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A Cultural Adaptation of Motivational Interviewing to Address Heavy Drinking among Hispanics

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Abstract

Although the need for cultural adaptations is often noted in addiction research, there are few templates to guide the process. The rationale for a social contextual framework to culturally adapt Motivational Interviewing for an immigrant heavy drinking Latino population in the U.S. Northeast is presented. The aim of the pilot study was to obtain data on acceptability of this approach. Participant responses to the adaptation were examined qualitatively and quantitatively in a preliminary study. Procedure: Participants recruited from the community met criteria for risky drinking (men, 5 drinks/occasion or 14 drinks/week; women, 4 drinks/occasion or 7 drinks/week). Participants ($n=25$) who completed baseline assessments and a culturally adapted brief motivational interview (CAMI) were asked to complete a qualitative exit interview to give feedback on their interview experience. Participants reported being highly engaged with treatment ($M=3.58$ on a scale of 1 - 4, $SD=.50$), and felt very satisfied with treatment ($M=3.58$ on a scale of 1 - 4, $SD=.93$). Nearly all (95%) reported that understanding their culture was important to understanding their drinking behavior. Results support the acceptability and relevance of this adaptation from participants' perspectives.

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Keywords

Alcohol; Motivational Interviewing; Latino

Although the volume of drinking (e.g., number of drinks per month) is not higher among Latinos compared to other racial/ethnic groups (Caetano, Baruah, Ramisetty-Mikler, & Ebama, 2010; Chan, Neighbors, Gilson, Larimer, & Marlatt, 2007), there is a greater burden of negative social and health effects of drinking for Latinos compared to other racial/ethnic groups (Caetano & Clark, 1998; Caetano, Ramisetty-Mikler, & Rodriguez, 2008; Campos-Outcalt, Bay, Dellapenna, & Cota, 2002; Grant et al., 2004; Mulia, Ye, Greenfield, & Zemore, 2009). For example, Latino drinkers are significantly more likely than non-Latinos to report workplace, legal and health problems, regardless of drinking level (Mulia et al., 2009). Symptoms of alcohol dependence remain more stable over time among Latino men, who are also more likely than non-Latino men to develop dependence (Caetano, 1997). Latinos are also at elevated risks for drinking and driving and have higher risk for alcohol-involved motor vehicle crashes and fatalities relative to non-Latinos (Caetano et al., 2008). Moreover, evidence suggests that Latinos are less likely to receive treatment for alcohol use problems than non-Latinos (Wells, Klap, Koike, & Sherbourne, 2001; Zemore, Mulia, Yu, Borges, & Greenfield, 2009), due to limited access to care (i.e., lack of insurance, Hargraves & Hadley, 2003), or to culturally appropriate care (USDHHS, 2001).

Few investigations of culturally adapted alcohol treatment research have been reported. One study comparing the effects of brief motivational interview in an Emergency Department on different ethnic groups reported the greatest gains for Latinos. Ethnically-matching Spanish-speaking providers and patients likely increased the intervention's cultural relevance (Field and Caetano, 2010). The authors noted that adapting the treatment would potentiate the effects of translation even further (Field & Caetano, 2010).

The important distinction between linguistic translation and cultural adaptation is often overlooked. Linguistic translation is a type of, but not a full, cultural adaptation. In the former, changes to content are minimal. In contrast, cultural adaptation considers the cultural congruence of key aspects of the intervention for potential adaptation while preserving the original active ingredients of the un-adapted treatment (Lau, 2006). For example, cultural adaptations to cognitive behavioral therapy to decrease panic attacks among Cambodian refugee victims of trauma (Hinton, Pham, Tran, Safren, Otto, & Pollack, 2004) modified core treatment elements, including psycho-education tailored to the refugee experience.

