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EVALUATING DIFFERENCES IN DRINK REFUSAL TRAINING AND POSTTREATMENT OUTCOMES IN WOMEN IN INDIVIDUAL ALCOHOL TREATMENT

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by

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ABSTRACT

This study sought to establish the topography of drink refusal behaviors clients engage in while undergoing manual-guided Cognitive Behavioral Therapy (CBT) for Alcohol Use Disorders (AUD). Prior research has demonstrated that clients who receive specific skills training on how to assertively refuse drinks are less likely to relapse. Behavioral coding has been used previously to explore in-session behaviors by both client and therapist. Using this methodology, a coding manual (Drink Refusal and Motivation-Alcohol; DRAM-A) was developed for the present study. We sought to explore the relationship between differential types of drink refusal behaviors uttered by clients receiving treatment for AUD and drinking outcomes at 3 and 9 months post-treatment. Study materials were obtained as part of a larger study exploring efficacy of group versus individual CBT for AUD. Participants were 52 women randomized to the individual treatment condition. Using DRAM-A, trained coders evaluated and classified drink refusal training behaviors into different categories. Results demonstrated that the most commonly generated drink refusal behavior was Direct Refusal (n = 22), with 71%

of clients who engaged in a roleplay demonstrating that skill. However, almost half of the sample (40.38%; n = 21) did not engage in the role-play exercise. Selection of specific drink refusal behaviors was not related to any specific client or therapist characteristics such as therapist gender, level of education, or client marital or employment status. The use of Direct Refusal in session was positively associated with a number of better drinking outcomes at 3 months post-treatment, such as: fewer heavy drinking days, F (1,28) = 7.20, p = .01), fewer total drinks consumed, F(1,28) = 12.50, p = .01, lower percentage of heavy drinking days, F (1,28) = 6.99, p = .01, greater percentage of abstinent days, F(1, 28) = 6.61, p = .02, fewer mean drinks per drinking day, F 1,21) = 5.07, p = .035), and more days of abstinence, F (1,28) = 6.61, p = .02. With the exception of total drinks consumed, similar results were found at 9 months post-treatment. At nine months post-treatment, women who used a Direct Refusal in session had a higher number of days abstinent from alcohol, F(1,26) = 8.47, p = .001; this effect was not observed at 3 months. Results suggest that having clients participate in drink refusal training with a therapist may be an important dimension to success in recovery.

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Chapter 1
Introduction

Alcohol use disorders (AUDs) are some of the most widespread health problems facing society today. Indeed, the Substance Abuse and Mental Health Services Administration (SAMHSA) reports that more than 7% of American adults have experienced an AUD within just the past year (2013); lifetime prevalence of AUDs is estimated to be considerably higher, with estimates ranging from 12.5% (Hasin, Stinson, Ogburn, & Grant, 2007) to as high as 13.9% (Grant et al. 2015). There is compelling evidence that the effects of AUDs can be profound, and are not limited to the individual. Partners of individuals with AUDs are more likely to experience intimate partner violence (O'Farrell & Rotunda, 1997) and lower relationship satisfaction (McCrady, 2012). Individuals struggling with their drinking can face a number of obstacles, such as interpersonal difficulties, health consequences, financial instability, legal issues and other consequences. AUDs and the consequences of heavy and problematic drinking are also a particularly costly public health issue, incurring estimated annual costs of $223.5 billion (National Institute on Alcohol Abuse and Alcoholism, 2015). Importantly, individuals struggling to control their drinking often experience a marked decrease in their quality of life. Quality of life issues as well as public health consequences illustrate the critical importance of continuing to examine how to most effectively and pragmatically aid individuals to control their drinking and help them mitigate the consequences.

Accessing alcohol treatment may be a particular barrier to improving these outcomes. It is estimated that only about 24% of individuals with an AUD access any form of treatment (Hasin et al., 2007). The reasons for this are numerous, but one likely possibility is that individuals in need are not able to access the treatments that would

benefit them. Alcohol treatment is quite costly, and finding providers who use evidence-based treatments can be challenging, particularly given the constraints of geography, time, insurance coverage and other practical concerns. Given that the need for alcohol treatment currently outpaces that of the providers and services available, it is imperative to examine factors that might improve existing treatments. The study reported here focused on one aspect of cognitive behavioral therapy, drink refusal training, as a possible means to strengthen client commitment as a mechanism of change.

Change Talk and Commitment Language as Causal Mechanisms of Behavior Change

Client commitment language, or statements indicating the client is intending to perform some action (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003), has been identified as a potential mechanism of behavior change. Client commitment language has long been thought to be a key causal mechanism of change in motivational interviewing (MI) (Magill et al., 2014). Eliciting change talk, or statements made by the client indicating reasons they may have to change a specific behavior, is thought to bolster and strengthen the client's commitment to changing their behavior. Statements of commitment ("I will attend an AA meeting on Friday at noon") are a specific type of change talk. Strength of client commitment language is thought to be a causal mechanism of change in alcohol treatment. In a seminal study by Amrhein and colleagues (Amrhein et al., 2003), strength of client commitment language was examined in inpatient and outpatient drug abusers randomly assigned to receive MI from trained clinicians. The authors explored the relationship between in-session utterances of commitment and outcomes subsequent to the end of treatment. An interesting linguistic

pattern emerged in end-of-session utterances. For clients who were maintaining abstinence or who were most strongly committed to changing their behavior, discussing plans to change served to bolster and sustain their commitment (Amrhein et al., 2003). However, clients who were struggling with abstinence and provided discrepant information to their clinicians (clients whose drug screens were positive despite denial of substance use), talking concretely about changes to come (planning) served to offset prior commitment statements. One possible explanation may be that clients who were not forthcoming about their drug use also may have over-reported their motivation to change. These findings were later replicated with a sample of cocaine users (Aharonovich, Amrhein, Bisaga, Nunes, & Hasin, 2008) that looked at differences in cognitive function in drug abusers receiving outpatient CBT and found that greater impairment in cognitive function predicted dropout from treatment. However, this relationship was not stable when predicting drug use. In contrast, when evaluating strength of commitment language across treatment, greater strength of commitment strongly predicted reduced drug use at the end of treatment.

In summary, client commitment to change has been explored in therapy contexts in a number of different studies, with results indicating that strength of commitment is predictive of better outcomes for clients attempting to reduce their drinking. Importantly, client commitment language has been explored within the context of therapy, but no explorations of change and commitment language in other interpersonal contexts exist. Exploring how clients interact with their environment while trying to reduce their drinking may be an area of potential interest for future study.

The Role of Drink Refusal Training in Alcohol Treatment

Drink refusal skills training in CBT has long been demonstrated to be an important part of treatment. Research on drink refusal skills dates back to the late 1970s, with Foy and colleagues examining the success of applying newly acquired drink refusal skills in patients recently discharged from inpatient settings (Foy, Miller, Eisler, & O'Toole, 1976). Foy and colleagues (1976) evaluated two adult males who were receiving inpatient treatment for alcohol addiction. Both clients were coached on refusal strategies such as asking for an alternative to alcohol, asking the pusher to stop offering alcohol or changing the subject. At a three-month follow-up, one patient had maintained abstinence while the other patient had resumed drinking. However, both patients reported feeling more confident in their ability to navigate social situations with alcohol. Theorizing that social skills training could effectively arm individuals in treatment with more tools to navigate difficult situations in which relapse seemed likely, drink refusal skills training was a logical step for Chaney and colleagues (Chaney, O'Leary, & Marlatt, 1978). These interventions focused on teaching specific behavioral responses in specific social situations, thought to be some of the more difficult situations individuals in recovery might face. Individuals in alcohol treatment who were given drink refusal skills training had fewer and less severe episodes of relapse at one year follow up than controls who did not receive drink refusal training (Chaney et al., 1978). More recently, individuals in alcohol treatment who received drink refusal training as part of a combined pharmacotherapy and behavioral intervention (COMBINE; Anton et al, 2006) (versus those who did not) demonstrated greater reductions in drinking days while in treatment and at one year follow up (Witkiewitz, Donovan, & Hartzler, 2012). Preliminary research exists on exploring the efficacy of drink refusal skills training among individuals of

different cultural groups, as well. For example, secondary analyses from the COMBINE project showed that African Americans who were exposed to the drink refusal module in the Witkiewitz et al. study also showed reduced drinking at one year follow ups (Witkiewitz, Villarroel, Hartzler, & Donovan, 2011), suggesting that drink refusal skills training may be appropriate for members of different ethnic and cultural groups.

Drink refusal training is one of the key skills taught during cognitive behavioral therapy (CBT) for AUDs. Many people report social pressure as one of the obstacles to remaining sober (Hunter-Reel, Witkiewitz, & Zweben, 2012). Learning how to effectively and assertively refuse alcoholic beverages can help individuals remain abstinent. Peer influence has been shown to be a strong predictor of alcohol use, with higher levels of alcohol use among one's peers predicting higher individual alcohol use (Sieving, Perry, & Williams, 2000). As drinking becomes more severe, individuals tend to maintain social circles with fewer and fewer sober acquaintances and friends (Kadden, 1995). This can be risky for individuals trying to change their drinking for a number of reasons. First, their drinking behaviors likely have been reinforced and encouraged from their social circles over a prolonged period of time. Second, having a drinking social circle may make relapse especially likely; if an individual is around friends or acquaintances who are providing social pressure to drink, and are experiencing cravings likely triggered by encountering certain places or people, the individual has a particularly difficult situation to navigate if they desire to remain sober (Kadden, 1995).

