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Do therapist cultural characteristics influence the outcome of substance abuse treatment for Spanish-speaking adults?

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Abstract

This secondary data analysis of the Clinical Trials Network's Motivational Enhancement Therapy effectiveness trial with Spanish-speaking substance users examined whether the degree of birthplace and acculturation similarities between clients and therapists, as well as the therapists' own level of acculturation and birthplace were related to the clients' participation in treatment and level of substance use during outpatient substance use treatment. Sixteen therapists and their 235 clients from the larger effectiveness trial were included in the analyses for this study. Results of the multilevel regression models for client participation in substance use treatment and client days of substance use taking into account within and between therapist cultural characteristics revealed that birthplace match and acculturation similarity between each therapist and his/her clients did not predict client outcomes. Instead, therapists' birthplace and level of acculturation independently predicted days of substance use, but not treatment participation for monolingual Spanish-speaking clients. These findings are discussed in the context of the results of the main effectiveness trial and of psychotherapy research with ethnic minority populations, in particular Hispanic minorities.

Keywords

treatment; Hispanic; therapist; acculturation; cultural match

The Hispanic population is the fastest growing minority population, expected to increase from 14.8% (44.3 million; U.S. Census Bureau, 2007) to 24.4% by the year 2050 (U.S. Census Bureau, 2004). Of the U.S. population five years of age and older, 32.1 million speak Spanish at home (U.S. Census Bureau, 2005). Given such dramatic growth, the field is challenged to develop culturally and linguistically competent addiction treatments that effectively meet the needs of Hispanics.

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Wells and colleagues (2001) reported that needs for alcohol and drug abuse treatment are not met for a sizeable sample of the Hispanic population. Under utilization of treatment services is even more pronounced for monolingual Spanish speaking immigrants (Alegria, Mulvaney-Day, Woo, et al., 2007). Unfortunately, there is limited research on evidence-based, culturally-appropriate substance abuse treatment for monolingual Spanish speaking adult populations. To address this gap and ultimately improve health care, Vega and Lopez (2001) recommend increased cultural competency training for therapists working with Hispanics. However, little is known about the therapist skills and characteristics that would facilitate cultural competence and lead to positive treatment outcomes for monolingual Spanish clients.

One of the most widely proposed mechanisms in cultural competency has been to match client and their therapists on a specific shared cultural characteristic. It is expected that therapists from the same culture as the clients will be better able to communicate and understand the language and cultural background of the clients than therapists from other cultures (Flaskerud, 1986). In Hispanic populations, Alegria and collegues (2006) suggested that Hispanic clients may view therapists with similar ethnic backgrounds as more empathic. Particularly within the Hispanic culture, empathy and warmth are key elements that convey trust and honesty among people who share cultural values (Sue & Sue, 1990). Partly because of the difficulty of defining the aspects of the culture that are relevant to psychotherapy or in particular to substance abuse treatment, researchers have not directly tested the assumption that cultural match between therapists and clients is related to therapy outcomes (Karlsson, 2005).

As a result, cultural match research has been reformulated into the study of ethnic match, which refers to the matching of a client with a therapist of the same ethnicity (Maramba & Hall, 2002). Results of research on client-therapist ethnic match have been mixed. A review of ethnic match studies from the early 1990's yielded small effects sizes (Maramba & Hall, 2002). However, for monolingual Spanish speaking Mexican Americans, the results of one study, which examined treatment outcomes (i.e., premature termination; total number of sessions, and global assessment scale) from data spanning 15 years of outpatient mental health services in the Los Angeles district, suggested that ethnic matching predicted positive treatment outcomes (Sue, Fujino, Hu, Takeuchi, & Zane, 1991). Therapist-client ethnic similarity in Hispanic populations has been associated with better client treatment engagement and participation as well as higher levels of abstinence than for therapist-client dissimilar dyads (Alegria, et al., 2006; Alvarez, Olson, Jason, Davis, & Ferrari, 2004; Diaz, Prigerson, Desai, & Rosenheck, 2001; Fiorentine & Hillhouse, 1999; Gamst, Dana, Der-Karabetian, & Kramer, 2000; Malgady & Zayas, 2001). The conclusion that ethnic matching in Hispanic populations yields positive results in psychotherapy is based on studies that compare Hispanics to other ethnic groups (e.g., Asian Americans, African Americans, Caucasian). However, for a group as heterogeneous as Hispanic Americans, the question still remains: What factors in ethnic matching account for the positive results?