A separate investigation of the effects of adaptation distinct from the effects of translating an intervention, would contribute to the knowledge base. Motivational Interviewing (MI) (Miller & Rollnick, 2002) is a client-centered, directive counseling style originally developed to treat substance abuse that is widely supported (see meta-analyses by Lundahl & Burke, 2009; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). While MI has been successfully translated in many languages (see <http://motivationalinterview.org>), few cultural adaptations of MI have been attempted. This may be because evidence suggests un-adapted MI does not adversely impact minority clients (Hettinga, Steele, & Miller, 2005). In fact, a meta-analysis of health behavior studies using MI reported a greater effect size for minority compared to non-minority samples (Hettinga et al., 2005). However, this conclusion was based on a handful of studies. Only a small proportion (8 out of 82, 10%) of studies reported sample ethnic composition, and all eight studies sampled clinical populations (e.g., Brown & Miller, 1993; Graeber, Moyers, Griffith, Guajardo, & Tonigan, 2003; Handmaker, Miller, & Manicke, 1999). Further, none of the eight studies had more

than 15% minority representation. Therefore, while MI elements should work well across populations, the question of whether culturally adapting MI enhances its effect remains unknown. While studies of cultural adaptation in addictions treatment are often called for, few conceptual templates for cultural adaptations exist (Hall, 2001). The goal of this paper is to present the conceptual model guiding a cultural adaptation of MI, and to present data on the participants' responses to the adapted treatment. Because a guiding assumption was that MI elements were not harmful to patients, efforts were made to preserve MI treatment elements in the adapted version.

Culturally Adapting Treatment through Incorporating the Social Context: A Proposed Conceptual Framework

The potential of incorporating the social context to tailor health behavior research is increasingly acknowledged (Hall, 2001; Lakes, Lopez & Garro, 2006; Lopez & Guarnaccia, 2000; Sorensen, Barbeau, Hunt, & Emmons, 2004). For example, high rates of alcohol abuse and mental distress among those living in a "colonia" (impoverished communities along the Mexico-U.S. border), were associated with poverty, and not acculturation, suggesting the need to target environmental stressors (Blume, Resor, Villanueva, & Braddy, 2009). Similarly, the positive association between alcohol abuse and social contextual factors such as discrimination and historical trauma (e.g., genocide experienced by Native Americans) emphasizes the need to incorporate historical influences into a tailored intervention for Native Americans (Whitbeck, Chen, Hoyt, & Adams, 2004).

We used the following social contextual model to guide our cultural adaptation of Motivational Interviewing (MI). Conceptually, the MI model focuses on the clinical interaction. Social contextual factors, such as employment status, are considered to be potential treatment mediators or moderators (Miller & Rose, 2010) and are not acknowledged or emphasized as primary influences (Stanton, 2010). With regards to MI, social context has been described as the involvement of significant others (Stanton, 2010). We extend this conceptualization by contending that social contextual factors are essential to understanding drinking behavior among racial/ethnic minorities. Therefore, these social contextual variables should be at the forefront of any cultural adaptation of MI (e.g., part of the patient's presenting history or concerns) and not just a treatment mediator or moderator. These social contextual factors include: historical and political experiences around immigration, contexts of migration, receptivity of the host community, the language barrier, and discrimination. These factors are central experiences for many immigrants that are not as common to mainstream patients. We hypothesize that if these important aspects of the social context, such as immigration or discrimination, are acknowledged to the patient, that the feeling of being understood by the counselor will be enhanced. Miller and Rose (2010) presage our hypothesis by noting that MI may have a good effect with minorities because it presents a "welcome contrast to how others have treated the person" (p. 298).

There are several advantages to incorporating the social context in cultural adaptations. First, adaptations that focus solely on ethnic culture may presume differences, thus inadvertently cause stereotypes. A social contextual approach minimizes this possibility while maintaining the importance of culture. Second, the culture as internalized values model presumes it is static, not a dynamic, evolving entity. People who visit their home countries and then return to the US often bring with them new ways of living learned from their culture. Therefore, while individuals acculturate in the United States, they may also retain values of their country of origin (Room, Babor, & Rehm, 2005). Third, the culture as values model suggests that acculturative change is located exclusively within the individual (Gutmann, 1999; see Hunt, Schneider, & Comer, 2004, for a review). In fact, changes in one's social contexts, such as limited access to resources (Hunt et al., 2004; Lopez, 2003)