For individuals in recovery, social pressure to drink alcohol is thought to take one of two forms (Kadden, 1995). One situation is indirect social pressure: the individual is in places and contexts where they typically have consumed alcohol before seeking

treatment. These situations can be challenging, as the cues and contexts around the individual can be highly triggering. Being exposed to stimuli previously associated with drinking behaviors can bring on intense cravings, which can be difficult to ignore. Exposure to drug and alcohol-related stimuli can cause neuroplastic changes, making individuals more vulnerable to relapse. Cues in an individual's environment become indelibly associated with the dopamine release of exposure to the addictive substance, causing neurochemical changes that make relapse more and more difficult to avoid (O'Brien, 2015; Kalivas, 2008). The second form is direct social pressure. Individuals may be offered alcoholic beverages directly, typically in the context of social situations. Being offered alcohol directly can create a high risk for relapse, as being directly asked or pressured to drink alcohol is particularly challenging for an individual lacking skills to manage that social situation. Additionally, these types of situations are likely to occur in risky situations (parties, bars, etc.), where the individual may already be feeling stressed about remaining sober and experiencing cravings for alcohol because of environmental cues. Strongly conditioned responses to alcohol-related cues in conjunction with being directly offered alcohol may create a situation in which it is particularly difficult to maintain abstinence. Individuals in recovery also may be feeling stigmatized or ashamed about not being "allowed" to drink, or may feel pressure to either lie about why they are not consuming alcohol, or alternately, to disclose their recovery status even if they feel it is a private matter.

Experiencing social pressure to drink or feeling triggered by contextual cues are both situations individuals in recovery are likely to encounter after treatment. Avoiding people or situations that trigger urges is a reasonable strategy but is not always practical

or possible. Therefore, learning how to effectively and assertively refuse alcohol when it is offered directly can be a critical skill for individuals in recovery. While undergoing manual-guided CBT treatment for AUDs, clients are given the opportunity to first generate ideas about situations where they are likely to encounter people who will offer them alcohol as well as individuals who will push them to drink. They are then instructed to practice assertively refusing drinks with the therapist who is treating them. In drink refusal training, clients are instructed that their first refusal should be a firm, "No, thank you." If that is not effective, clients are encouraged to offer alternatives (e.g., "No, thank you, but I'd love a club soda") or to change the subject (Anton et al., 2006). If the "pusher" continues to offer alcohol despite the client's clear refusals, the client is taught how to assertively ask the person to stop offering them alcohol (e.g., "Please stop offering me drinks") or finally to disengage (e.g., "Please leave me alone"). If the situation becomes too difficult for the client to navigate, they are encouraged to remove themselves from the situation (McCrady & Epstein, 2009). By executing these steps, clients are empowered to retain control of their drinking while also remembering that anyone who is repeatedly pushing alcohol on them likely does not have their best interests and goals in mind. Learning to assertively navigate situations where alcohol is present may help reduce the chance of relapse for individuals in treatment for AUDs.

Behavioral Coding and Alcohol Use Disorders

Behavioral coding involves systematically analyzing data (typically qualitative, in the form of transcripts, video or audio sources) and identifying specific themes and constructs (predetermined codes). Identifying these codes allows for statistical analysis of thematic elements that would not normally be possible (Chorney, McMurtry, Chambers,

& Bakeman, 2015). To reliably and systematically explore what occurs in the therapy session, behavioral coding has been a useful research tool. Coding methodology has been used to explore both therapist and client utterances.

Behavioral coding methodology also has been employed to explore which therapist behaviors are most likely to effect change. Some attention has been given to therapist behaviors that elicit change talk from clients. Client change talk has been found to be most likely to occur following therapist behaviors such as affirming/accepting the client, asking the client open-ended questions, and making reflective statements (Apodaca et al., 2015). Apodaca et al. also found that affirmation was related to fewer instances of sustain talk, or statements given by clients that communicate reasons not to change. As client change talk in therapy has been amply demonstrated to have beneficial effects, interventions designed to foster client expressions of change are likely to be an important area to expand and explore.

The majority of behavioral coding studies in the alcohol field have employed coding as a means to explore client commitment language, therapist utterances, or treatment fidelity. To date, no studies have used behavioral coding to explore therapist characteristics in drink refusal training or functionally different client expressions of drink refusal within therapy or in natural environments. Given the role of motivation in effecting behavior change, continuing to evaluate which interventions specifically to augment and modify may provide valuable information for therapists and for individuals in recovery. As reviewed above, strength of commitment language has been demonstrated to be related to better outcomes for individuals within and post-treatment. It is possible, therefore, that therapist interventions designed to strengthen change-talk

statements and client commitment to change through drink refusal training can directly impact treatment outcomes. An exploration of qualitatively different client strategies for dealing with proffered drinks may have important implications for treatment.

Therapists and other treatment providers are uniquely poised to elicit change talk and commitment language in session from clients who are trying to change their drinking behavior. In motivational interviewing, change talk and commitment language occur in the course of the therapeutic dialogue. Drink refusal training is a unique component of CBT for alcohol use disorders, and offers an opportunity for therapists to reinforce commitment language in CBT. Because drinking behaviors and situations do not typically present themselves in therapeutic settings, behavioral rehearsal through role play provides an opportunity to assess how clients could navigate real world drinking situations. It is possible that the types of refusal behaviors generated by clients during role plays may represent a specific kind of change talk that is a reflection of their commitment to behavior change. It is expected that the skills taught in therapy will then generalize to situations outside of therapy, and that clients will have opportunities to use the skills they have learned.

Specific Aims

To date, drink refusal skills have not been conceptualized as a form of commitment language, and no studies on differences in types of drink refusal behaviors generated by clients in alcohol treatment exist. Empirical research demonstrates the importance of eliciting change talk in clients who are attempting to reduce their drinking. Similarly, strength of commitment language in therapy has been linked to subsequent

behaviors, with stronger utterances of commitment predicting greater abstinence post-treatment.

Drink refusal training is known to be an important module of CBT for AUDs. Learning skills that they can apply in real-world situations is thought to be at the core of what effects change for individuals in CBT. Given the empirical support around the importance of commitment language, change talk and drink refusal skills, a number of specific aims and hypotheses were addressed in the current study.

Aim 1. No studies on the topography of drink refusals currently exist. Therefore, exploring and operationalizing the characteristics and range of drink refusals was a foundational goal. Aim 1 was to document the types of drink refusal behaviors expressed in role plays with therapists.

Aim 2. Aim 2 was to explore the relationship between type of drink refusals generated and subsequent drinking behaviors. We hypothesized that expressions of commitment to abstinence (as opposed to other forms of drink refusal) would be predictive of better drinking outcomes post-treatment. We also explored the prospective association between expressed drink refusal skills and drinking outcomes at both proximal (end of treatment to the first follow up) and distal (months 9-12) follow-up points.

Aim 3. Aim 3 examined the influence of an individual's belief in their ability to remain abstinent on the selection of specific drink refusal behaviors. We explored whether or not within-treatment drinking and situational confidence to remain abstinent prior to the drink refusal training session (session 8) influenced the selection of drink

refusal skills in session 8. As no studies exist exploring types of drink refusal behaviors and subsequent drinking behavior, this aim was exploratory in nature.

Aim 4. Factors that may potentially moderate the relationships tested in Aims 2 and 3 were also of interest. Aim 4a: Exploring specific moderators (therapist gender, comorbid psychopathology, and situational confidence to remaining abstinent) of the relationship between specific drink refusal behaviors and drinking outcomes was the first part of the fourth aim of the current study. Aim 4b: Exploring what moderates the relationship between specific drink refusal behaviors and later drinking was the second part of the fourth aim of the current study. Additionally, we explored whether there was an association between expressed drink refusal behaviors and therapist characteristics (therapist gender and therapist level of education).

Chapter 2
Methods

Participants

Participants were part of a larger study on women and alcohol use disorders (AUDs). Women (N = 155) were recruited primarily via newspaper ad or web-based advertising (see Figure 1 for complete breakdown of study participants). Additionally, community outreach targeted libraries, places of worship, physician's offices, schools, and other community organizations. Inclusion criteria included 6th grade reading level, DSM-IV criteria for current Alcohol Dependence or Abuse, and having drank alcohol within the past 30 days. Exclusion criteria included gross cognitive deficits, psychosis, and simultaneous involvement with another treatment or therapy. Women were randomly assigned to one of two conditions, individual or group CBT for AUDs. The current study only included data from the individual condition. These data were collected in the Northeastern United States and thus, sample demographics reflect typical samples collected in the area.

Procedure

Participants were receiving manual-guided treatment from clinicians who had been trained as part of a research study. All participants consented to having their sessions audiotaped. Informed consent was obtained from all participants. All data have been de-identified and stored on a secure server, requiring a password for access.

After participants completed an initial telephone screen to determine eligibility, participants (N = 155) then completed a baseline assessment of alcohol use, psychological functioning, and interpersonal resources and functioning. Over a period of

39 months, participants were then block randomized into either the individual, female-specific CBT condition (12 sessions; *n* = 75) or female-specific group therapy (12 sessions; *n* = 80). For the current study, only women in the individual condition were included. Patient follow-ups were completed at three time points: post-treatment, 6 months, and 12 months post-treatment. Both treatment conditions were abstinence-based, and included motivational enhancement, skills training, relapse prevention and strategies to help manage individual negative affect and to manage heavy drinkers in the participant's social networks.