Critics of ethnic matching designs in psychotherapy research have argued that even when clients and their therapists are ethnically similar, they may differ in cultural attitudes and levels of acculturation; thus, ethnic match does not ensure cultural match (Maramba & Hall, 2002). Karlsson (2005) echoed this sentiment in his recent review of the literature on ethnic matching arguing for examination of within-group variables, such as levels of acculturation, for acquiring a complete understanding of the role of ethnic matching in psychotherapy research.

After searching PsycINFO and MEDLINE, we found no published study that explored the relationships between acculturation level of Hispanic therapists, their clients and the clients' substance use treatment outcome. Contemporary views on acculturation maintain that it is a bidimensional process, whereby an individual adjusts and integrates features of both the original and dominant cultures (LaFromboise, Coleman, & Gerton, 1993; Tadmor & Tetlock,

2006). Although some substance abuse treatment research has examined acculturation in clients (Alegria, Canino, Shrout, Woo, Duan, Vila, Torres, Chen, & Meng, 2008; Arroyo, Miller, & Tonigan, 2003; Ortega, Rosenheck, Alegria, & Desai, 2000; Vega, Alderete, Kolody, & Aguilar-Gaxiola, 1998; Vega, Kolody, Aguilar-Gaxiola, & Catalano, 1999), there is a lack of knowledge regarding the impact that therapists' level of acculturation may have on the client's outcome in therapy. Thus, this study sought to examine the influence of therapist acculturation on client outcomes in two ways, by looking at the similarity between therapists and client acculturation level, as well as by examining the therapists' individual level of acculturation.

In the present study, we examined whether the similarity in birthplace and level of acculturation between clients and therapists were related to the clients' participation in treatment and level of substance use in the 4 months of outpatient treatment. In this case, similarity in birthplace was defined by whether Hispanic therapists and their clients were born in Latin America (including Puerto Rico) or in the United States. In addition, the extent of similarity in acculturation of the clients and their therapists was determined by examining both Hispanicism and Americanism differences in scores. Specifically, we examined two research questions. First, is the match between client and therapist birthplace and Hispanicism/Americanism related to client's participation and level of substance use in treatment? Second, is the therapists' birthplace and level of Hispanicism/Americanism related to the clients' participation and level of substance use in treatment?

These two questions were evaluated using the following five hypotheses: Hypothesis 1: (a) Clients of therapists with a matched birthplace will have better outcomes during treatment; and (b) Clients of therapists with more similar Hispanicism and Americanism levels will have better outcomes during treatment. Hypothesis 2: (a) Clients of therapists born in Latin America will have better outcomes than clients of therapists not born in Latin America; (b) Therapist Hispanicism will be positively related to client outcomes; and (c) Therapist Americanism will be inversely related to client outcomes.

Methods

Participants

The participants were 16 therapists from four community substance abuse treatment agencies in Colorado, Florida, New Mexico, and New York, who volunteered to participate and were randomized to be trained and conduct Motivational Enhancement Therapy (MET; Miller, Zweben, DiClemente, & Rychtarik, 1992) or standard individual counseling and the 235 clients randomly assigned to these therapists. Therapists from one site in the larger trial did not provide cultural data about themselves; therefore, therapists and participants from this site were not included in this study. From the 235 participants, 224 with complete data on their participation in the treatment agency at follow-up and 227 with data on their primary drug use at follow-up were included in the analyses.

Therapists—Therapists at each participating agency with no prior motivational interviewing or motivation enhancement therapy training were eligible to participate in this trial provided that they demonstrated an adequate level of Spanish fluency. Using an objective test developed by the first and last authors of this manuscript, who are bilingual Hispanic researchers, the Spanish fluency of each therapist was determined. The test consisted of the therapists' oral responses to two scenarios (i.e., description of educational background and a challenging counseling experience), where Spanish language comprehension, topic development, expression clarity, and discussion of a case was evaluated[1] (Suarez-Morales, Matthews, Martino, Ball, Rosa, Farentinos, Szapocznik, & Carroll, 2007). At least four therapists who were eligible were then randomly assigned to either MET or standard counseling at each site.