may be equally influential (Gutmann, 1999; Hunt et al., 2004). For example, Latinos may experience diminished social networks upon US arrival. This external structural change, in conjunction with shifts in internal values (i.e. “*familism*”) may influence the quality of social ties between US Latinos. *Familism* refers to Latinos valuing their family as a source of emotional and instrumental support, to strong familial connections, and to the centrality of family in daily life (Gil & Vega, 1996; Hovey, 2000; Hovey & King, 1996). Therefore, it is not acculturation alone, or English language preference *per se*, that influences health behavior; it is also the level of stress or barriers experienced in the social world that accompany acculturation, that predicts poorer mental health (Cook, Alegria, Lin, & Guo, 2009), or increased drinking (Finch, Catalano, Novaco, & Vega, 2003).

Our adaptation was based on social and cultural processes identified in formative qualitative research conducted with male and female Latino heavy drinkers in the Northeast that documented changes in the social contexts of drinking after US arrival, changing drinking patterns, and stressors related to immigration (Lee, Lopez, Colby, Tejada, Garcia-Coll, & Smith, 2006). Adaptation broadened clinical focus from the person and his/her behavior to the person’s behavior in the context of his or her social and cultural background.

In this paper, we describe how the intervention was culturally adapted to address social stressors identified in the Lee et al. (2006) study. For pilot studies in general, establishing acceptability and relevance of the new treatment are key outcomes, (Kraemer, Mintz, Noda, Tinklenberg, & Yesavage, 2006), and this is especially true when investigating under-researched populations. Therefore, the goal of this paper is to report findings on the acceptability and relevance of the CAMI. To accomplish this goal, we first describe how the treatment was adapted to address identified stressors. In the next section, we present data on participant responses to the treatment.

Social Stressors in the Context of Acculturation and Consequent Treatment Adaptations

Construct one: The social context of immigration

Benefits to US arrival, such as more stable legal systems, were noted, as were the challenges of adjusting to a new social context (Lee et al., 2006). Participants felt unable to do many activities they took for granted in their home countries, due to the language barrier, or to lack of information or money. The time immediately following U.S. arrival, when people felt most isolated, unsure of their new environment, and experienced the language barrier, was a time of increased drinking.

Adaptation: Increased focus on social context—CAMI discussion incorporated the participant’s social context by adapting the Typical Day, a MI structured strategy (Rollnick, Heather, & Bell, 1992) designed to enhance rapport and reduce judgment by exploring the individual’s alcohol use in the context of their daily routines. Although MI encourages therapists to understand the patient and his/her concerns broadly, the focus of motivational interview is usually on the *individual* and his/her drinking. Because inquiries about one’s social context as an influence on drinking behaviors are not explicitly made, cultural adaptation involved exploration of contextual influences. Interventionists were trained to probe and discuss stressors, such as experiences of discrimination, the effects of low status employment, or missing family back home, as influences on drinking behavior. A second adaptation of the Typical Day was to elicit *what mattered* to the participant, a key construct in understanding peoples’ social and cultural contexts (Kleinman, 1995).

Construct two: Changing family dynamics

Participants regretted leaving behind more connected familial networks. In the US, lives were described as more individualized with less family cohesion (Lee et al., 2006). Changes in family structures also accompanied immigration. Participants felt their children did not share their cultural perspectives, which caused conflict. For example, parents were reluctant to allow their children to spend the night with friends who were not close to the family. They also felt that children in the US were less respectful to parents than in their home countries. Participants identified respect for elders, or “*respeto*,” as an influence on their drinking behaviors because drunkenness in front of an elder person was seen as disrespectful. Women spent less time in the home with children in the US than in their home countries. Parents valued their familial roles and wanted to maintain them, even as the family structure and children changed.

In the U.S., participants reported drinking alone more often than in their home countries. Drinking alone was associated with negative moods and with missing one’s family or home country. Loneliness, nostalgia, and *sombría* (sadness) increased alcohol consumption. People drank to recreate happier times of being with family.