Fifty two taped sessions were evaluated and coded (see Measures section for complete description of coding materials). As the drink refusal module occurs in session 8 of manual-guided CBT for AUDs, coding was limited to that session. Two undergraduate research assistants were recruited as study coders and trained in all study procedures. One master's level coder with seven years of coding experience was designated as the criterion coder; this coder supervised all aspects of the project including training and reliability. A portion of session 9 tapes (n = 27) were evaluated for potential follow-up data; after that review, it was determined that only one therapist explicitly asked the client if they had used the specific drink refusal skill. That client had not; thus, no further coding or exploration was deemed necessary.

Coders were trained using sample audio recordings from other studies with drink refusal sessions. Reliability statistics were computed after training. Intraclass correlations (ICCs) are an appropriate way to measure interrater reliability for studies that employ more than two coders or when only a subset of the data is analyzed for reliability (Hallgren, 2012). Kappa statistics correct for chance agreement; thus, both statistics were

calculated to measure interrater reliability. When coders reached kappa of .8, indicating good agreement, coders were approved to code study materials. Using the Drink Refusal and Motivation-Alcohol (DRAM-A) coding manual, developed for this project, coders listened to each audiotaped session, and identified the drink refusal module. Coders then designated each drink refusal role-play as one of the pre-existing codes ("Direct Refusal", "Statement of Abstinence", "Offering Alternatives", etc.). Weekly coding meetings were held to prevent coder drift and to troubleshoot problems coders might be having, as well as on-the-spot coaching and brainstorming.

Measures

Development of the coding system. A coding system was developed specifically for this study. This coding system, Drink Refusal and Motivation-Alcohol (DRAM-A) was conceptualized as a method of differentiating and classifying different types of commitment language specific to drink refusal. Theorizing that drink refusal behavior may be a form of "real world" commitment language, this coding system was designed to capture the types of drink refusal behaviors individuals seeking to change their drinking may realistically use.

The coding system was developed over many months. Study tapes were listened to extensively by the criterion coder to initially identify recurring themes in the drink refusal portion of CBT for AUDs. Using existing coding systems as exemplars, the basic structure of the coding manual was developed. As this coding manual was the first attempt at differentiating between different types of drink refusal behaviors, the coding system is categorical in nature. Through an iterative process of listening to audiotapes,

nine overarching codes were identified. A complete copy of all coding materials is provided in Appendix 1.

DRAM-A codes.

Direct refusal. Clinicians encourage clients to first directly and assertively refuse offers of alcohol using assertive body language and a firm tone of voice ("No, thank you"). This is likely to be the first line of defense for clients attempting to refuse alcohol.

Statement of abstinence. This behavior was hypothesized to be predictive of better long-term outcomes. Statements of abstinence included language such as, "I don't drink anymore"; "I'm in recovery"; or "I stopped drinking alcohol".

Justification-health. Clients often feel compelled to offer information to support their refusal. Drink refusal behaviors categorized as Justification-health included language such as, "I'm on medication that doesn't mix with alcohol," or "My doctor wants me to limit my drinking for a while."

Justification-other. Drink refusal behaviors in this category included any justification for refusing alcohol that was not health related. For example, clients might say, "I'm the designated driver tonight."

Offering alternatives. Drink refusal behaviors in this category might occur after a client has exhausted other methods of refusal and asks for an alternative, non-alcoholic beverage. In these situations, the client might say, for example, "I would love a club soda if you have it."

Avoidance/evasion. Although clients are encouraged to feel empowered not to drink alcohol and to recognize their right to sobriety, some clients feel fundamentally uncomfortable refusing alcoholic beverages. Drink refusal behaviors in this category

included attempts to "pass" a non-alcoholic beverage off as an alcoholic one, or attempts to sidestep the issue by saying, "Maybe later." Responses in this category are likely to be immediately followed by more practice, as therapists were supposed to train clients that the most effective refusals are not evasive, but assertive.

Changed the subject. In certain situations, clients may be disinclined to continue to offer refusal behaviors. Clients might then attempt to distract the pusher by changing the subject so as to avoid any perceived awkwardness. Drink refusal behaviors in this category included language such as, "No, but before I forget—how is Suzy doing? I know you were worried."

Asked the person to stop offering. Sometimes clients feel empowered to directly address the pusher. These refusal behaviors included language such as, "No, and actually, I would really appreciate it if you stopped offering me any alcohol. Thanks."

Accepted a drink. Rarely, while practicing the skill with therapists, clients will be unclear on what the goal of the exercise is. In cases like these, the client might demonstrate what they *have done*, instead of what they *will do.* In these situations, the therapist typically immediately clarified the purpose of the skills training exercise and start over.

Conceptual similarities to past coding systems. Previous coding systems have sought to classify and organize types of change talk (CT) for purposes of coding and analysis. The gold standard of such coding systems is the DARN-C (Miller & Rollnick, 2013; Moyers et al, 2009), which designates different CT utterances into different categories. Desire is used for utterances that reflect a client's desire for change: "I want to stop drinking." Ability statements reflect a client's belief in their ability to make a

change: “I can do this—I can make this change.” Reason statements reflect the reasons relevant to the client that drive their desire to change: “My health is getting worse and worse—drinking is making me sick.” Need statements reflect the client’s perception of necessity: “I need to stop.” Commitment statements are statements that reflect the client’s commitment to change: “While I’m at the party, I’m not drinking alcohol—I’m having a coffee instead.”

The present coding system was designed to evaluate and identify the most common drink refusal behaviors clients generated in a simulated role-play. As these role-plays are, in part, designed to evoke and elicit change talk from clients, there is a conceptual linkage between the DARN-C continuum and the one established by the DRAM-A. For example, Direct Refusal can be conceptualized as commitment change talk, as the person is assertively refusing alcohol: “No, thank you.” Similarly, Statements of Abstinence also would be a reflection of commitment in the client: “I’m not drinking anymore.” A statement such as this indicates a firm commitment to remaining abstinent. Justification, both Health and Other are likely to evoke change talk that reflects the client’s reasons for not drinking: “I’m working on my health and so I don’t want to drink;” “I’m saving for a house and I’m not spending money on alcohol right now.”

Other parts of the current coding scheme are somewhat harder to map neatly onto the DARN-C continuum. Refusals categorized as Avoidance/Evasion are less effective strategies to navigate social situations; these types of drink refusal behaviors likely reflect the client’s desire to remain abstinent but recognize the complexity of managing high risk drinking situations. Clients who feel empowered to assertively ask the pusher to stop offering them alcoholic beverages may be demonstrating particularly strong commitment

in that moment, as directly asking the person to stop may be seen as awkward or embarrassing. And finally, clients who change the subject may be reflecting desire to change while not being willing to either reveal their recovery status or to ask the pusher directly to stop.

Conceptually categorizing types of drink refusals into this continuum may help therapists to shape and train clients to generate drink refusal responses that may ultimately help them achieve their drinking goals. As commitment language, or statements that reflect how committed a client is to behavior change, has been linked with outcomes, it is a particularly critical piece. No less important, however, are statements that reflect desire, ability, reasons, or need, as those types of change talk have been shown to predict later occurrences of commitment language. Understanding how clients are refusing drinks may be a useful tool for assessing where they may benefit from either psychoeducation or other strategies to resolve their ambivalence.

Demographic Questionnaire. This form was used to collect basic demographic information, such as age, ethnicity, level of education, and marital status.

Baseline Interview (Form 90) (Miller, 1996). This semi-structured interview was used to gather information on general drinking patterns, living situation, medical conditions, psychosocial functioning, living situation and blood alcohol content (BAC). This measure was used to derive: percent days abstinent days (PDA), number of abstinent days (NABDAY), percent heavy drinking days (PHDD), number of heavy drinking days (NHDAY), total drinks consumed (TOTDRK), percent drinking days (PDD) and mean drinks per drinking day (MDPDD). Reliability for the Form 90 has been found to be excellent (Miller & Del Boca, 1994; Tonigan, Miller, & Brown, 1997)

Situational Confidence Questionnaire (SCQ) (Breslin, Sobell, Sobell, & Agrawal, 2000). This 8-item measure is designed to tap individual confidence to resist drinking alcohol in different situations and has been found to have good internal consistency ($\alpha = .85$; (Breslin et al., 2000). This instrument has three subscales (Negative Affect Situations, Positive Affect Situations, and Testing Control) and also can be used to compute a total summary score wherein higher scores indicate more confidence to resist drinking alcohol.

Structured Clinical Interview for DSM-IV (SCID). The SCID is the gold standard for clinical interviewing tools. In this study, the SCID was used to evaluate the presence of current or lifetime Axis 1 (mood, anxiety) or Axis 2 (personality) disorders. Interrater reliability for the SCID has been reported to be good (First, Gibbon, Spitzer, & Williams, 1997).

Chapter 3
Results

Participants

Study data were collected in the Northeastern United States. All study participants were women (N = 52). Mean participant age was 49.85 years old (*SD* = 10.77). The sample was predominantly non-Hispanic white (82.7%; *n* = 43), followed by 11.5% African-American participants (*n* = 6), and 5.8% biracial (*n* = 3) participants. Four participants (7.7%) identified as Hispanic/Latino.

