
[3] Department of Psychology, Monmouth University
[4] Department of Public Health and Health Sciences, Northeastern University

Human laboratory alcohol administration studies are crucial for advancing knowledge of cognitive processes and behaviors that precede alcohol consequences in a controlled environment, improving our understanding of etiology of alcohol problems and ability to develop and test safety and efficacy of interventions. However, conducting lab administration studies is challenging in part due to high participant burden, limiting generalizability of results to individuals who do not typically present for lab studies. Given the advantages of lab administration methods coupled with their challenges, remote alcohol administration was pursued as an alternative to enhance generalizability by removing barriers to participation and reducing participant burden. To establish feasibility and acceptability of this new remote method, we conducted qualitative interviews of 27 individuals (51.8% male; $M_{age} = 21.96$) and found that an average of 80% of individuals were willing to potentially participate in remote administration. Several themes emerged concerning participants' willingness and ability to participate, including (1) study location, (2) ease of participation, and (3) wanting to participate with a friend. However, some participants also cited specific barriers to participation, such as (1) living situation not conducive to participation, (2) study safety concerns, and (3) not wanting to participate with a romantic partner. Understanding both facilitators and barriers to potential participation will enable researchers to better design remote studies and enroll individuals not commonly included in current lab administration studies which has important implications for improved generalizability of findings.

Public Health Significance
Evidence indicates that participants are open to participating in alcohol administration research conducted remotely. Wide adoption of this method may improve generalizability of alcohol research findings.

Keywords: generalizability, substance administration, participant perceptions, online research methods

Alcohol administration studies elucidate alcohol's pharmacologic effects on risk-related processes in a rigorous, tightly controlled fashion, advancing knowledge of alcohol consequences (e.g., sexual assault, accident, injury, and death; Amlung et al., 2014; Curtin & Fairchild, 2003; Melkonian & Ham, 2018) and how to prevent them (Martin & Sayette, 1993; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2023). Alcohol challenge and self-administration studies also enable testing of key constructs pertaining

Neo Gebru served as action editor.

Abigail P. Masterson https://orcid.org/0000-0002-4791-0648

None of the data or ideas in the article have been disseminated prior to this publication. The authors have no conflicts of interest to disclose. Preparation of this article was supported in part by grants and contracts from the National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health Grants L30AA027013 (principal investigator: Liana S. E. Hone) and T32AA025877 (principal investigator: Robert Cook) awarded to Abigail P. Masterson. Drew A. Westmoreland was supported, in part, by a career development award (Grant K01AA029047). Robert F. Leeman was supported in part by Grant R01 AA029488 (multiple principal investigators: Jessica Weafer and Robert Leeman). The funding source had no other role other than financial support. All authors contributed in a significant way to the article and have read and approved the final article.

Abigail P. Masterson played a lead role in data curation, formal analysis, software, writing–original draft, and writing–review and editing and a supporting role in project administration. Claire Wilhelm played an equal role in formal analysis, software, and writing–review and editing. Deepthi S. Varma played a supporting role in methodology, supervision, and writing–review and editing. Drew A. Westmoreland played a supporting role in writing–original draft and writing–review and editing. James B. Moran played a supporting role in data curation, writing–original draft, and writing–review and editing. Sarah Chance played a lead role in data curation and project administration and a supporting role in conceptualization. Robert F. Leeman played a supporting role in conceptualization and writing–review and editing. Liana S. E. Hone played a lead role in conceptualization, funding acquisition, and supervision and a supporting role in writing–original draft and writing–review and editing.

Correspondence concerning this article should be addressed to Abigail P. Masterson, Department of Health Education and Behavior, University of Florida, P. O. Box 118210, Gainesville, FL 32611-8210, United States. Email: amasterson@ufl.edu

to alcohol-related risk such as craving and subjective response to alcohol, as well as comparisons between active treatments (often pharmacotherapy) versus placebo or other control conditions. For example, O'Malley et al. (2002) included an alcohol challenge in the context of a self-administration study. They administered a priming dose of alcohol along with naltrexone or placebo to examine alcohol craving. Ray et al. (2014) used a similar method and administered varenicline or placebo and then dosed participants to 0.06 breath alcohol concentration (BrAC) to assess nicotine craving.

In self-administration studies, researchers observe how much or little alcohol participants opt to consume (Cyders, 2023), and alcohol consumption or other changes of interest (e.g., cognition, craving) are the dependent variables. In alcohol challenge studies (alcohol is often the independent variable/moderator), researchers administer a fixed dose of alcohol determined by biological sex, height, and weight to achieve a target BrAC (Cyders, 2023). This enables researchers to observe changes due to alcohol dosing in a laboratory setting yet, despite the utility of administration studies, alcohol effects in the laboratory may not accurately mimic effects in the natural environment (Testa et al., 2006). As a result, one of our field's most valuable methodological tools must overcome significant challenges.