Adaptation: Changing family dynamics—Discussing the Pros and Cons of drinking is a MI structured strategy designed to increase internal motivation to change by clarifying ambivalence around changing behavior (Rollnick et al., 1992). These were culturally adapted by broadening inquiry and discussion of the effects of one’s drinking from oneself, to his/her family. Interventionists helped participants clarify discrepancies between their pros and cons of changing. For some, addressing cultural values helped with that clarification. Some of the pros, such as wanting to be the same kind of mother as they had in their countries of origin, were culturally-based. Therefore, the discrepancy between what they valued (being a stable provider and role model) and their current drinking behavior, was presented to enhance intrinsic motivation to change.

Giving feedback using an Elicit (asking permission to give feedback or what is known about the topic), Provide (give information) and Elicit (ask the participant what they make of it) format follows MI principles and is another structured approach (Rollnick et al., 1992). Cultural adaptations to feedback included a module on the impact of heavy drinking consequences on the family and children, with emphasis on being a positive role model. Because motor vehicle crashes and related fatalities due to alcohol consumption are higher among Latinos compared with non-Latinos (Caetano et al., 2008), another cultural adaptation was information on the risks of drunk driving *for child passengers in Latino families*. Another adaptation was to provide Latino and non-Latino norms for drinking based on national survey data (Chan, Neighbors, Gilson, Larimer, & Marlatt, 2007).

Construct three: Social Support

Social support refers to help from others in handling problems (Finch et al., 2003), feeling valued and cared for (Turner, 1999). Participants reported having greater contact with friends and family in their home countries and experienced available and strong sources of social support. While alcohol was present at most events and part of the culture in their home countries, it was often there to complement other social activities, such as dancing or talking (Lee et al., 2006). In contrast, participants felt that in the U.S., alcohol was the focus of getting together.

Adaption: Social support—To operationalize social support, the intervention focused on the quality of social support in the participant’s lives and whether it was relevant to their drinking. Interventionists were trained to probe the importance of social and family support,

who is most important to him/her, and how these individuals influenced their drinking behavior. When discussing plans for changing drinking, interventionists also explored how friends and family could provide support for changing drinking if interested.

Construct four: Alcohol health literacy

Drinking heavily was not considered a problem unless there were severe consequences, such as needing detoxification (Lee et al., 2006). Further, there was little awareness that drinking could cause negative health effects. For example, some women were unaware that drinking affects a developing fetus, and some were drunk at the time of delivery. However, educational level, not just cultural background, has been found to influence health literacy on the effects of alcohol. For example, focus group work with highly educated Latinos revealed that all were aware of the risks of drinking to pregnant women (Lee et al., unpublished data).

Adaptation: Health literacy—In the CAMI adaptation, we used the MI based Elicit-Provide-Elicit approach to understand participants' views on problem drinking. After getting permission, participants were given information on problem drinking using guidelines established by the National Institute on Alcohol Abuse and Alcoholism, and were told how heavy drinking increased one's risk for harm. They were then asked what they made of the information.

The Current Study

As the study goal is to investigate patient responses to the adapted treatment, participant responses in the pilot ($n=25$) trial are reported.

Methods

Participants

The average age of the 25 participants (44% male, 56% female) was 34 years ($SD = 11.97$; range = 18-63 years). Most immigrated around 16 years of age and 40% were single. About 20% completed high school. About 32% of the sample was below the federal poverty line ($< \$20,000/\text{yearly}$). Half (55%, $n=30$) were foreign-born. Of those, 60% immigrated from the Caribbean and the remaining 40% ($n=12$) were from Columbia ($n=6$), Mexico ($n=2$), and Guatemala ($n=4$). The mean level of acculturation was 3.12 ($SD=.78$) on the Short Acculturation Scale for Hispanics (SASH) (1 = less acculturated and 4 = highly acculturated), indicating more acculturated levels (1-2.99 less acculturated, > 2.99 more acculturated) (Marín, Sabogal, VanOss Marín, Otero-Sabogal, Pérez-Stable, 1987). High weekly levels of drinking were reported among men ($M=34$ drinks/week) and women ($M=18$ drinks/week).