Study participants were highly educated, with 50% (*n* = 26) having received a bachelor's degree or higher. Fourteen participants had received either an associate's degree or a technical/vocational certificate (26.9%) and nine listed High School Diploma as their highest level of education (17.3%). Two participants had received a GED (3.8%), and only one person had not finished high school (1.9%).

Almost half of the study sample (*n* = 25; 48.1%) were employed full-time. Twenty five percent (*n* = 13) were unemployed, and 13.5% (*n* = 7) were employed part-time. Three study participants were retired (5.8%), two participants were homemakers (3.8%). One participant (1.9%) was on disability, and another participant listed their employment status as 'Other' (1.9%).

Most participants were married (*n* = 30; 57.7%). Seven participants were divorced (13.5%) and another seven indicated that they were either cohabiting or in a committed relationship (13.5%). Five participants were single (9.8%) and three were widowed (5.8%).

Preliminary Analyses

Preliminary analyses centered on the reliability of the coding system. Coder 1 (RM) was designated as the criterion coder. Two coder pairs were tested for each variable. Ten reliability tapes were designated and coded by all three coders. Overall, reliability was generally good, with coder pair 1 and 2 achieving good to perfect agreement on most variables. Reliability between coder pair 1 and 3 was less consistent. Subsequent analyses were computed only using data generated from coders 1 and 2. Full results are reported in Tables 1-4. Both kappas and intraclass (ICCs) correlations are supplied.

Due to the low frequency of in-session role-plays, reliability statistics could only be computed for a portion of the variables. Coders were determined to be reliable when identifying whether or not a role-play occurred, and whether or not the therapists reviewed the handout with the client. Given the small number of dyads that engaged in more than one role-play (two roleplays, $n = 11$; three roleplays, $n = 3$); thus, reliability statistics could not be calculated for subsequent role-plays. Within the subset of reliability tapes, only one reverse role-play was observed by any of the coders.

Characterizing Drink Refusal Behaviors (Aim 1)

As no explorations of specific drink refusal behaviors currently exist, analyses to address Aim 1 were primarily descriptive in nature. Session 8 data were available for 52 clients. Of these 52 tapes, 90.4% ($n = 47$) completed some amount of drink refusal skills training within session 8. The skills handout was reviewed by 84.6% ($n = 44$) of client-therapist pairs, with an average of almost 11.50 minutes ($M = 11.41$, $SD = 6.00$) spent on the training module.

Descriptively, Table 5 displays the frequency of types of drink refusal behaviors voiced by participants. Thirty one participants completed at least one role-play with their therapist; 21 did not engage in a role-play in session. Direct Refusal was the most commonly generated drink refusal behavior, with 71% (n = 22) of participants who engaged in a role-play displaying that behavior. Offering Alternatives was the second most commonly generated drink refusal behavior, with 38.5% (n = 20) of participants displaying that drink refusal behavior. Justification-Health was the third most commonly displayed drink refusal behavior, with 21.2% (n = 11) of participants who engaged in the role-play offering health-related justifications to refuse alcohol. All other frequencies of the first role-play were lower than n = 10 (see Table 5).

Eleven client-therapist dyads did a second role-play, and three client-therapist dyads did a third role-play. No client-therapist dyads practiced more than three role-plays. Due to a restricted range and small sample size, all subsequent analyses were limited to the first role-play.

Exploratory analyses looked at the association between specific drink refusal behaviors and client characteristics (employment status, marital status, religious background, income, age, and years of education). Using 2x2 chi squares, all client characteristics that were categorical were crossed by all possible drink refusal behaviors generated in session 8. For continuous client variables (age, income, years of education), independent t-tests were conducted. Without exception, no individual client characteristic was found to be related to selection of specific drink refusal behaviors.

Finally, all drink refusal behaviors exhibited in session 8 were crossed with all remaining drink refusal behaviors to explore the potential link between selection of

specific behaviors and subsequent generation of drink refusal behaviors. Percentages of clients who generated multiple behaviors are given in Table 6; however, no significant relationships were found. Use of one type of specific drink refusal behavior was unrelated to subsequent drink refusal behavior generation.

No specific hypotheses were formed around Aim 1 as it was exploratory in nature. However, a goal of this aim was to establish what drink refusal behaviors are most often generated in session. Aim 1 analyses have established that although therapists and clients may not always do the role-play together, when they do role play, they most often practice Direct Refusal. Offering Alternatives, as well as Justification-Health were also relatively popular behaviors for clients to generate in session. Additionally, selection of a specific drink refusal behavior was unrelated to choice of subsequent drink refusal behaviors. What also is reflected is that the majority of client-therapist dyads do not engage in more than one role-play, and thus, the ability to observe subsequent drink refusal behaviors observations was much less common.

Relationships between Drink Refusal Behaviors and Drinking Outcomes (Aim 2)

To explore this aim, we first identified the predictor variables of interest from the coding materials: Accepted a Drink, Asked the Person to Stop, Avoidance/Evasion, Changed the Subject, Direct Refusal, Justification-Health, Justification-Other, Offering Alternatives, and Statement of Abstinence. These were all the possible codes for drink refusal behaviors. We identified six drinking outcome variables: number of abstinent days, number of heavy drinking days (defined as more than three drinks in a day), mean drinks per drinking day, total standard drinks consumed during the assessment periods, percent heavy drinking days, and percent alcohol abstinent days. Proximal outcome was

defined as either actual dates of treatment attendance for individuals who completed all twelve sessions plus 89 days or for individuals who had completed fewer than 12 sessions, treatment start date plus 89 days. The distal timepoint was defined as end of treatment through 270 days for individuals who had completed every session or for individuals who had not, 90 days after the start of treatment through 270 days. Nine regression analyses were run (one for each drink refusal variable). These nine analyses were repeated for each dependent variable at 3 months and 9 months post-treatment. Baseline value of the drinking outcome variable of interest was entered as a covariate in each analysis, and predictor variables were dummy coded with 0 = yes, and 1 = no. Multiple regression analyses were used to examine the unique relationship between baseline drinking and subsequent use of specific drink refusal behaviors.

Controlling for baseline number of heavy drinking days, defined as more than three drinks in a day, there was a significant relationship between clients generating a Direct Refusal behavior and number of heavy drinking days at three month follow-up, $F(1,28) = 7.20$, $p = .01$. This mean difference was associated with an increment of 18% of variance accounted for. At three months post-treatment, clients who had generated a direct refusal on average had 4.32 ($SD = 9.24$) heavy drinking days vs. 15.78 ($SD = 18.06$) heavy drinking days for clients who did not use a Direct Refusal. This effect was observed at nine months post-treatment, as well, $F(1,26) = 4.40$, $p = .04$. At nine months post-treatment, this mean difference was associated with an increment of 13% of variance accounted for. Clients who generated a Direct Refusal behavior in treatment, at nine months post-treatment, on average had 16.20 heavy drinking ($SD = 30.14$) days vs. 49.33 ($SD = 69.21$) heavy drinking days for clients who did not use a Direct Refusal.

Controlling for total number of drinks consumed at baseline, there was a significant relationship between clients generating a Direct Refusal in treatment and total number of drinks consumed at three months post-treatment, $F(1,28) = 12.50$, $p = .001$. This mean difference was associated with an increment of 25% of variance accounted for. Clients who generated a Direct Refusal in treatment, at three months post-treatment, reported on average, 36.68 ($SD = 57.08$) total drinks consumed vs. 121.45 ($SD = 87.78$) total drinks consumed for clients who did not generate a Direct Refusal in treatment. This relationship was approaching significance at nine months post-treatment, $F(1,26) = 3.99$, $p = .05$ but ultimately no significant relationship was found between generation of Direct Refusal behaviors and total drinks consumed at nine months post-treatment.

Controlling for percent heavy drinking days at baseline, there was a significant relationship between clients generating a Direct Refusal in treatment and percent heavy drinking days at three months post-treatment, $F(1,28) = 6.99$, $p = .01$. This mean difference was associated with an increment of 17% of variance accounted for. Clients who generated a Direct Refusal in treatment, at three months post-treatment, reported on average, 4.93 (SD =10.27) percent heavy drinking days vs 19.04 ($SD = 23.79$) percent heavy drinking days for clients who did not generate a Direct Refusal in treatment. This effect was observed at nine months post-treatment, as well, $F(1,26) = 4.23$, $p = .04$. At nine months post-treatment, this mean difference was associated with an increment of 13% of variance accounted for. Clients who generated a Direct Refusal behavior in treatment, at nine months post-treatment, on average had 8.84 ($SD = 16.50$) percent heavy drinking days vs. 26.23 ($SD = 35.70$) percent heavy drinking days for clients who did not generate a Direct Refusal.

Controlling for baseline percent days abstinent, there was a significant relationship between clients generating a Direct Refusal behavior in treatment and percent days abstinent at three months post-treatment, $F(1, 28) = 6.61$, $p = .02$. This mean difference was associated with an increment of 13% variance accounted for. Clients who generated a Direct Refusal in treatment, at three months post-treatment, reported on average, 85.28 (*SD* = 18.43) percent abstinent days vs. 68.89 (*SD* = 26.22) percent abstinent days for clients who did not generate a Direct Refusal. This effect was observed at nine months post-treatment, as well, $F(1,26) = 7.70$, $p = .01$. This mean difference was associated with an increment of 18% variance accounted for. Clients who generated a Direct Refusal in treatment, at nine months post-treatment, on average had 82.08% (*SD* = 25.31) abstinent days vs. 55.90% (*SD* = 37.05) abstinent days for clients who did not generate a Direct Refusal.