Laboratory administration studies likely underestimate the true effects of alcohol that operate outside of the lab, and failure to replicate real-world alcohol effects in the lab can be attributed to differences in part due to sampling (Testa et al., 2006). To achieve experimental control, administration studies occur in clinical environments or labs that are challenging for participants to access, creating barriers that limit recruitment of eligible participants and, thus, generalizability of findings to critical populations (e.g., rural participants). Moreover, the nature of administration studies may systemically limit eligible participants' ability and willingness to enroll (Humphreys et al., 2005). Participation typically requires a substantial time commitment, including traveling to and remaining in a research facility until desisting to a predetermined BrAC threshold (typically .02, which can take up to 8 hr; Bujarski & Ray, 2016; Lawson et al., 1980), thus favoring flexibly employed/unemployed individuals (Chaudhari et al., 2020) or those with no family obligations or dependents.

Subsequently, as few as 3%–20% of eligible subjects may choose to participate (Mason et al., 2006), and it is likely that younger individuals and students are more likely to enroll (Goodwin et al., 2024). In addition, key subsets of individuals who have experienced serious negative consequences during or after drinking (i.e., sexual assault survivors) may also be underrepresented (Abbey et al., 2014). Thus, among those who are eligible, diverse samples are difficult to recruit. To address this shortcoming, innovative approaches to improving generalizability like improving convenience and comfort of participation are necessary to recruit and retain participants who *are* eligible but who experience barriers to participation (Le Strat et al., 2011; Motschman et al., 2016; Schick et al., 2020).

One approach to addressing sample issues in administration studies is to move research to a remote setting. The COVID-19 pandemic's impact on in-person research led to a rise in remote research broadly, as well as calls for remote substance administration studies (Englund et al., 2022). Remote methods generally provide privacy and accessibility for participants and enable certain groups to participate despite health and travel concerns (O'Quinn et al., 2024). Hard-to-reach populations, including parents with family and work responsibilities and those in rural or isolated locations, prefer remote research and are easier to reach for remote studies (O'Quinn et al., 2024). Additionally, participants of all ages report that they would be more likely to take part in clinical research via video call (Neumann et al., 2021). Thus, remote substance administration seems to be an important future direction for alcohol researchers (Englund et al., 2022) that is currently underleveraged. However, the extent to which participants would be willing to participate in remote alcohol administration studies is unknown.

Thus, the purpose of this study was to establish the feasibility and acceptability of remote alcohol administration research for those who can participate but who might have barriers to participation that affect willingness or ability to enroll. Our goal was to find ways to increase participation and make participation possible for a wider range of participants rather than make a case for altering eligibility criteria. Thus, we focused our line of inquiry on understanding perspectives of those who can but are not willing/able to participate (e.g., rural participants) rather than those for whom participation may not be ethically possible (NIAAA, 2023; e.g., those with high Body Mass Index, severe alcohol use disorder, or little drinking experience).

Our structured qualitative interviews investigated (1) barriers and facilitators to and (2) safety of participating in alcohol challenge studies remotely. Specifically, we were interested in participants' willingness to participate in a study that had a lab component in which we taught them administration methods, an at home component in which they replicated those methods, and potential follow-up sessions of varying length that might involve alcohol administration. Our first research question was: "Is it feasible to conduct remote alcohol administration among adults aged 21–45 in the Gainesville area?" More specifically, "Are individuals who are eligible for alcohol administration studies comfortable with participating in a remote alcohol administration study?" (Aim 1a) and "What potential issues do they foresee when thinking of participating?" (Aim 1b). Our second research question was: "Would adults, aged 21–45 in the Gainesville area, want to participate in a remote alcohol administration study?" More specifically, "Are people likely to participate?" (Aim 2a) and "What are the reasons they may or may not want to participate?" (Aim 2b). This qualitative approach enabled us to collect information that may not be captured through researcher-developed quantitative data collection. Insight into eligible drinkers' barriers to participation may improve enrollment of diverse participants and ultimately enhance the generalizability of alcohol administration studies.

Method

Sampling

Participants were recruited via convenience sampling. Flyers were posted around the Gainesville, Florida, area to capture a sample of the community. Our immediate goal was to collect information from those who were eligible to participate in an alcohol administration study, and a convenience sample was deemed appropriate. This study was approved by the University of Florida institutional review board 202202500, and all individuals clicked to indicate their consent during an eligibility screener.

Transparency and Openness

We report our sample size determination, data exclusions, and study measures, and we follow Journal Article Reporting Standards (Levitt et al., 2018). All data, codes and themes, and research materials are available by request. Data were analyzed using NVivo 14. The study design and its analysis were not preregistered.

Participants

We enrolled individuals aged 21–45 because binge drinking rates do not drop below 25% until age 45–49 (Substance Abuse and Mental Health Services Administration, 2024). We limited the sample to those under age 45 as there is evidence older adults may be more impaired under similar doses of alcohol compared to younger adults (Gilbertson et al., 2009). Moreover, rates of sexual violence among 35–64 year olds remain above 25%. Thus, we raised the age of inclusion to 45 to capture thoughts and opinions from a wider range of individuals.