Materials

Description of CAMI treatment—CAMI was a manualized single session brief motivational interview that lasted about an hour and a half. The target behavior was to reduce hazardous drinking and related negative consequences. The principles of MI were followed, including providing an empathic therapeutic milieu and reflective listening to elicit the patient's thoughts. The CAMI was standardized using MI structured strategies (Rollnick et al., 1992) that were adapted using culturally relevant content and by augmenting the therapeutic alliance.

Because minority participation in clinical trials is low, building rapport was critical (e.g., Yancey et al., 2006). Further, in more traditional cultures, individuals may view medical

staff as experts. Therefore, the opening statement was scripted to emphasize their rights to speak up even if they disagreed with the interventionist. This coaching sought to recast the unfamiliar role of being a research participant into a more familiar relationship, a process called using cultural scripts (Preloran et al., 2001). Similarly, the Cultural Lenses adaptation model (Lopez, 2002; Lopez, Kopelowicz, & Canive, 2002), views the participant's understanding of the helper relationship to be a cornerstone of developing culturally congruent treatment.

Description of interventionist training and monitoring—Interventionists were six graduate or post-graduate clinical psychologists. Most of the interventionists were non-Latino Whites ($n=4$) or Asian ($n=2$), most ($n=4$) were female, and all were English-speaking. The first author (CL), a Ph.D. level psychologist and a Motivational Interviewing Trainer, conducted the 16 hour CAMI training. Didactic sessions reviewed cultural and social influences (e.g., gender differences, importance of family) on drinking behavior among Latinos, the theoretical model of cultural adaptation, and coding (MI) a CAMI video and discussing how it reflected cultural processes. Trainees practiced each CAMI component using role plays and exercises to apply the theoretical model and to generate cultural hypotheses as part of their MI reflections.

To monitor treatment fidelity, interventionists and participants completed treatment fidelity forms, reviewed by the PI after each session. The PI and research team reviewed interventionists' video and audiotapes to ensure that he/she adhered to the manualized treatment (CAMI) and MI style. The PI and interventionists reviewed taped sessions during supervision, which occurred after each case.

Measures

Post-CAMI assessment interview—Few studies have assessed participant responses to culturally adapted treatments. The first author designed a qualitative interview comprised of nine open-ended questions: "What did you think about the conversation you just had?", "What do you think was the focus of the conversation", "What about the conversation was most helpful to you?", "What was least helpful to you?", "How do you feel the interviewer tried to understand you and your cultural background?", "Do you think that referring to your cultural background helped you to talk about your drinking?", "If you were to do it again, what parts of the interview would you rather not include?", and "What parts do you wish you had spent more time discussing?"

Measures of treatment acceptability—Treatment acceptability was quantitatively measured with two-questions, "How satisfied overall were you with this session?", and "How engaged did you feel in the session?" (willing to discuss your drinking, and actively participating), rated on a 5 point Likert scale ranging from 0 (*not at all*) 1 (*a little satisfied/engaged*) 2 (*somewhat satisfied/engaged*), 3 (*pretty satisfied/engaged*), to 4 (*very satisfied/engaged*).

Design and Procedure

To recruit participants in the CAMI, standard approaches (e.g., bus advertisements), and culturally sensitive approaches (e.g., Spanish radio talk-shows) were used. Recruitment methods also addressed participant concerns. For example, because participants were proud of their ethnic background and expressed concern that Latinos not be stereotyped as heavy drinkers, the intervention was advertised as a "health education study about the effects of drinking", modeled after the Drinker's Check-Up (Miller, Sovereign, & Krege, 1988). Participation as a way of helping the Latino community was also emphasized. This was effective with males, according to anecdotal reports. Heavy drinking status was assessed

using the following guidelines: 5 drinks/drinking episode or > 14 drinks/week for men, and 4 drinks/episode or >7 drinks/week for women (Monti, Tevyaw, & Borsari, 2005; Wechsler & Nelson, 2001). Interested volunteers were first asked, “Do you sometimes drink alcoholic beverages?” and if yes, “How many times in the past month have you had 5/more drinks in a day or 14/more drinks in the past week?” (e.g., male).