Controlling for baseline number of abstinent days, there was a significant relationship between clients generating a Direct Refusal behavior and number of abstinent days at nine months post-treatment, $F(1,26) = 8.47$, $p = .001$. This mean difference was associated with an increment of 20% of variance accounted for. Those who used a Direct Refusal in treatment, at nine months follow-up, on average had 153.70 (*SD* = 48.93 abstinent days vs 100.00 (*SD* = 66.63) abstinent days for those who did not generate a Direct Refusal in treatment. This effect was not observed at three months post-treatment.

Controlling for baseline mean drinks per drinking day, there was a significant relationship between clients generating a Direct Refusal behavior and mean drinks per drinking day at three months, $F(1,21) = 5.07$, $p = .035$. This mean difference was

associated with an increment of 11% of variance accounted for. Those who used a Direct Refusal in treatment, at three-month follow-up, on average had 3.02 (*SD* = 1.49) drinks per drinking day vs. 6.05 (*SD* = 4.71) drinks for those who did not use a Direct Refusal. This effect was not observed at nine months post-treatment.

Aim 2 sought to establish a link between specific drink refusals generated in session and subsequent drinking behaviors. Without exception, Direct Refusal was the only drink refusal behavior observed to be related to either proximal or distal drinking outcomes. However, this effect was robust, and largely, effects observed at the 3-month follow-up also were observed at the 9 month follow-up. Thus, Aim 2 was partly supported.

Situational Confidence and Selection of Drink Refusal Behaviors (Aim 3)

Our third aim sought to explore whether or not baseline behaviors (baseline drinking and baseline confidence to remain abstinent) predicted the selection of specific drink refusal behaviors in session 8. Because all variables were binary in nature, a logistic regression framework was employed to analyze the relationship between drinking outcomes and situational confidence. Only drink refusal behaviors with sufficient cases (n > 10) were included in final analyses; thus, only Direct Refusal (*n* = 22), Justification-Health (*n* = 11), and Offering Alternatives (*n* = 20) were included in final analyses. No significant relationships between situational self-confidence and selection of specific drink refusal behaviors were observed; thus, Aim 3 was not supported.

Moderators of the Associations between Drink Refusal Behaviors, Situational Confidence, and Drinking Outcomes (Aim 4)

Aim 4 served primarily to explore relationships observed in Aims 2 and 3. However, the limited sample size contraindicated moderator analyses for this study, as cell sizes were too limited to be meaningful. Thus, moderator analyses for the study were not undertaken. We then sought to explore the possible link between presence of a current or lifetime Axis 1 or 2 disorder and the selection of drink refusal behaviors. We also explored any potential direct relationships observed between therapist characteristics (gender, level of education) and selection of specific drink refusal behaviors.

As no significant relationships between situational self-confidence and either selection of specific drink refusal behaviors were observed in Aim 3 analyses, situational self-confidence was omitted from Aim 4 analyses. Because of small cell sizes, 2x2 chi squares were deemed an appropriate way of exploring any potential relationship between presence of psychopathology and selection of specific drink refusal behaviors. Analyses were limited to cells with greater than 10 participants (Direct Refusal, Offering Alternatives, and Justification-Health). Using 2x2 chi squares, lifetime presence of an Axis 1 disorder was first crossed with the selection of specific drink refusal behaviors, followed by current presence of Axis 1 disorder. No significant relationships were found between specific drink refusal behaviors and presence of Axis 1 disorder. The same procedure was repeated with Axis 2 disorders. Lifetime presence of an Axis 2 disorder was first crossed with the selection of specific drink refusal behaviors, followed by current presence of an Axis 2 disorder. None were significant; however, lifetime presence of Axis 2 disorder reached the trend level with Direct Refusal, suggesting that individuals who generated a Direct Refusal were somewhat more likely to have a lifetime

Axis 2 disorder (χ^2 (1, 31) = 3.70, p = .05). However, these results cannot be interpreted conclusively, as they did not reach significance.

Finally, the relationship between therapist characteristics (therapist gender and therapist level of education) and selection of specific drink refusal behaviors was explored. Once again, drink refusal behaviors with sufficient cell sizes were crossed with therapist gender, and therapist level of education. No significant effects were found. Thus, Aim 4 hypotheses were not supported.

Chapter 4
Discussion

This study sought to explore the relationship between drink refusal skills and post-treatment drinking behaviors. An original coding scheme was developed to explore specific client behaviors generated while receiving drink refusal skills training. We found that Direct Refusal was the most frequently demonstrated drink refusal behavior. Direct Refusal was consistently linked with positive outcomes in multiple areas, such as an overall reduction in drinks consumed and heavy drinking days, as well as increases in abstinent days. No other specific drink refusal behaviors were linked to post-treatment drinking. Additionally, no individual patient or therapist variables were linked to post-treatment outcomes.

Skills training has been found to be a beneficial component of treatment for alcohol misuse (Gajecki, 2017). In particular, drink refusal training has been shown to be beneficial to individuals in treatment (Witkiewitz et al., 2012) such that individuals who receive drink refusal skills training have fewer heavy drinking days at one year follow up. The present study delved more deeply into drink refusal training to identify specific client behaviors within the drink refusal training that contribute to positive outcomes. A particularly notable aspect of the present study is the consistency and frequency with which clients selected Direct Refusal in session. Typically, therapy is thought of as a way to expand a client's behavioral repertoire; having multiple skills has long been thought to contribute to client success. However, among clients who engaged in the role-play, Direct Refusal was by far the most commonly generated behavior. This may suggest that clients either prefer to develop and become very skilled in this particular behavior, or that clients are uninterested in trying out strategies they believe they are unlikely to use.

Client motivation has been demonstrated to be important to maintaining abstinence (Ostafin & Marlatt, 2008). Similarly, Hall and colleagues (1990) also reported that clients for whom absolute abstinence was their goal were less likely to experience a relapse than clients who did not have abstinence as their main treatment goal. Initially, we hypothesized that clients who generated statements about their commitment to abstinence in response to being offered alcohol might fare better post-treatment. That was not the case with this sample. However, clients who are more highly motivated to remain abstinent may be more inclined to simply state, "No, thanks—I'm good," than clients who are more ambivalent about abstinence. Clients who are highly motivated may not feel the need to generate any further refusal behaviors, whereas clients who are more ambivalent may be more inclined to offer multiple justifications for why they are abstaining. It is beyond the scope of the current study to test for possible associations between specific drink refusal behaviors and motivation. Future research should examine associations between Direct Refusal and client motivation to remain abstinent.

Initially, this study sought to explore qualitative differences in specific drink refusal behaviors generated in session 8. We hypothesized that "stronger" expressions of abstinence, such as stating "I'm in recovery" might be associated with better post-treatment drinking outcomes. This did not prove to be the case. However, the results of this study proved to be nuanced and interesting. Direct Refusal was not only the most commonly generated drink refusal behavior within session 8, it also was robustly linked with a number of positive post-treatment drinking outcomes. Clients who unambiguously stated in session, "No, thank you," demonstrated a number of positive outcomes at both proximal and distal timepoints. Though this was not what we had anticipated finding, the

implications are of interest. In thinking about the framework that guided the development of DRAM-A, DARN (i.e., desire, ability, reason, need) statements are all "pre-commitment" forms of change talk (Rollnick, Miller, & Butler, 2008); that is, they are promising in gauging the utterer's intent, but do not reach the level of action. Commitment statements, therefore are a much firmer expression of behavioral intentions with regards to individuals in recovery. Taken together, the Direct Refusal statements issued by the women from whom these data were generated seem to clearly evidence strong commitment language. An individual giving an unambiguous, "No, thank you," in response to being offered alcohol seems to be clearly stating not just a desire to maintain abstinence, but a clear expression that they will do so. Another notable consideration is that these roleplays occurred approximately halfway through treatment. It is highly likely that these participants may have already had some experience with drink refusal in real-life social situations, and were therefore emulating behavior that they had previously found effective. Simplified, it may be that Direct Refusal behaviors are an observed version of real-life commitment.

Qualitative Impressions

After analyses revealed that close to half of all therapist-client dyads did not practice the role-playing component of drink refusal skills training, further exploration of what could potentially be driving that particular phenomena was warranted. Although initially it might seem that it was merely an issue of noncompliance, listening to a subset (n = 12) of audiotapes was informative. These tapes were selected because the coders indicated that there had been some discussion of drink refusal in the session, but that no

role-plays were conducted. Tapes were analyzed informally for content, and to see if recurrent themes emerged in sessions where role-plays were not conducted.