We enrolled individuals who would typically meet eligibility criteria for alcohol administration studies (NIAAA, 2023) including (1) consumption of ≥5 alcoholic drinks on one occasion and some alcohol use on at least a monthly basis in the past year, (2) no reported history of psychiatric or neurological disorders or head trauma, (3) no history of treatment for alcohol or substance use disorder, (4) no reported withdrawal symptoms during periods of abstinence from drinking, (5) no desire to quit or cut down on drinking, and (6) no medical contraindications for alcohol. Eligible individuals were invited to participate in a structured one-on-one interview via Zoom. The analytic sample comprised 27 participants (M_{age} = 21.96, SD_{age} = 1.37, range = 21–26; Table 1). Typically, five to 24 interviews are adequate in nonpurposive sampling studies to reach saturation—the point at which data collected has no additional insights identified and data repeats, indicating that further data collection is unnecessary (Hennink & Kaiser, 2022).

Data Collection

To determine eligibility based on the NIAAA (2023) alcohol administration criteria, we asked participants to complete a screening survey. We also collected basic demographic data such as age, race, sexual orientation, and gender identity. We developed a script comprising specific interview questions in a nested order with broader questions followed by specific probing questions, so the structured interview format was most fitting. Our script was developed by the coauthors AM, DV, and SC, with input from the senior author (LH) as they have experience conducting alcohol administration studies in the laboratory and conducting qualitative interviews. Interview questions were asked after the procedures (Figure 1) and timeline (Figure 2) of a potential remote alcohol administration study were described. Participants were asked to give their immediate thoughts about the proposed study, say if they would or would not be interested and why, provide any ideas for improvement, along with whether they would participate, feel safe participating at home, or would like to participate with others either in their home or over Zoom. They were then asked about potential barriers. Interview transcripts were generated from Zoom calls using the transcription feature.

Table 1
Sample Demographics

Variable	*M* or % of sample (*N* = 27)
Age	*M* = 21.96, *SD* = 1.37
Gender	
Men	51.9
Women	48.1
Ethnicity/race	
Black/African American	3.7
Hispanic/Latino	22.2
Asian	11.1
White/Caucasian	48.15
More than one race	14.81
Sexual orientation	
Straight	77.8
Gay/Lesbian	7.4
Bisexual	11.1
Queer	3.7

Data Analysis

Transcripts were downloaded and cleaned. A coding scheme was developed deductively based on the interview guide, as many questions were designed to probe specific themes. Subsequently, data that did not align with the initial deductive codes were analyzed inductively through thematic coding to capture additional emergent themes. As a result, the codebook was developed based on the interview guide and topic repetition within the interviews (Braun & Clarke, 2006). Each topic that was repeated more than once was assigned a code, and these codes were grouped into themes based on theoretical overlap. Coding was performed independently by two coders with qualitative research training (AM and CW) and discussed with a coauthor (DV) when consensus could not be reached to reconcile differences. While both coders aimed to be objective with their codes, as cisgender, White women with backgrounds in psychology, it is possible there may have been bias introduced for participants' responses.

Results

Qualitative Results

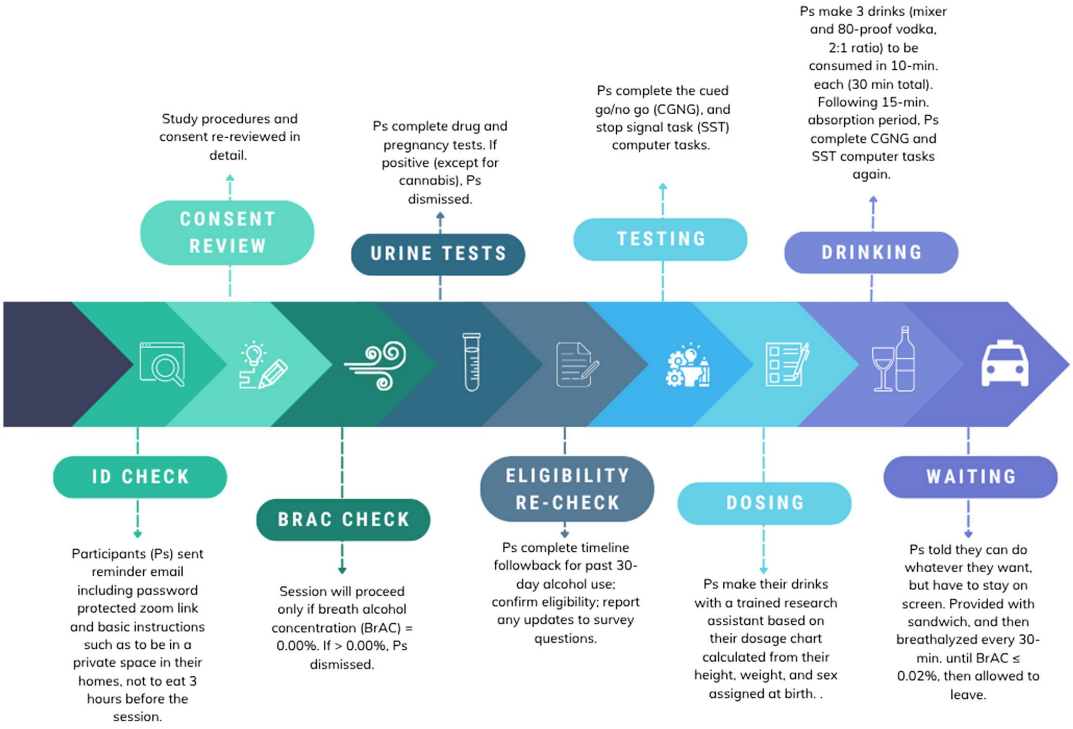
A thematic analysis revealed three primary themes for participating in remote administration studies and three themes for barriers to participating.