All counselors agreed to follow study procedures, including completing self-reports about their educational history, using specified therapeutic techniques, and audio-taping all study sessions for supervisory and independent review. Those assigned to the MET condition also agreed to training and supervision in Spanish MET for the duration of the study.

Table 1 summarizes the characteristics of the therapists included in this study. Their nationalities varied widely. Although all therapists were bilingual, 10 out of 16 therapists indicated their primary language as Spanish.

Clients—The clients in this study were described in detail in Carroll, Martino, Suarez-Morales, Ball, Miller, Rosa, Añez, Paris, Nich, Frankforter, Matthews, Farentinos, & Szapocznik (2007). The subset of participants who were assigned to the 16 therapists examined in this study is described in Table 1. Participants were primarily Spanish-speaking substance-using individuals seeking outpatient treatment at each participating site. Most of the participants were of Mexican heritage (43%), with 14% Puerto Rican, 10% Cuban, and 16% U.S. born Hispanics. Of all the clients, 69.8% were mandated to treatment and 57.9% were primary alcohol users. At baseline, over half the sample met criteria for a substance use disorder: 15.3% Alcohol Dependence, 13.2% Cocaine Dependence, 6.8% Cannabis Dependence, 4.8% dependence on another substance, 7.7% Alcohol Abuse, 5.5% Cocaine Abuse, 3.0% Cannabis Abuse, and 2.5% abuse of other substances.

Procedures

Spanish MET Protocol Procedures—The National Institute on Drug Abuse's Clinical Trials Network (CTN), a nationwide network of 17 regional academic research centers in partnership with over 200 community substance abuse treatment programs (Hanson, Leshner, & Tai, 2002), recently completed a multi-site randomized clinical trial that examined the effectiveness of Motivational Enhancement Therapy (Spanish MET) compared with standard individual counseling with Spanish-speaking substance users in five outpatient treatment programs. This study is identical in design to another CTN-based MET study delivered in English (Ball, Martino, Nich et al., 2007). The Spanish MET trial afforded the opportunity to evaluate whether the therapists' cultural variables impacted the clients' treatment outcomes. Consistent with cultural/ethnic matching viewpoint, the therapists in this national trial delivered the treatment to monolingual Spanish-speaking clients entirely in Spanish.

In brief, monolingual Spanish-speaking individuals seeking treatment for substance use were randomly assigned at each site to receive either three individual sessions of manual-guided MET or three standard individual counseling sessions during the first 28 days of treatment (i.e., active phase of this treatment study). Spanish MET is a Spanish translation of the 3-session MET (Farentinos & Obert, 2000) that had been based on the Project MATCH MET manual (Miller et al., 1992). All clients in this analysis attended all three experimental sessions during the active phase. After the active phase, clients remained in outpatient substance use treatment at their respective agencies. Treatment at each agency varied widely and consisted of participation on at least one mode of therapy including, individual treatment, group treatment, and self help. All study assessments (baseline, 4-, 8-, and 16-weeks post randomization) and treatment interventions were conducted entirely in Spanish.

[1]Spanish fluency test is available from the corresponding author.

Measures

Instruments completed by Therapists and Client Participants

Participant Characteristic Form: This six-item self-report instrument developed for this study gathered relevant demographic information about the country of origin of the therapists and the participants and each of their parents, language use, and the individual's length of residence (years) in the United States. Therapist/participant country of origin was measured by asking the individual to indicate his/her country of birth from a list of Latin American nations (e.g., Mexico, Puerto Rico, Cuba, Venezuela), Spain, and United States. A dichotomous birthplace variable was created for this study, coded 1 for a birthplace in Latin America, including Puerto Rico and coded 0 for a birthplace outside of Latin America. Of clients, 83% were born in Latin America. On average, foreign-born clients had lived in the U.S. for 14.3 (*SD* = 11.8) years. Of therapists, 58.8% were born in Latin America. On average, foreign-born therapists had lived in the U.S. for 30.5 (*SD* = 16.0) years. For analyses examining matched birthplace for each dyad, a match was defined as a client and therapist sharing birthplace, whether Latin America or not.