A variety of reasons for not completing the role-plays emerged. In multiple cases, clients expressed confidence in their abilities to navigate social situations with alcohol, and thus, did not feel that the role-play was relevant to them personally. Said one client, "I'm not thinking I'll have a problem with it—I'll just say, 'No, I'm not drinking' and be done with it." Another client also expressed skepticism at the utility of the exercise: "I can't imagine my friends being that pushy…they've been fine with it, they obviously still think I'm fun and want to hang out." Other clients expressed hesitation at practicing role-plays meant to simulate social situations: "Well, typically, I drink by myself…other people are unfortunately not the issue." In cases like that, therapists appeared to modify the exercise to practice what one therapist called "self-assertiveness." Other therapists simply ran out of time. In only one case did the decision not to engage in the role-plays seem to be driven by the therapist, with the therapist plainly stating, "I really don't like doing role-plays." However, without consulting with the therapist, it is impossible to know what was behind the therapist's disinclination to conduct the exercise. Ultimately, in most cases where clients and therapists did not complete the role-play, it appeared largely to be an artifact created as a result of the therapist's decision to tailor the treatment to the individual client. When clients expressed reservations about the exercise, therapists generally appeared able to flexibly adapt or eliminate the exercise. Therapeutic alliance is a robust predictor of success in treatment for depression (Krupnick et al., 1996), schizophrenia (Frank & Gunderson, 1990) and alcohol use disorders (Connors et al., 1997; Ilgen, McKellar, Moos & Finney, 2008), and inflexibly using session time to

practice skills the client does not feel are relevant could damage the therapeutic relationship. With respect to manual-guided treatments, community therapists often cite numerous challenges that arise when trying to balance treatment adherence with realistic client needs (Hill, O'Grady & Elkin, 1992). This also illustrates how treatment fidelity and building rapport require a careful balance. Therapists appeared, in most cases, to be considering the individual client characteristics in front of them. This willingness to meet the client where they are, instead of pushing the client to do an exercise that they do not feel will be useful may be a powerful way to build and maintain rapport. Adopting a "one size fits all" approach to therapy is rarely a good strategy. However, care must be taken to ensure that clients enrolled in manual-guided treatment are still receiving treatment with an empirical basis. It is a careful balance, and one that every clinician must consider when faced with the complexities of clients with multiple comorbidities. Future research should explore therapist decision-making in-session about when to eliminate or modify existing interventions or training, and what relationship those decisions may have to client recovery.

Strengths and Limitations of the Present Study

This study has several notable strengths. The present study is the first to explicitly explore the link between specific drink refusals generated in session and post-treatment outcomes. To explore this construct, we developed a unique and novel coding scheme, the DRAM-A, and employed multiple coders. With the exception of the handout review, reliability was generally good, suggesting that coders were adequately trained and able to explore the data as intended. Notably, this study also explored both proximal and distal outcomes, which is a unique strength. Due to time and resource constraints, exploration

of both proximal and distal outcomes is often impossible; however, this study successfully explored post-treatment drinking outcomes. Finally, much of the current addictions research literature has relied on all-male samples. That our sample was comprised solely of women is a particular strength that adds to the diversity of addictions research.

One limitation of this study was the small sample size, a particular concern because so many client-therapist dyads did not engage in the role-play together. However, in this study, observing what clients and therapists discussed in lieu of the formal role-play was illuminating. Rather than an issue of compliance or fidelity, it appeared that therapists were flexibly adapting the treatment to be of most utility to their clients. Furthermore, a number of clients indicated specifically that a role-play of this nature would not be of particular use to them, given that they did not encounter situations where they were likely to be offered alcohol. Additionally, though the all-female sample is a particular strength with regards to inclusivity and diversity, it cannot be assumed that the results of this study would generalize to other genders. Moreover, from these data, we are not able to know whether or not the skills observed in the role plays actually generalize to the natural environment of these women. Another point to consider is that this sample was highly educated and mostly Caucasian, which may not generalize to women of different ethnicities or with differing levels of education.

Finally, a possible study limitation derives from the complexity of behavioral coding. Behavioral coding has been demonstrated to provide a nuanced and complex picture of in-session behaviors and treatment fidelity (Apodaca et al., 2015; Chorney et al., 2014; Moyers et al., 2009). However, interrater reliability is an ongoing challenge in

studies that employ this methodology. The present study employed one expert coder with several years of coding experience across multiple projects and two undergraduate research assistants interested in learning about behavioral coding. Although reliability generally was good, there was poor inter-rater agreement on whether the therapist reviewed the handout in-session. Because neither of the undergraduate researchers had any prior therapy experience, recognizing specific structured components of a therapy session may have been unduly challenging and unfamiliar for naïve coders.

Future Directions

Direct Refusal was the most robust predictor of positive drinking outcomes, as well as the most frequently used drink refusal behavior generated in session. These findings were consistent and robust, and replicated prior research in this area. However, the small sample size makes it difficult to ascertain whether or not these effects would generalize to larger samples. For example, the second most frequently generated drink refusal behavior was "Offering Alternatives." With a larger sample size, similar effects could be found for clients who use the Offering Alternatives as a drink refusal behavior, or other behaviors explored through the DRAM-A coding system. Future studies should replicate these findings with a larger sample and explore whether or not different drink refusal behaviors also are linked with drinking outcomes. Finally, the small sample size precluded moderator analyses but exploring what factors may moderate the relationship between specific drink refusal behaviors and drinking outcomes is recommended for future research.

Historically, much alcohol research has focused on non-Hispanic white males as both the population of interest and the referent group. Research has made great strides in

inclusivity, and a unique strength of this study is that the sample was comprised solely of women in alcohol treatment. However, exploring how drink refusal behaviors function in men also is an area of importance. Similarly, individuals for whom English is a second language, or individuals who are members of minority groups also may have unique conventions around language, social situations, and cultural mores around drinking (Caetano & Mora, 1998). Understanding how to remain abstinent in social situations is an important skill for many people, and assumptions should not be made on how to best achieve that goal.

Finally, Direct Refusal seems to be somewhat foundational in nature. Given the overall preference for this particular drink refusal behavior, perhaps a mastery model that is more incremental in nature might be of interest for clients in recovery. Clients might appreciate the opportunity to master Direct Refusals before attempting to use other strategies. One way to implement this would be to introduce drink refusal training earlier in treatment, to give interested clients multiple opportunities for practice and feedback with a clinician. Both the findings in this study and previous work on drink refusal training have demonstrated the importance of this skill; introducing it earlier and providing ongoing training and evaluation, as well as adding other skills and strategies as clients dictate could be potentially helpful. Understanding how individuals navigate social situations while still meeting their drinking goals is an important goal in alcohol research.

Appendix A
Coding Instrument

Appendix 1

Drink Refusal and Motivation-Alcohol (DRAM-A) Coding Manual Developed for Cognitive Behavioral Therapy for Alcohol Use Disorders

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Drink Refusal and Motivation-Alcohol
Coding Manual

This coding system has been developed to code in-session behaviors of individuals seeking treatment for alcohol use disorders (AUDs). This manual has been developed specifically with AUDs and has not yet been tested with other substances.

This coding system will serve to categorize types of drink refusal statements made in session 8 of Cognitive Behavior Therapy (CBT) for AUDs. Coders will begin listening to audiotapes of session 8 at approximately halfway through the session. Coders will listen to the session from that point on, but will not code yet. Coders will instead note the approximate time the therapist and client begin practicing drink refusal training on the coding sheet, and make preliminary notes as to what types of refusal behaviors the client is generating. Coders will listen to the session again, starting at the point the training started, and will code on the second pass.

This coding system is dichotomous in nature—meaning, coders will designate *whether or not* a code occurred in a given roleplay. Codes will be used to capture differences in *types* of drink refusal behaviors generated in session by the *client.* Coders will only code client utterances, not therapist utterances. The codes are meant to be categorical in nature; a code of "Direct Refusal" is meant to indicate that the client uttered a direct refusal ("No, thank you") when offered alcohol. As drink refusal training is typically given in the context of roleplays between client and therapist, coders will code all role plays, noting the number of roleplays in the session on the coding sheet. Coders will then categorize and code roleplays in session, using this coding system as a template. Using the accompanying coding sheet, coders will indicate (Yes/No) whether or not a code occurred.

See below for an example of drink refusal training in session.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you.

Therapist (as Alex): Are you sure? If you don't want either one of those, we've got a lot of liquor and mixers, too.

Client: Thanks, Alex—I'm not drinking anymore.

Therapist (as Alex): Oh, okay—can I get you a Coke or something?

In the above exchange, the client's first refusal ("No, thank you") would be coded as "Direct Refusal". The client's second refusal ("Thanks, Alex—I'm not drinking anymore") would be coded as "Statement of Abstinence". The coder will indicate on the coding sheet "Yes" under "Direct Refusal" and "Statement of Abstinence" and "No" for all other codes.

Specific Codes

5.....Direct Refusal
6.....Statement of Abstinence
7.....Justification—health
8.....Justification—other
9.....Offering Alternatives
10.....Avoiding/Evasion
11.....Reverse Role Play
12.....Accepted A Drink
13.....Changed Subject
14.....Asked the Person to Stop

Direct Refusal

This is may be the first refusal behavior generated in any roleplay. For a client utterance to be coded as "Direct Refusal", the client simply needs to say, "No," or "No, thank you." The following roleplay provides an example of a direct refusal. *Note: clients will often use this utterance in conjunction with other codes.*

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you.

Therapist (as Alex): No problem, they're over there if you change your mind.

Because the client first directly refused the alcohol without additional justification, you would code this as "Direct Refusal." Clients will often immediately offer some reasoning or extra information, which will then be coded accordingly.

Statement of Abstinence

Clients often provide explanations for not drinking. Statements of abstinence include such language as "I'm not drinking anymore"; "I'm in recovery"; or "I stopped drinking". The following roleplay provides an example of a Statement of Abstinence.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you.

Therapist (as Alex): Oh, come on! We're celebrating, and I know how much you love sangria.