Reasons for Participating in Remote Research. A major theme concerned why participants would want to participate in remote administration research. Subthemes included (1) study location, (2) facilitators to participate (e.g., ease of participation), and (3) participating with others.

Study location encompassed how the setting of the study affected participants' desire to participate. Some individuals described alleviation of concerns regarding participating in the lab and indicated they would feel (1a) safer and/or it would be (1b) more convenient to participate at home. Some participants also indicated they would be (1c) more comfortable participating at home compared to the lab:

> It's just convenient because you don't have to be in a certain place. Like if you do it from your home, you know that where you are is safe, or you might trust it more and then you know exactly what's in the drink.

Figure 1
Procedures for Alcohol Administration Study



Note. BrAC = breath alcohol concentration. See the online article for the color version of this figure.

You're just kind of more familiar with your surroundings and your setting. (Participant 10, 21-year-old Black female)

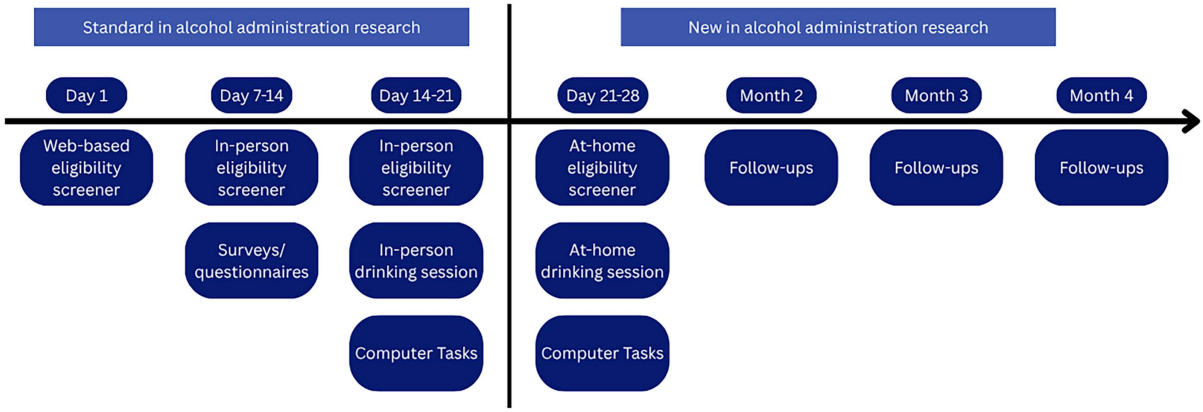
Having it at home would just maybe make the participant feel a little bit more comfortable in a safer environment. … all of those measures could be helped by having it be at home. (Participant 4, 22-year-old White male)

Even this opportunity, I was like, oh, you know, it's a Zoom call at home. It's convenient, especially, with drinking is also another thing because transportation is an issue, you know, finding a ride, that kind of thing. I know you guys mentioned you Uber your participants back to, to their places, but it just, it makes it a lot more accessible and easy in that way. (Participant 7, 22-year-old White, male)

One of the most prominent themes was study incentives to participate which included (2a) ease of performing study activities, which was commonly brought up as something that would facilitate participation.

With the at-home portions of the study, like I like that everything's like pre-made and pre-designed. I guess it removes a lot of the variance of,

Figure 2
Proposed Timeline Shown to Participants



Note. See the online article for the color version of this figure.

> hey, can you go grab a beer from your fridge or something and figure it out from there? (Participant 14, 21-year-old White, male)

It also encompassed several participants' (2b) desire to have clear instructions and thorough preparation for the study:

> The materials being provided with like said instructions of, how much like—what I need to be able to do—would make me feel more comfortable in terms of like knowing everything is set up for me, and I don't have to go out on my way to do anything else to set up for it. (Participant 1, 23-year-old Black, Hispanic, Caribbean male)

Some participants indicated the (2c) flexibility of scheduling would make them more likely to participate:

> I'm guessing with an at home study … there are a lot more availability, I guess, in terms of like when you can like participate, like, it might be easier to do on like week … weekend nights or nights, like, before you have work or school. (Participant 4, 22-year-old White male)

The most common incentive to participate was (2d) financial compensation, with many citing it as a large contributor to why they would participate:

> Definitely the compensation and definitely I just love being a part of scientific research and seeing it grow. (Participant 15, 26-year-old Hispanic/Latino White male)

> That sounds like a good amount, but I definitely think the (financial) compensation would play a big factor because you know… too little, me and other people probably would be less incentivized to do it, then if it was a larger compensation, then we'd be more incentivized. (Participant 17, 22-year-old Hispanic/Latino female)