Bicultural Involvement Questionnaire (BIQ): The BIQ is a 24-item scale that assesses the individual's level of acculturation/involvement with either the Anglo-American or Hispanic cultures (Szapocznik, Kurtines, & Fernandez, 1980). The BIQ is one of the few bidimensional acculturation measures designed specifically for Hispanics (Zane & Mak, 2003). Half of the items are Hispanic-oriented and half are American-oriented. The items assessing comfort with the English or Spanish language in specific settings (e.g., home, work, with friends) and enjoyment of American or Hispanic cultural activities are answered using a 5-point Likert scale (1 = not at all comfortable/not at all to 5 = very comfortable/very much). A score is computed for each cultural dimension (i.e., Americanism and Hispanicism). In the present sample, the Cronbach's alpha coefficients for the Americanism and Hispanicism scores were .98 and .76, respectively for therapists and .88 and .85, respectively for clients. In general, the average level of acculturation for therapists was 3.9 for Hispanicism and 4.2 for Americanism; whereas for clients was 4.4 for Hispanicism and 3.0 for Americanism. For analyses examining similarity in acculturation level, we created two difference scores between the therapists' and clients' Hispanicism and Americanism scores for each dyad, respectively, by subtracting the clients' scores from the therapists' scores.

Instruments completed by Client Participants

Treatment Utilization Form: Clients provided information about their level of treatment involvement in the treatment facility on a weekly basis during the active phase of treatment (i.e., first 28 days of treatment) and then again at the 1-month and 3-month follow up after study treatment termination. Participation in treatment, defined as the number of reported days that the client was involved in treatment at the community treatment agency, was used in this study as a client outcome (*M* = 87.50, *SD* = 36.02).

Substance Use Calendar (SUC): The SUC is an interview assessment, adapted from the Form-90 (Miller & Del Boca, 1994) and Time Line Follow-Back interview (Sobell & Sobell, 1992) of client-reported substance use (marijuana, cocaine, alcohol, methamphetamine, benzodiazepines, opioids, and other illicit drugs), which is completed for the 16 weeks of the study by a research assistant. Clients reported their primary substance at baseline (*n*s: alcohol = 136, cocaine = 51, marijuana = 28, opiods = 13, methamphetamines = 7). Using this information, an independent variable, 'primary substance', was created for this study, in which primary alcohol users (58%) and primary drug users (42%) were divided into two mutually exclusive categories. In addition, the number of days of use of clients' primary substance from

the SUC was used as a marker of client outcomes over the course of treatment (M = 4.58, SD = 9.13).

Analytic Strategy—Multilevel regression models are similar to ordinary regression models but model relationships at more than one level (Bickel, 2007). As with ordinary regression analysis, level-one predictors explain variation in a dependent variable. Level-two predictors, however, explain variation in the intercept and/or slope of the level-one regression equation. In this analysis, multilevel regression analysis was chosen for three reasons. First, these models account for the hierarchical nature of the data, that is, clients at level-one assigned to one of 16 therapists at level-two. Second, these models permit level-two therapist characteristics to be modeled with random coefficients which allows for generalizations beyond the present sample of therapists. Third, these models are robust to unequal numbers of clients among therapists.

Two separate multilevel regression models with clients nested within therapists were conducted to test hypotheses using Mplus version 5 (Muthén, and Muthén, 1998–2007). In both models, two client characteristics, namely primary substance use (alcohol = 1 and illicit drug = 0) and mandated to treatment status (mandated = 1 and not mandated = 0), which differed by site, were controlled. The first model contained participation (i.e., total number of days at the treatment agency) as an outcome and the second model contained days of primary substance use as an outcome. Although participation was approximately normally distributed, days of substance use was positively skewed. Poisson regression was used with days of substance use to account for this positive skew. Fit statistics such as the CFI and RMSEA were not available for Poisson analysis in Mplus (Muthén, and Muthén, 1998–2007), so a chi-square test of differences in 2*loglikelihood between the model with predictors and a null (intercept-only) model was used to determine if the difference in fit was statistically significant. The Bayesian Information Criterion (BIC; lower values suggest better fit) was then used to determine which model fit the data better (Schwarz, 1978). Both sets of hypotheses were analyzed with each model.