Client: No, thanks. I've actually stopped drinking.

Therapist (as Alex): Oh, no problem. There's plenty of sodas and bottled water, too.

Note that the client *first* exhausts Direct Refusal and generates a more compelling reason only after Direct Refusal is not effective. In this case, you would code both statements. The first statement ("No, thank you") would be coded as Direct Refusal, and then the client's rebuttal ("I've actually stopped drinking.") would be coded as Statement of Abstinence. *Please note: the client first used Direct Refusal and then moved on to Direct Refusal combined with Statement of Abstinence. In this case, because you've already indicated that they have used Direct Refusal, just note the Statement of Abstinence.*

Justification—Health

Statements of Justification—Health may include such language as "I'm on medication" or "My doctor wants me to only drink on weekends." The following roleplay provides an example of a Justification—Health drink refusal.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you, I'm on some medication that doesn't mix with alcohol, but thank you for the offer.

Therapist (as Alex): Oh, no problem. There's plenty of sodas and bottled water, too.

Note that the client *combines* Direct Refusal and also spontaneously generates further information. In this case, you would code both statements. The first statement ("No, thank you") would be coded as Direct Refusal, and then the client's rebuttal ("I'm on some medication that doesn't mix with alcohol, but thank you for the offer") would be coded as Justification--Health. *Please note: Clients will often combine direct refusals and within the same statement, offer other reasons for not drinking. Please code accordingly.*

Justification—Other

Statements of Justification—Other is meant to capture any other reason the client gives for not drinking that is *not* health-related. This code can capture a number of situations. Statements of Justification—Other may include language such as "No thanks—I'm driving." The following roleplay provides an example of a Justification—Other drink refusal.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you. I'm the designated driver tonight. But thanks for the offer.

Therapist (as Alex): Oh, no problem. There's plenty of sodas and bottled water, too.

Note that the client *combines* Direct Refusal and also spontaneously generates further information. In this case, you would code both statements. The first statement ("No, thank you") would be coded as Direct Refusal, and then the client's rebuttal ("No, thank you. I'm the designated driver tonight. But thanks for the offer") would be coded as Justification--Other. *Please note: Clients will often combine direct refusals and within the same statement, offer other reasons for not drinking. Please code accordingly.*

Offering Alternatives

Offering Alternatives is meant to capture when a client directly asks for a non-alcoholic alternative to what they are being offered. Offering Alternatives may include language such as "No thanks, but I'd love a club soda." The following roleplay provides an example of an Offering Alternatives drink refusal.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, thank you, but I'd really love a club soda, if you have it.

Therapist (as Alex): Oh, no problem. There's plenty of sodas and bottled water, too.

Note that the client *combines* Direct Refusal and also spontaneously generates further information. In this case, you would code both statements. The first statement ("No, thank you") would be coded as Direct Refusal, and then the client's rebuttal ("No, thank you, but I'd really love a club soda, if you have it").would be coded as —Offering Alternatives. *Please note: Clients will often combine direct refusals and within the same statement, offer other reasons for not drinking. Please code accordingly.*

Evasion/Avoidance

This code will likely be used when the client is particularly uncomfortable refusing drinks directly, and feels the need to either evade the question or lie. Evasion/avoidance is meant to capture when a client either deliberately skirts the offer or else attempts to pass off another beverage (club soda, Sprite) as an alcoholic beverage. Evasion/avoidance may include language such as "No thanks, I've actually already got a cocktail here" or "Maybe later" and then attempts to change the subject. The following roleplay provides an example of an Evasion/Avoidance drink refusal.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: Got a drink right here, thanks!

Therapist (as Alex): Great—let me know if you need a refill.

Note that the client *indirectly* passes their beverage off as alcoholic. There is ambiguity on whether or not they are attempting to mislead the "pusher". However, this ambiguity serves to evade the question. In this case, it is appropriate to use the Evasion—Avoidance code to capture this statement. Another thing to note is that though clients will sometimes attempt to generate this sort of refusal, therapists will typically encourage clients to use more effective and direct strategies. If this is followed by another roleplay, please code that roleplay accordingly.

Reverse Roleplay

The therapist will often offer to demonstrate the exercise first. This can help clients who are having trouble visualizing or generating effective drink refusal responses. In this way, the therapist can model effective drink refusal behaviors to the client, who can then use the skills they have learned. The following roleplay provides an example of a Reverse Roleplay.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Well—I don't really know what I'm supposed to do here. I feel sort of goofy.

Therapist: Would it help if I pretended to be you, and sort of demonstrated? You can be Alex, then.

Client: Yeah, okay, I think that might help me.

Client (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Therapist: No problem, Alex—it's good to see you too.

Client (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Therapist: No, thank you, but I'd really love a club soda, if you have it.

Client (as Alex): Oh, no problem. There's plenty of sodas and bottled water, too.

Note that the therapist demonstrates this for the client *before* they have tried any other roleplays. This will not always be the case. If a client is offering drink refusal behaviors that are likely to be ineffective, the therapist may offer to demonstrate to help the client understand what effective refusals may look like. A Reverse Roleplay may occur at any point in the Drink Refusal Training module. *Please note that the therapist should only demonstrate examples of drink refusals that are "positive", such as Direct Refusal, Statement of Abstinence, etc. The therapist should not be modeling less effective behaviors. Another thing to note is that therapists may demonstrate several times; just fill in what codes they used across their roleplays. Another thing to note: even if the therapist*

and client do multiple Reverse Roleplays, please only count it as ONE roleplay—just note on the coding sheet which skills the therapist demonstrates.

Accepted a Drink

Sometimes clients will have trouble with this exercise and won't understand that the purpose is to train them to effectively refuse a drink in a social situation. In those cases, the client may generate what they *have done*, instead of what they are learning to do. The following roleplay provides an example of Accepted a Drink.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: Uh, sure, I'll take a beer.

Therapist: Let's practice that one again.

Note that the therapist recues the roleplay. At this point, the therapist may offer to demonstrate effective drink refusal behaviors through a Reverse Roleplay, or they may not. If the therapist demonstrates effective drink refusal behaviors, please code those as a Reverse Roleplay. If the client and therapist then engage in another roleplay, with the client generating drink refusal behaviors, please code those accordingly.

Changed the Subject

Sometimes situations arise when clients are uncomfortable continuing to continue trying to negotiate or refuse offers of alcoholic beverages. In these situations, clients are empowered to change the situation so as to prevent further offers. The following roleplay is an example of Changed the Subject.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No, I'm good—before I forget, how's your mom doing? I know she was ill for a while. Why don't we make plans to catch up this week?

Therapist: She's well, thanks for asking. Let's do that.

Note that the client uses Direct Refusal right before changing the subject. Please make sure to code other refusal behaviors that the client demonstrates as well as the client's attempt to change the subject.

Asked the Person to Stop Asking

Sometimes situations arise when clients choose to assertively address the person offering them alcohol by asking them to stop. This can sometimes occur after the client has exhausted multiple refusals, but not always—sometimes clients will lead with this so as to take control of the situation. The following is an example of Asked the Person to Stop.

Therapist: Knowing how to successfully refuse drinks is a key part of staying sober. Now we're going to practice together. Is there a situation coming up where you might be offered alcohol?

Client: Yeah—a friend of mine, Alex, a drinking buddy, is having a graduation party this week. I know there's going to be a lot of alcohol there.

Therapist: Great, let's use that! I'll be Alex. Your job is to just use your skills to say no.

Client: Okay.

Therapist (as Alex): Hey, it's really great to see you! Thanks so much for coming to my party, I really appreciate it.

Client: No problem, Alex—it's good to see you too.

Therapist (as Alex): Can I get you a beer, or something to drink? There's some really good sangria we made, too.

Client: No thank you—and actually, if you could not offer me any more alcohol tonight, I would really appreciate it, thanks.

Therapist (as Alex): Of course—we also have sodas, coffee, and bottled water, too. No problem.

Note that the client uses Direct Refusal right before asking the person to stop offering alcohol. Please make sure to code other refusal behaviors that the client demonstrates as well as the client's request that the host stop offering them alcohol.

Summary

- Please code only what's there in the tapes—avoid inferring meaning when possible.
- If a behavior appears more than once *in a given roleplay*, please only code it once (no need to keep track of the number of times Direct Refusal is employed, for example).
- Coding is tough work—take frequent breaks to avoid coder drift.
- Please listen to the Drink Refusal training module at least once in its entirety before attempting to code.
- Please be sure to code *all roleplays (multiple Reverse Roleplays only need to be coded as **one** Reverse Roleplay).*
- Most roleplays should easily fall within one of these categories. If you come across any roleplays that really don't seem appropriate for any existing category, please come prepared to talk about it in the weekly coder meeting. It may be that we need to add a new code to the manual.