Furthermore, (2e) knowing the results of the study once it was published was also commonly cited as a reason they would participate:

> It would just be interesting to see different things about myself, and it'd be interesting to like see if there's like a pattern to these things. Relating to like being under the influence of alcohol like if it's like a consistent thing. (Participant 16, 24-year-old Hispanic/Latino female)

(3) Participating with others was another subtheme that many participants cited as potentially facilitating their participation and encompassed things like (3a) participating with a friend:

> It might be even more helpful to just have 2 people can kind of do it together at once to benefit them and also get more participants. (Participant 2, 21-year-old White female)

As well as (3b) interacting with our research assistant on Zoom:

> Sociable researchers: people that are conducting the study to be personable, because that definitely can make somebody who's under the influence more comfortable. (Participant 9, 21-year-old White female)

Reasons for Not Participating in Remote Research. A second major theme appearing in the data concerned why participants would not want to participate in remote research. Subthemes included (1) living situation, (2) study concerns, and (3) participating with others.

Some participants indicated their (1) living situation may not be conducive to remote alcohol research, rendering them less likely to participate due to lack of a private space:

> There are things that like I wouldn't really be concerned about sharing in a research study, because, I feel I'm not going to see these people again and also there's an expectation of confidentiality, whereas I might not be at a point in the relationship with, like my roommate or my partner or my child, where I'm like ready to share that and I might be concerned about it being like overheard. (Participant 3, 23-year-old White male)

Another important subtheme that emerged was (2) study concerns, for example, (2a) methodology concerns like standardization of drinks and environment:

> If you're trying to keep some consistency. Yeah. Or maybe like a specific like, like a bottle of wine, like something that has a more like set alcohol percentage like if someone's like pouring themselves a mixed drink like people's versions of that could be different. (Participant 2, 21-year-old White female)

Some participants (2b) questioned how alcohol is used or would be safe to use in the study:

> I just wonder like how would you test like what your actual BAC is if you're at home? (Participant 17, 22-year-old Hispanic/Latino female)

> How do you determine if people are drinking standard drinks during remote alcohol sessions? (Participant 9, 21-year-old White female)

While other participants asked more (2c) general logistical questions about the study:

> What would happen if they like, just left the meeting?… like cause if you're in the lab bar, you're obviously physically there. … It's harder to leave, but like if they were like doing the at home drinking session, they could. (Participant 2, 21-year-old White female)

> The level that you're choosing is still—you're legally allowed to drive under that level, so are you trying to see if you are like cognitively impaired, even though, like you're still allowed to drive? (Participant 25, 22-year-old White female)

(2d) Follow-up commitment was a commonly mentioned barrier to participation, with nearly all participants indicating a substantial time commitment as a deterrent to participating.

> Having a reasonable time, of how long the study takes. Like I said, about 6 months. I don't think I would go over that, because for me personally, my life is moving forward, and I have a lot going up, coming up. (Participant 1, 23-year-old Black, Hispanic, Caribbean male)

Possible (2e) technology issues were also brought up by some participants:

> Possibly technology issues or like camera and audio quality. (Participant 9, 21-year-old White female)

Finally, while some participants cited participating with others as a facilitator, some participants thought they would be uncomfortable participating with (3a) a romantic partner or (3b) research assistant, citing them as barriers to participation:

> The sensitive information thing or like questions that might be a little like iffy, if that is something that you guys do, because I know you mentioned earlier in this interview about possibly doing this like with your partner or something like that or that kind of thing. I do think that that should be something that's separate just because some people with their partners are not ready for that. … I think that would just help you guys have happy participants without any issues. (Participant 12, 21-year-old Hispanic/Latino male)

> It would be weird, I guess, to just have another person in Zoom or it would just feel different, obviously. So I'm not entirely sure how I feel about that. (Participant 5, 21-year-old White male)

Furthermore, one participant mentioned that participants who participate with others may be more vulnerable to socially desirable reporting:

> This is just me guessing since I, as I said, I don't have one at this time, but my guess would be that many people would feel comfortable doing it together, but you might not necessarily get as precise results if people are answering questions about sex or sexual relationships with the person they're in a relationship with participating at the same time as them. (Participant 5, 21-year-old White male)

Ancillary Quantitative Results

We assessed the probability of participation in remote research toward the end of the interview via one question, "What is the probability that you would participate in our study as we've described it? 0% meaning you wouldn't to 100% meaning you would." Participants cited an average of 80% probability of participation (range = 50%–100%). Reasons for hesitation included current living situation. Participant 2, a 21-year-old White female said,

> I'd say maybe like 60 to 75% with my reason for hesitating being because I live communally, and it would be hard for me to, if I was trying to do that, I would probably obviously want to be able to have the room to myself.

Another participant cited their participation would depend on financial compensation: "Personally, for me, I guess it would depend on the financial compensation. So as long as there's adequate financial compensation, like I would 100% commit to the study" (Participant 4, 22-year-old White male).