After completing informed consent (Spanish or English), participants completed a baseline assessment battery and participated in a culturally adapted motivational interview lasting about one hour and a half. Afterwards, they met with a research assistant to complete the Post-CAMI Assessment Interview and treatment acceptability measures. They were told that the interventionist would not know their responses.

Data Analysis

Participant responses to the nine questions were transcribed and coded for qualitative analysis following reported procedures (Berg, Raminani, Greer, Harwood, & Safren 2008). To create the codebook, the first and third authors met to generate categories for responses to each question. Any responses that signified a pertinent theme was assigned to a category, which were used to create the codebook. Two independent coders, who were both college level and bi-lingual (Spanish) then coded the questions separately using the codebook. Coders were trained in the coding manual and practiced how to assign codes. The coders met with the first and third authors to review and to discuss discrepant codes until consensus was achieved. These codes were entered into a data set for analysis.

Results from each coder were then compared. Interrater kappas ranged from .74-.89. One item, asking how culture was relevant to their drinking, was not in this range (inter-rater reliability = .46).

Results

In each of the following sections, results are first presented quantitatively (e.g., percentile of responses) and then qualitatively to enhance understanding of the results.

General Experience of the Intervention

All participants (n=22, 3 missing) said they understood that the focus of their intervention was to discuss their drinking behavior and how it influenced their daily lives. The average mean for treatment engagement ($M = 3.58$, $SD = .50$), and satisfaction ($M = 3.58$, $SD = .93$), was high: 36% (n=8) said that it was informative, 23% (n=5) reported a positive interaction with their interventionist, and 41% (n=9) said the intervention was helpful.

Most and Least Helpful Aspects of the Intervention

Participants rated as most helpful the information on how drinking affects one's health (32%, n=7), evaluations of their behavior while drinking (23%, n=5), and discussions about changing one's behavior (14%, n=3). A smaller number reported that talking about how their drinking affected others and their social relationships (9%, n=2), ethnic drinking norms (5%, n=1), the effects of their drinking on the community (9%, n=2), effects of drinking on others and on social relationships (9%, n=2), and talking about goals (5%, n=1), was most helpful. When asked what parts of the interview they wished they had more time for (n=16, n=9 missing), participants listed alcohol-related information (31%, n=5), and discussion about goals (6%, n=1). A sizable number (56%, n=9) listed overall satisfaction with the intervention (e.g., “very good”), and did not comment any further.

Participants (32%, n=7) also said acknowledgement of their own family life and community as part of the intervention was helpful:

“What I found most helpful was knowing I was helping the community by participating”.

“I think she knows that this (intervention) will help me and my group”.

“Asked questions about family origins and values”.

“Straight to the point and tried to get an idea of how my culture affects my drinking”.

When asked what they wished they had spend more time on, participants listed health, discussion of the change plan, strategies to cut down on drinking, and a more time discussing their cultural backgrounds.

To assess what participants did not like, we asked, “What topic was the least helpful?” (n=11 total, n=14 missing), and “What parts of the interview would you not include?” (n=4, n=21 missing). On both questions there were significant missing data. About 3 participants listed overall satisfaction with the study and did not comment further. For example, one participant said there was “nothing” wrong with the intervention. However, a few noted that study handouts (27%, n=3) and exercises (9%, n=1), were least helpful. A few noted that the questions were confusing (18%, n=2), one person wished there was more discussion about the family during the intervention, and one noted questions about cultural processes as being least helpful. Of the 10 who answered the questions, “What parts of the interview would you not include?” most wished it were more simple (3%, n=3), and shorter (1%, n=1).