For the first set of hypotheses, birthplace match and the two difference scores, one for Hispanicism and one for Americanism, were entered on the within-level, for clients within each therapist. As mentioned before to test a more refined method of ethnic match, therapists' and clients' birthplace was used, given that in this sample both therapists and clients were presumed to be of Hispanic ethnicity. Birthplace match was assigned a 1 if the client birthplace matched their therapist's (either Latin America- or U.S.-born), and a 0 if not. To represent client-specific relationships, the relationships between each within-level predictor and outcome were estimated with a random intercept and slope coefficients.

For the second set of hypotheses, two continuous variables, therapist Hispanicism and Americanism, and one dichotomous variable, therapist birthplace, were entered in the model at the between-level to predict variation in the level-one random intercept. Therapist's birthplace was defined with a dummy variable with therapists who were born in Latin America (including Puerto Rico) coded as 1 and those born in the United States or a nation outside of Latin America coded as 0.

Results

Table 2 summarizes the results for the two multilevel models predicting participation in treatment and days of primary substance use.

Predictors of Participation

The fit of the multilevel model with participation was significantly different from the null model, χ^2 (11) = 773.9, p < .001, and showed overall better fit with the BIC (4549.3 vs. 5263.5).

Hypotheses (1a–b)—Therapist-client match on birthplace (*B* = −0.04, *SE* = 0.10, *ns*), the extent of difference in the Hispanicism scores (*B* = 0.01, *SE* = 0.06, *ns*), and the extent of difference in the Americanism scores (*B* = −0.04, *SE* = 0.03, *ns*) between client and their therapist were not significantly related to client participation in treatment, after controlling for primary substance and mandated to treatment status.

Hypotheses (2a–c)—Therapist birthplace (*B* = 0.14, *SE* = 0.13, *ns*), therapist Hispanicism (*B* = −0.09, *SE* = 0.12, *ns*), and therapist Americanism (*B* = −0.10, *SE* = 0.07, *ns*) were not significantly related to client participation in treatment, after controlling for primary substance and mandated to treatment status.

Predictors of Days of Substance Use

The fit of the multilevel model with days of substance use was significantly different from the null model, χ^2 (11) = 940.3, p < .001, and showed overall better fit with the BIC (2031.5 vs. 2912.3).

Hypotheses (1a–b)—Therapist-client match on birthplace (*B* = −0.54, *SE* = 0.65, *ns*), the extent of difference in the Hispanicism scores (*B* = 0.61, *SE* = 0.46, *ns*), and the extent of difference in the Americanism scores (*B* = −0.10, *SE* = 0.12, *ns*) between clients and their therapist were not significantly related to the clients' number of days of substance use, after controlling for primary substance and mandated to treatment status.

Hypotheses (2a–c)—Therapist birthplace (*B* = 0.99, *SE* = 0.49, *p* < .05), therapist Hispanicism (*B* = −1.03, *SE* = 0.38, *p* < .001), and therapist Americanism (*B* = 0.45, *SE* = 0.06, *p* < .001) were significantly related to number of days of substance use, after controlling for primary substance and mandated to treatment status. On average, clients of therapists born in Latin America had greater substance use than clients of therapists born outside of Latin America. In addition, the results indicated that higher therapist Hispanicism was linked to fewer days of substance use, but higher therapist Americanism was linked to greater days of substance use.

Discussion

The results of this study suggest that birthplace match and cultural similarity between each therapist and his/her clients in level of acculturation may not be important as hypothesized with respect to clients' outcome in substance abuse treatment in a sample of Spanish-speaking clients. Instead, therapists' cultural characteristics, including birthplace and level of Americanism and Hispanicism, independently predict days of substance use for monolingual Spanish-speaking clients. However, therapists' birthplace and level of acculturation are not related to clients' participation in substance use treatment in this ethnic minority population. Because of the scarcity of information on therapist cultural characteristics as predictors of treatment outcome, in particular therapists serving Hispanic communities, the current study makes an important contribution to the field.