Additionally, most participants cited they would like to participate in the study with their romantic partner (n = 24). One participant mentioned while they would want to do this, their partner was currently breastfeeding and thus unable to participate. This brought a unique perspective to challenges for parents to participate. One of the biggest challenges cited for parents was availability:

> If you're interested in, you know, the population that is parents … it's that time bit. Five to six hours is just such a huge, it would have to be, I think, a very generous compensation to get someone to be willing to be away, and, you know, in my case, to be able to convince their partner. (Participant 15, 26-year-old Hispanic male)

Some other themes with the highest prevalence of endorsement were logistical concerns (62.96%), comfort (74.07%), and interest in the topic (81.48%; see Table 2).

Discussion

We sought to establish preliminary feasibility and acceptability of a remote alcohol administration method and varying follow-up assessments. We found evidence that individuals thought remote administration was feasible (Aim 1) and would participate in a remote study (Aim 2). These results provide evidence that individuals eligible for administration studies are willing to participate in remote research and believe remote administration would be safe, convenient, and at times more comfortable than participating in a lab administration study. Moreover, we intended to use the qualitative perspectives to inform protocol development in a way that took barriers to participation into consideration. Thus, protocols for how we would distribute alcohol and test alcohol content or BrAC at home were not provided in descriptions of the potential study. Subsequently, we do not have qualitative data on many specific aspects of remote alcohol administration, only on barriers and facilitators. Future qualitative research should include details on the role of research assistants in the study, the role of the study physician, the exact compensation structure, alcohol procurement procedures,

Table 2
Themes and Codes

Theme	Subtheme	Code	Percent of participants endorsed
Barriers	Study concerns	Follow-up commitment	100
		Logistical questions	62.96
		Methodology concerns	44.44
		Questions about alcohol standardization or consequences (i.e., hangover)	44.44
		Technology	14.81
Barriers and facilitators	Location	Comfort	74.07
		Physical safety	40.74
		Convenience	14.81
	Living situation	Children	51.85
		Pets	40.74
		Private space	33.33
		Bathrooms	25.93
	Participating with others	Research assistants	55.56
		Romantic partners	33.33
		Roommates	14.81
Facilitators	Incentives to participate	Interest in topic	81.48
		Compensation	70.37
		Ease of performing study activities	51.85
		Flexibility of scheduling	33.33
		Knowing results	25.93

accurate measurement via hydrometer, and use of a smartphone breathalyzer to iteratively improve remote methods.

These qualitative data speak specifically to barriers to remote administration research, which primarily centered on study concerns regarding how to standardize alcohol, logistics of methods, technology issues, and follow-up commitment. To address this, researchers should clearly outline how participants would measure alcohol volume and breath alcohol, get alcohol, and so forth. Some solutions could include teaching the participants the remote methods over Zoom before the alcohol administration session would occur. Additionally, all participants noted the time commitment the study required was a particular issue, but participating remotely absolved some of those concerns. In contrast, we found many participants were interested in participating for a variety of reasons. By emphasizing their interest in the topic of alcohol administration, compensation level, ease of performing study activities (i.e., they will be taught all methods before participating), and disseminating research findings to participants, individuals said they would be more likely to want to participate in a remote alcohol administration study.

Of note, some of our subthemes were categorized as both barriers and facilitators to participation. For example, some participants cited participating in the study at their homes would be safer and more convenient, but others indicated that it would not be conducive as they did not have a private space where they felt comfortable to participate, indicating lab studies are still preferable to some. When designing remote studies, participants' living situations should be considered. Access to private spaces may be differently available to those from different socioeconomic backgrounds. This may introduce bias toward certain potential participants and result in unintended sampling issues, so lab options may still be of use. Additionally, some individuals stated they would like to participate with others such as their friend, whereas other participants brought up potential discomfort participating with their romantic partner or a research assistant. Having others in the home (or lab) is an important consideration in future remote alcohol administration studies, both in terms of safety concerns (e.g., risk for intimate partner violence) and biased results (e.g., during attention tasks).

Perhaps the most important takeaway from this is how and when remote methods may be used in lieu of laboratory methods. While many participants indicated they would participate in the remote method, there are cases as discussed above when it may not be appropriate or safe to do so. For example, one participant mentioned they would be concerned if their partner heard answers to sensitive questions, so studies on sensitive topics such as sexual health or experiences may warrant procedures to ensure participant comfort and safety along with honest reporting. Another participant indicated they had a child, and thus it would be difficult for them to participate due to the time commitment for either study. Future qualitative research should investigate how to better enroll parents in their studies.

Limitations

This study had several limitations. First, our sample was skewed toward those who typically participate in administration studies (i.e., White, young; Plebani et al., 2012). Thus, while the information we collected is applicable to an administration study, it did not accurately capture all the possible barriers or facilitators to participation and may not be fully transferable to all populations. However, we did have some diversity of gender and racial/ethnic identity in our sample, suggesting a diverse population may be interested in participating in these studies. Second, all interviews were conducted via Zoom, which limited our study population to those with a reliable internet connection and technology supporting video conferencing. This was necessary as our planned studies would be conducted via Zoom; however, it does make the results of this study less representative of the overall population. Future qualitative studies should address this by sampling those who do not usually participate in alcohol research studies, conducting interviews in person, or providing take-home technology for remote research. Additionally, participants were asked to give their thoughts on a potential study that was not yet fully designed as some of the qualitative perspectives were used to design the subsequent study. Future research should ask about acceptability and feasibility for participants who have completed remote administration studies.