The Relevance of Culture in Discussing Drinking Behavior

Ninety-five percent of the participants who received the adapted intervention agreed that referencing their culture helped to talk about their drinking behavior (somewhat to very much agree). To “How do you feel the counselor was able to understand you and your culture?” 50% (of 22 people, n=11) felt it was the therapist’s own abilities and qualities, 14% (n=3) identified the therapist’s cultural sensitivity, and the remainder listed general satisfaction in response to this question (33%, n=7).

Cultural Elements that Enriched Discussion

Eighteen participants responded to this question (n=7 missing). Most reported either that discussing cultural norms around drinking (22%, n=4), or evaluating their behavior in the context of their culture (23%, n=5), enriched their intervention discussion. Others (17%, n=3) stated that reflecting on how their drinking fit into their upbringing enriched their discussion. Sample comments included, “We are accustomed to drinking since we are young. It is good to talk about”. Talking about valued social relationships (11%, n=2), and reminiscing about their culture (17%, n=3) was also found to be helpful. One commented, “Anglo-American culture is different. Our culture (Latino) is more active, happier, and our social life is different”. Lastly, another participant said, “It helped to talk about our culture because we are away from our country and we want to reminiscence about our culture”.

Discussion

We took a systematic approach to culturally adapting motivational interviewing, an evidenced-based treatment that focused on reducing harmful drinking and consequences. Each intervention component was adapted to reflect the underlying theoretical assumption that behavior is socially as well as culturally determined among Latinos. Therefore, unlike an approach that augments separate components of an intervention model, our approach imbues each intervention component with this theoretical perspective. A first question was

to determine whether the integrity of unique MI treatment elements was maintained in the adapted version.

Overall, the underlying precepts of motivational interviewing seemed to influence the therapeutic relationship as intended. Participants responded favorably to the collaborative and nonjudgmental counselor attitudes, and appreciated being able to have a conversation while receiving helpful information about the effects of their drinking on their health. First, they frequently mentioned the use of MI structured strategies, including giving feedback and completing a change plan, as being helpful. Second, participants seemed to positively regard the cultural adaptations to the MI as an enhancement to their intervention experience. They reported feeling highly engaged with the interventionist and were highly satisfied.

Our data interpretation is limited by several factors. We did not directly ask participants if acculturative stressors were relevant to their drinking behavior, because such questions would be awkward and difficult to answer. Instead, a possible future approach may be to ask: “How did you feel about talking about discrimination while focusing on drinking?” Although we tried to control for social desirability by having research assistants administer the post-CAMI interviews, social desirability remained a concern particularly given the emphasis on *simpatía* (importance of cultivating and retaining a positive social relationship) in Latino cultures (Field & Caetano, 2010). Participants may have wanted to please research staff, who provided assistance with travel to the study site and child care, with positive comments about our intervention. However, a few participants said that talking about their cultural background was not relevant to the intervention, suggesting that participants felt comfortable to respond honestly. Another limitation might be that the question, “Do you think that referencing culture helped you to talk about your drinking” may have been leading. Instead, “how did you feel about talking about culture while discussing your drinking?” may be a less leading question. Because determining whether culture is relevant to health behavior is important, future studies should consider other modifications.

Despite these limitations, a review of our results suggests that the adaptation targeted the intended content (cultural and social processes influencing drinking behavior), and that the participants responded positively to this approach. First, efforts to build a strong rapport, which included coaching the participant on what it meant to be a research participant and giving permission to actively engage with the interventionist, may have created a positive therapeutic milieu that enhanced their experience of the intervention. Patient responses to treatment and their level of engagement are associated with improved alcohol treatment outcomes (Lee et al., 2006; Lee et al., 2010), and with greater treatment retention, which is associated with improved alcohol treatment outcomes (Añez, Silva, Paris, & Bedregal, 2008; Baird et al., 2007; Carroll et al., 2009). Improving *alcohol health literacy* by giving information and feedback on the effects of drinking, was most frequently cited as being helpful. There was some evidence to suggest that focusing on the family and social support was helpful, but it was not frequently mentioned.