This investigation did not support the hypothesized effects of matching client and therapist on cultural characteristics to produce positive treatment effects. As suggested by the psychotherapy literature on cultural matching (Karlsson, 2005), we examined, in particular, whether similarity in client-therapist birthplace and level of acculturation in a Spanish-speaking

sample had any bearing on client outcomes in substance abuse treatment. From the findings, we can conclude that beyond matching clients and therapists on ethnicity and language, as the design of the study established and as previous literature would suggest (Alegria, et al.,, 2006; Alvarez et al., 2004; Diaz et al., 2001; Malgady & Zayas, 2001), there may not be any additional benefit in Hispanic populations of matching on cultural characteristics, such as birthplace (U.S. born vs. foreign born) and level of acculturation. Because this study is the first to examine the cultural match question in a substance abusing treatment population, further research should explore this question in clinical populations with other presenting problems (e.g., depression; anxiety) and using other psychotherapy modalities to determine if the findings are consistent across areas and treatments in Spanish-speaking populations.

On the other hand, we found initial evidence that suggests that individual cultural therapists' characteristics, specifically level of acculturation, are related to their Spanish-speaking clients' substance use patterns while in treatment. Based on the clinical literature with Hispanic clients (Andres-Hyman, Ortiz, Añez, Paris, & Davidson, 2006; Añez, Paris, Bedregal, Davidson, & Grilo, 2005; Añez, Silva**,** Paris, & Bedregal, in press), it may be that clients benefited from therapist expression of cultural nuances and values common to the Hispanic culture, as evidenced by the findings that high Hispanicism in therapists leads to decreased client substance use during treatment. For example, the Hispanic value of personalismo (personalism) is the preference for relating on a personal, rather than formal or institutional level (Comas-Diaz, 1993; Delgado & Humm-Delgado, 1982). Therapists may have conducted therapy with a close, informal way of treating the clients, sharing personal information, and demonstrating caring by the use of appropriate touch (e.g., handshake, or pat on the shoulder). In contrast, culturally specific behaviors may not be readily utilized by therapists with high levels of Americanism. This is a possible explanation for the findings regarding therapist Americanism being inversely related to client substance use during treatment. The findings of this study generate many more questions for future research, in particular about the process of therapy with Spanish-speaking clients and how therapists' level of acculturation may be related to treatment effects. Specifically, it is important that future researchers continue the search to identify the specific cultural characteristics displayed by highly Hispanicized and Americanized therapists that are conducive to better substance use outcomes in their clients.

Complicating this clinical picture is the finding that suggested that clients of therapists not born in Latin America decreased their substance use while in treatment, whereas for the clients of therapists born in Latin America the opposite was true. Clients born in Latin America may have overidentified with their Latin American-born therapist, which may have led to decreased inhibitions about using substances. It is also important to note that other factors, such as therapist competence or education, may have contributed to the current findings. In our current sample, we found that therapists born in the United States had higher education than therapists born in Latin America, which may explain in part the findings. It is also possible that for therapists displaying a higher level of competence in delivering the intervention their clients would do better. Together these findings suggest the existence of a complex process in therapy regarding the expression of cultural nuances, individual therapists' cultural characteristics, and therapist skills. Thus, additional research is needed to disentangle all of these variables and provide a clearer picture of the effects of therapist cultural characteristics in this population.

Because this secondary study of therapists' cultural characteristics that predicted the clients' days of substance use, the lack of findings on Spanish-speaking clients' participation in treatment should be discussed in the context of the larger Spanish MET clinical trial. In this trial, Spanish-speaking clients were equally retained in treatment in both conditions (Carroll et al., in press). This fact is very encouraging for the field, which has generally documented low retention of Hispanics in treatment (Agosti, Nunes, & Ocepeck-Welikson, 1996; Brecht, Greenwell, & Anglin, 2005; White, Winn, & Young. 1998). Based on the findings of the

Spanish MET trial regarding client participation, the findings of our secondary analysis are consistent with prior research on ethnic matching with Hispanic populations in particular (Erdur, Rude, & Baron, 2003; Gamst et al., 2000; Sue et al., 1991). However, these results also imply that beyond matching Spanish-speaking clients with Spanish fluent therapists, further matching on client-therapist birthplace and acculturation level may not lead to any additional gains in client participation in Spanish-speaking populations.