Another limitation is that this study only had two coders. One coder is trained in alcohol administration methods, so more importance may have been placed on certain barriers or facilitators that may not be fully representative of this sample's data. Both coders were also within the typical sample demographics for an alcohol administration study which may skew the results more positively than was intended. The coders received opinions from trained qualitative researchers in the health field who are not alcohol researchers to help counteract some of this bias and gain more understanding of the coding process. However, all interviews were conducted by two individuals in the health field who were not trained in alcohol research, which may have reduced some bias in data collection. Future research should include a second coder from a different field to bring different expertise and a less biased analysis.

Implications and Future Directions

Tightly controlled experimental alcohol administration research has yielded important discoveries that guide clinical practice and intervention development. However, researchers' ability to study alcohol effects in the lab is limited by sample issues affecting generalizability. Moving administration studies from the lab to a remote context addresses some issues while still providing an element of experimental control. It expands the accessibility of this method to researchers nationwide, potentially exponentially increasing the number of etiological studies that can be conducted. While we only asked participants about our specified alcohol challenge study and not self-administration methods, future work should focus on applying this approach to other types of administration methods. Future directions should also concentrate on how to make administration studies more accessible to populations with challenges to participation (e.g., parents).

Conclusion

Ultimately, this study identified barriers and facilitators (some overlapping) to potentially participating in remote alcohol administration research to inform the design of the first remote studies. Given there are several university towns like Gainesville with similar demographics and large student populations, remote research may be popular in many areas of the United States, and popularity may spread as methods are developed and fine-tuned, eventually fulfilling needs of both participants and researchers. This will move research on important public health questions forward and improve our knowledge of alcohol's role in negative consequences via

processes that precede alcohol-related violence, accident, injury, and death.

References

Abbey, A., Wegner, R., Woerner, J., Pegram, S. E., & Pierce, J. (2014). Review of survey and experimental research that examines the relationship between alcohol consumption and men's sexual aggression perpetration. *Trauma, Violence, & Abuse*, *15*(4), 265–282. https://doi.org/10.1177/1524838014521031

Amlung, M. T., Morris, D. H., & McCarthy, D. M. (2014). Effects of acute alcohol tolerance on perceptions of danger and willingness to drive after drinking. *Psychopharmacology*, *231*(22), 4271–4279. https://doi.org/10.1007/s00213-014-3579-1

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bujarski, S., & Ray, L. A. (2016). Experimental psychopathology paradigms for alcohol use disorders: Applications for translational research. *Behaviour Research and Therapy*, *86*, 11–22. https://doi.org/10.1016/j.brat.2016.05.008

Chaudhari, N., Ravi, R., Gogtay, N. J., & Thatte, U. M. (2020). Recruitment and retention of the participants in clinical trials: Challenges and solutions. *Perspectives in Clinical Research*, *11*(2), 64–69. https://doi.org/10.4103/picr.PICR_206_19

Curtin, J. J., & Fairchild, B. A. (2003). Alcohol and cognitive control: Implications for regulation of behavior during response conflict. *Journal of Abnormal Psychology*, *112*(3), 424–436. https://doi.org/10.1037/0021-843X.112.3.424

Cyders, M. A. (2023). *Translational research methods for alcohol use disorders* (Vol. 201). Springer. https://doi.org/10.1007/978-1-0716-3267-3_7

Englund, A., Sharman, S., Tas, B., & Strang, J. (2022). Could COVID expand the future of addiction research? Long-term implications in the pandemic era. *Addiction*, *117*(8), 2135–2140. https://doi.org/10.1111/add.15790

Gilbertson, R., Ceballos, N. A., Prather, R., & Nixon, S. J. (2009). Effects of acute alcohol consumption in older and younger adults: Perceived impairment versus psychomotor performance. *Journal of Studies on Alcohol and Drugs*, *70*(2), 242–252. https://doi.org/10.15288/jsad.2009.70.242

Goodwin, E. C., Gin, L. E., Aeschliman, A., Afoakwa, A. K., Allred, B. A., Avalle, S. T., Bell, A., Berkheimer, J., Brzezinski, H., Campos, R., Emerson, H., Hess, S. C., Montelongo, A. M., Noshirwani, N., Shelton, W. L., Valdez, E. M., White, J., White, Q., Wittekind, E., … Brownell, S. E. (2024). Who is represented in the research on undergraduate research experiences in the natural sciences? A review of literature. *CBE Life Sciences Education*, *23*(2), Article ar28. https://doi.org/10.1187/cbe.23-07-0137

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, *292*, Article 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Humphreys, K., Weingardt, K. R., Horst, D., Joshi, A. A., & Finney, J. W. (2005). Prevalence and predictors of research participant eligibility criteria in alcohol treatment outcome studies, 1970-98. *Addiction*, *100*(9), 1249–1257. https://doi.org/10.1111/j.1360-0443.2005.01175.x