DRAM-A Coding Sheet

Coder ID: Tape ID: Date Coded:

DRT Module completed in this session? Y/N

Did the therapist go over the handout? Y/N

Time DRT Starts: Time DRT ends: Time to complete:

Number of Roleplays:

Was there a Reverse Roleplay? Y/N (if yes, then please fill out the next cells →)	CODES	YES	NO
	Direct Refusal		
	Statement of Abstinence		
	Justification-Health		
	Justification-Other		
	Offering Alternatives		
	Changed Subject		
	Asked the person to stop offering alcohol		

Roleplay # 1 (additional	CODES	YES	NO
notes below)	Direct Refusal		
	Statement of Abstinence		
	Justification-Health		
	Justification-Other		
	Offering Alternatives		
	Avoidance/Evasion		
	Accepted A Drink		
	Changed Subject		
	Asked the person to stop offering alcohol		

	CODES	YES	NO
Roleplay # 2	Direct Refusal		
	Statement of Abstinence		

	Justification-Health		
	Justification-Other		
	Offering Alternatives		
	Avoidance/Evasion		
	Accepted A Drink		
	Changed Subject		
	Asked the person to stop offering alcohol		

	CODES	YES	NO
Roleplay # 3	Direct Refusal		
	Statement of Abstinence		
	Justification-Health		
	Justification-Other		
	Offering Alternatives		
	Avoidance/Evasion		
	Accepted A Drink		
	Changed Subject		
	Asked the person to stop offering alcohol		

	CODES	YES	NO
Roleplay # 4	Direct Refusal		
	Statement of Abstinence		
	Justification-Health		
	Justification-Other		
	Offering Alternatives		
	Avoidance/Evasion		
	Accepted A Drink		
	Changed Subject		
	Asked the person to stop offering alcohol		

Additional notes:

Table 1

Interrater Reliability (Coder Pairs)

Variable	κ	*p* values
DRT Module Completed	(.55) (.74)	(.05) (.02)
Handout Review	(.09) (.38)	(.75) (.24)
Number of Roleplays	(1.00) (.82)	(<.001) (.003)
Reverse Roleplay Completed	(1.00) (1.00)	(.003) (.003)

Note: All results reported in kappa. Format is (Coder 1xCoder 2) (Coder 1xCoder 3).

Table 2

Interrater Reliability

Variable	Cronbach's alpha	Single Measures	Average Measures	*p*
DRT Module Completed	.89	.71	.89	<.001
Handout Review	.40	.18	.40	.17
Number of Roleplays	.92	.80	.92	<.001
Reverse Roleplay	1.00	1.00	1.00	**

Note: All values reported in ICCs.
***N too low to produce p value*

Table 3

Interrater Reliability of Individual Codes

Variable	*κ*	*p* values
Direct Refusal	(1.00) (.55)	(.03) (.17)
Statement of Abstinence	(1.00) (1.00)	(.03) (.03)
Justification, health	(1.00) (.55)	(.03) (.17)
Justification, other	(**) (**)	
Offering Alternatives	(**)(**)	
Avoidance	(**)(**)	
Accepted Drink	(**)(**)	
Changed Subject	(1.00) (**)	(.04)
Asked the person to stop	(**)(**)	

*Note: ** indicates cell size too small to compute reliability statistics. Format is as follows: (Coder 1 x Coder 2) (Coder 1 x Coder 3).*

Table 4

Reliability of Specific Drink Refusal Behaviors (ICCs)

Variable	Cronbach's alpha	Single Measure	Average Measure	*p*
Direct Refusal	.90	.75	.90	.003
Statement of Abstinence	1.00	1.00	1.00	**
Justification, health	.88	.71	.88	.006
Justification, other	**	**	**	**
Offering Alternatives	**	**	**	**
Avoidance	**	**	**	**
Accepted Drink	**	**	**	**
Changed Subject	.75	.50	.75	.070
Asked the person to stop	**	**	**	**

*Note: ** denotes cases where cell sizes are too small to compute reliability statistics.*

Table 5

Frequencies of Specific Drink Refusal Behaviors Generated in Session 8

	Roleplay 1 (N=31)	Roleplay 2 (N=11)	Roleplay 3 (N=3)
Direct Refusal	71.0% (*n* = 22)	63.6% (*n* = 7)	66.7% (*n* = 2)
Statement of Abstinence	25.8% (*n* = 8)	18.2% (*n* = 2)	33.3% (*n* = 1)
Justification-Health	35.5% (*n* = 11)	18.2% (*n* = 2)	-
Justification-Other	16.1% (*n* = 5)	18.2% (*n* = 2)	33.3% (*n* = 1)
Offering Alternatives	64.5% (*n* = 20)	27.3% (*n* = 3)	33.3% (*n* = 1)
Avoidance/Evasion	6.5% (*n* = 2)	27.3% (*n* = 3)	-
Changed Subject	9.7% (*n* = 3)	9.1% (*n* = 1)	-
Asked the Person to Stop	3.2% (*n* = 1)	-	-
Accepted a Drink	3.2% (*n* = 1)	-	-

Note: Value listed reflects valid percentage of participants who engaged in roleplay, rather than percentage of the total sample. Percentages will not equal to 100% due to possibility of participants generating multiple behaviors in one roleplay. "N" refers to total number of participants who engaged in the roleplay, while "n" designates number of participants within that group that generated that specific drink refusal behavior. "-" indicates the behavior was not observed. No participants engaged in more than 3 roleplays.

Table 6

Descriptive Percentages of Participants Performing Multiple Drink Refusal Behaviors

	1	2	3	4	5	6	7	8	9
DR (1)	1	16%	16%	7%	-	-	-	-	-
OA (2)		1	32%	17%	-	-	-	-	-
SOA (3)			1	53%	-	-	-	-	-
JH (4)				1	-	-	-	-	-
JO (5)					1	-	-	-	-
CS (6)						1	-	-	-
ASK (7)							1	-	-
ACC (8)								1	-
AV (9)									1

Note: DR=Direct Refusal; OA=Offering Alternatives; SOA=Statement of Abstinence; JH=Justification-Health; JO=Justification-Other; CS=Changed the Subject; ASK=Asked the Person to Stop; ACC=Accepted a Drink; AV=Avoid/Evasion. Analyses were conducted only for cells with sufficient sample size; cells with insufficient cases are denoted by "-".

Figure 1: Flowchart of Study Participants

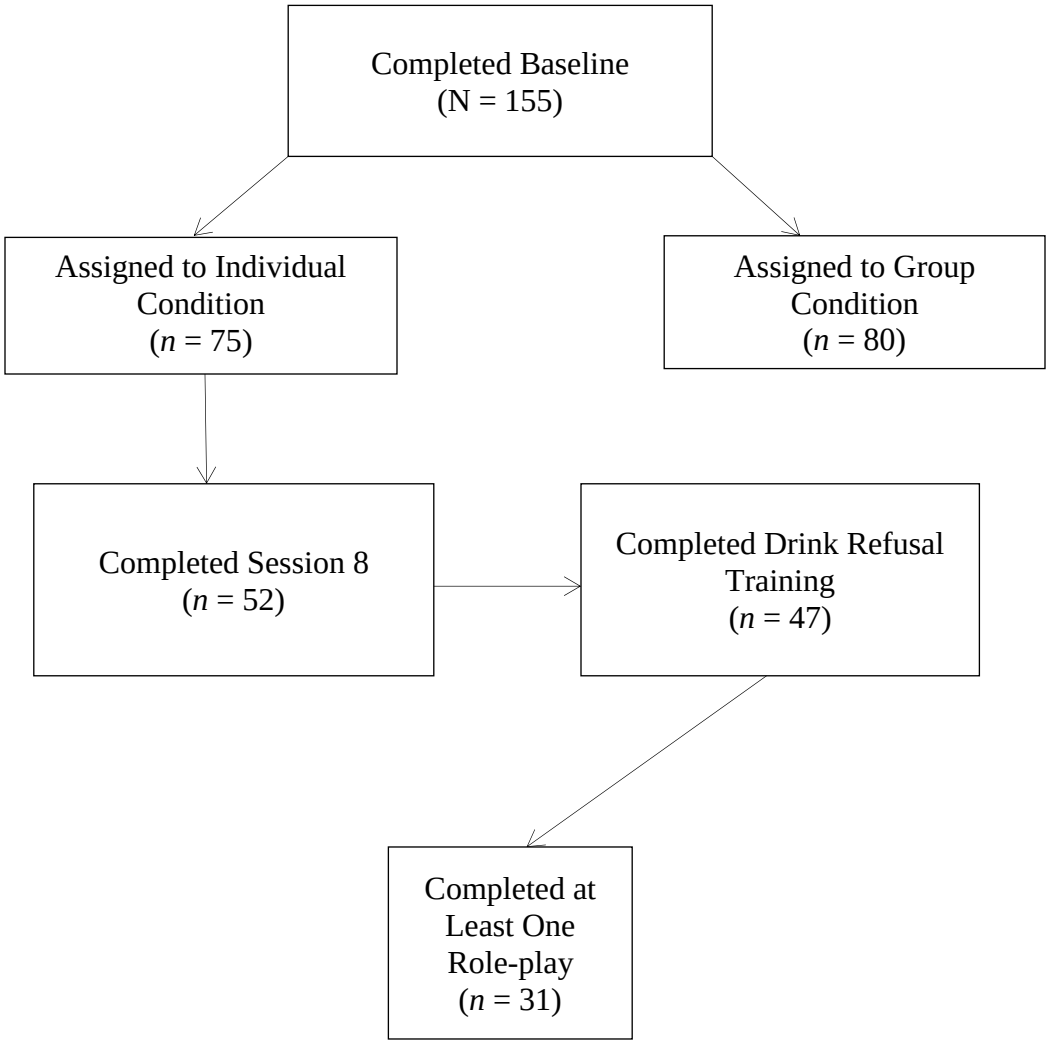

Figure 1. Complete breakdown of study recruitment and final study sample.

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