Clinical Implications of the Findings

The findings of the present study are encouraging for therapists in the substance abuse treatment field working with monolingual Spanish-speaking populations. Because many therapists working with this population may not be foreign born, the findings suggest that these therapists could be very effective in the delivery of substance abuse treatment services. It appears that therapists' knowledge and use of the Spanish language is the main requirement for keeping clients in treatment and for obtaining positive results. In addition, the therapists' understanding and high regard for the Hispanic culture seems to further benefit clients in reducing their substance use while in treatment. The mechanisms for understanding why this might be the case, or the specific cultural behaviors that therapists may use in therapy are still unclear at this point. Therefore, additional research examining the psychotherapeutic process with Spanish-speaking clients is clearly needed to uncover specific culturally relevant behaviors that lead to positive treatment outcomes. There is a growing clinical literature (e.g., Andres-Hyman, Ortiz, Añez, Paris, & Davidson, 2006; Añez, Paris, Bedregal, Davidson, & Grilo, 2005) that hypothesizes potential culturally congruent behaviors that may guide this empirical inquiry.

Limitations and Future Directions

This study was limited in several respects. First, although we attempted to control for therapist characteristics, the lack of random assignment to acculturation levels prevents us from ruling out the influence of unmeasured confounding variables on the outcomes. Clearly replication of the current results would be necessary prior to contemplation of a random assignment design. In addition, future research could address this limitation by including a number of other therapist characteristics, such as therapeutic skill, language fluency, or other possibilities to expand our understanding of these naturalistic relationships. Second, we measured acculturation of the therapists, not behaviors of therapists or transactions between therapists and clients. As such, it is not possible to determine the precise mechanism of action whereby the cultural characteristics of therapists influenced client outcomes. We recommend that future research combine cultural characteristics and therapeutic process.

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Table 1

Description of Therapist and Client Characteristics.

	Therapist (*N* = 16)	**Client (*N* = 235)**
	M (SD) or N (%)	***M (SD) or N (%)***
Female[b]	10 (62.5)	29 (12.3)
Age	38.8 (12.1)	33.5 (9.2)
Years of Education	15.0 (5.2)	9.9 (3.3)
Employed	16 (100.0)	139 (59.1)
Spanish is Primary Language	10 (62.5)	221 (94.0)
Hispanicism	3.9 (0.7)	4.4 (0.7)
Americanism	4.2 (1.0)	3.0 (1.4)
Years living in the U.S.	30.5 (16.0)	14.3 (11.8)
Birthplace[a] (Latin America)	10 (58.8)	195 (83.0)
Mexico	2 (12.5)	101 (43.0)
Puerto Rico	2 (12.5)	33 (14.0)
Cuba	1 (6.3)	24 (10.2)
United States (excluding Puerto Rico)	5 (31.3)	39 (16.6)

Note:

[a]Nations where less than 10 clients were born are not specified.

Table 2

Multilevel Models Predicting Participation in Treatment (N = 227) and Days of Primary Substance Use (N = 224).

	Participation		Days of Use	
	Coefficient	**SE**	**Coefficient**	**SE**
Control Variables				
Primary Substance[b]	0.00	0.04	−0.31	0.27
Mandated to Treatment[c]	**0.17****	0.06	**−0.91*****	0.25
Within-level[a]				
Ethnic Match[d]	−0.04	0.10	−0.54	0.65
Hispanicism Difference Score	0.01	0.06	0.61	0.46
Americanism Difference Score	−0.04	0.03	−0.10	0.12
Between-level				
Therapist Ethnicity[e]	0.14	0.13	**0.99***	0.49
Therapist Hispanicism	−0.09	0.12	**−1.03****	0.38
Therapist Americanism	−0.10	0.07	**0.45*****	0.06

Note:

# $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Significant estimates and trends toward significance are shown in **BOLD**.

[a] Within-level coefficients are random coefficients.

[b] Alcohol = 1, illicit drug = 0.

[c] Mandated to treatment= 1, not mandated to treatment = 0.

[d] Same birthplace between therapist and client = 1.

[e] Born in Latin America = 1, born outside of Latin America = 0.