Lawson, D. M., Nathan, P. E., & Lipscomb, T. R. (1980). Guidelines for the administration of alcohol to human subjects in behavioral research. *Journal of Studies on Alcohol*, *41*(9), 871–881. https://doi.org/10.15288/jsa.1980.41.871

Le Strat, Y., Rehm, J., & Le Foll, B. (2011). How generalisable to community samples are clinical trial results for treatment of nicotine dependence: A comparison of common eligibility criteria with respondents of a large representative general population survey. *Tobacco Control*, *20*(5), 338–343. https://doi.org/10.1136/tc.2010.038703

Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D. M., Josselson, R., & Suárez-Orozco, C. (2018). Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: The APA Publications and Communications Board Task Force Report. *American Psychologist*, *73*(1), 26–46. https://doi.org/10.1037/amp0000151

Martin, C. S., & Sayette, M. A. (1993). Experimental design in alcohol administration research: Limitations and alternatives in the manipulation of dosage-set. *Journal of Studies on Alcohol*, *54*(6), 750–761. https://doi.org/10.15288/jsa.1993.54.750

Mason, B. J., Goodman, A. M., Chabac, S., & Lehert, P. (2006). Effect of oral acamprosate on abstinence in patients with alcohol dependence in a double-blind, placebo-controlled trial: The role of patient motivation. *Journal of Psychiatric Research*, *40*(5), 383–393. https://doi.org/10.1016/j.jpsychires.2006.02.002

Melkonian, A. J., & Ham, L. S. (2018). The effects of alcohol intoxication on young adult women's identification of risk for sexual assault: A systematic review. *Psychology of Addictive Behaviors*, *32*(2), 162–172. https://doi.org/10.1037/adb0000349

Motschman, C. A., Gass, J. C., Wray, J. M., Germeroth, L. J., Schlienz, N. J., Munoz, D. A., Moore, F. E., Rhodes, J. D., Hawk, L. W., & Tiffany, S. T. (2016). Selection criteria limit generalizability of smoking pharmacotherapy studies differentially across clinical trials and laboratory studies: A systematic review on varenicline. *Drug and Alcohol Dependence*, *169*, 180–189. https://doi.org/10.1016/j.drugalcdep.2016.10.018

National Institute on Alcohol Abuse and Alcoholism. (2023). *Guidance for conducting alcohol administration studies with human participants*. https://www.niaaa.nih.gov/research/guidelines-and-resources/guidance_conducting_alcohol_administration_studies_human_participants

Neumann, S., Bamford, A., Lithander, F. E., Tenison, E., & Henderson, E. J. (2021). Public attitudes to the use of remote data collection in clinical research. *Contemporary Clinical Trials*, *111*, Article 106595. https://doi.org/10.1016/j.cct.2021.106595

O'Malley, S. S., Krishnan-Sarin, S., Farren, C., Sinha, R., & Kreek, M. J. (2002). Naltrexone decreases craving and alcohol self-administration in alcohol-dependent subjects and activates the hypothalamo-pituitary-adrenocortical axis. *Psychopharmacology*, *160*(1), 19–29. https://doi.org/10.1007/s002130100919

O'Quinn, J., Slaymaker, E., Goldstein-Kral, J., & Broussard, K. (2024). Sociology from a distance: Remote interviews and feminist methods. *Qualitative Sociology*, *47*(1), 43–67. https://doi.org/10.1007/s11133-024-09556-y

Plebani, J. G., Ray, L. A., Morean, M. E., Corbin, W. R., MacKillop, J., Amlung, M., & King, A. C. (2012). Human laboratory paradigms in alcohol research. *Alcohol: Clinical & Experimental Research*, *36*(6), 972–983. https://doi.org/10.1111/j.1530-0277.2011.01704.x

Ray, L. A., Courtney, K. E., Ghahremani, D. G., Miotto, K., Brody, A., & London, E. D. (2014). Varenicline, low dose naltrexone, and their combination for heavy-drinking smokers: Human laboratory findings. *Psychopharmacology*, *231*(19), 3843–3853. https://doi.org/10.1007/s00213-014-3519-0

Schick, M. R., Spillane, N. S., & Hostetler, K. L. (2020). A call to action: A systematic review examining the failure to include females and members of minoritized racial/ethnic groups in clinical trials of pharmacological treatments for alcohol use disorder. *Alcoholism: Clinical and Experimental Research*, *44*(10), 1933–1951. https://doi.org/10.1111/acer.14440

Substance Abuse and Mental Health Services Administration. (2024). *2023 national survey on drug use and health: Annual national report*. U.S. Department of Health and Human Services. https://www.samhsa.gov/data/sites/default/files/reports/rpt47095/National%20Report/National%20Report/2023-nsduh-annual-national.pdf

Testa, M., Vanzile-Tamsen, C., Livingston, J. A., & Buddie, A. M. (2006). The role of women's alcohol consumption in managing sexual intimacy and sexual safety motives. *Journal of Studies on Alcohol and Drugs*, *67*(5), 665–674. https://doi.org/10.15288/jsa.2006.67.665

Received May 30, 2025
Revision received September 10, 2025
Accepted September 18, 2025 ■