Participants volunteered cultural and social interventional elements that were appreciated, such as the presentation of ethnic-based drinking norms and talking about how their culture affected their drinking behavior. Some appreciated that their participation would help their community and group, reflecting *simpatía* (Field and Caetano, 2010), as well the social reality that our participants were minorities in a larger, non-Latino community, and therefore may have appreciated a sense of ethnic solidarity and identification with one's group.

When we directly asked if culture was relevant to their drinking behavior, nearly all responded affirmatively. This is an important question for adaptation research because at times people may *not* feel that addressing culture is relevant, while researchers may assume

otherwise. As described earlier, our study was designed to accommodate this potential variance. Interventionists were trained not to emphasize a cultural and social approach if during assessment participants stated that culture was not relevant to understanding his/her drinking behavior. Of note, this was an English-speaking and more highly acculturated sample. Therefore, the fact that culture remains valued and important for more than half of the acculturated sample is noteworthy, and also suggests that in a less acculturated (e.g., mainly Spanish speaking) sample, the focus on cultural adaptation might be even more relevant.

Participants appreciated the expansion of the discussion to look beyond cultural values, to their social context and influences on their drinking behavior. Some participants felt that talking about lives before and after immigration was helpful. Others felt that talking about their drinking and how it fit into their cultural and social lives, enriched their own understanding of their drinking behavior. Together, these responses suggest that the theoretical broadening of cultural adaptation to include the social context is a feasible and meaningful approach.

Our study supports the need to continue building the science of adapting treatment using a conceptual model. Our social context model for cultural adaptations integrated social and cultural influences in adapting MI for problem drinking. In the context of an empirically-based treatment (Motivational Interviewing) delivered as intended, participants responded positively to the conceptually-informed cultural adaptations. Study findings also support the distinction between adaptations and linguistic translation and suggest that investigations of their effects should be conducted separately in clinical trials. Most importantly, using a conceptual and testable model will enable more rigorous tests of the effects between standard and adapted treatment versions to be conducted, which is the next step in our study program.

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Table 1**Participant Responses to a Culturally Adapted Motivational Interview (n=25)**

Topic	Participant Reactions
1.Opinion of intervention *	Informative (n=8), quality of interaction (n=5), response to intervention (n=2), expressed satisfaction (n=7) (n=3 missing)
2.Perceived focus of intervention	Alcohol (n=9), how drinking affects my life (n=8), behavior evaluation (n=4), changing behavior (n=1), (n=3 missing)
3.Most helpful topic	Alcohol effects on health (n=7), evaluating behavior (n=5), on social relationships (n=2), on community (n=2), discussing goals (n=1), changing behavior (n=3), drinking norms (n=1), overall satisfaction (n=1), (n=3 missing)
4.Least helpful topic	Need more discussion of family (n=1), cultural processes (n=1), confusing questions (n=2), study exercises (n=1), study handouts (n=3), expressed satisfaction (n=3) (n=14 missing)
5.How did counselor understand you/culture	Therapist characteristics (n=11), cultural sensitivity (n=3), expressed satisfaction (n=7) (n=4 missing)
6.Did referencing culture help you talk About your drinking?	Yes/somewhat yes (n=20), no (n=1) (n=4 missing)
7.(If Yes) how?	Discussed cultural life/upbringing (n=3), cultural norms (n=4), evaluation of self in culture (n=5), social relationships (n=2), cultural reminiscence (n=3), (n=8 missing)
8.What parts would you exclude?	More simple (n=3), less lengthy (n=1), no answer given (n=21 missing)
9. What parts spend more time on?	Alcohol-related information (n=5), talking about goals (n=1), expressed satisfaction (n=9), (n=10 missing)

* Questions: 1. What did you think about the conversation you had? 2. What did you think was the main focus of the conversation? 3. What topic was the most helpful to you? 4. What topic was the least helpful? 5. How did you feel the counselor was able to understand you and your culture? 6. Did you think referencing your culture helped you talk about your drinking? 7. (If yes), How? 8. If you could do the interview again, what parts would you not include? 9. What parts would you have liked to spend more time on?