

Treatment Utilization and Unmet Treatment Need Among Hispanics Following Brief Intervention

Craig A. Field, Gerald Cochran, and Raul Caetano

Background: In a large randomized trial examining ethnic differences in response to a brief alcohol intervention following an alcohol-related injury, we showed that Hispanics, but not non-Hispanics, were more likely to reduce alcohol intake in comparison with treatment as usual (*Addiction* 105:62, 2010). The current study evaluates whether the observed improvements in drinking outcomes previously reported among Hispanics following brief intervention might be related to prior or subsequent treatment utilization.

Methods: This study is a secondary analysis of data collected in a randomized clinical trial that evaluated ethnic differences in the effect of a brief motivational intervention (BMI) on alcohol use among medical inpatients admitted for alcohol-related injury. For this study, statistical analyses were carried out to compare alcohol use, alcohol problems, treatment utilization, and unmet treatment need between Hispanic ($n = 537$) and non-Hispanic White ($n = 668$) inpatients. In addition, we examined the relationship between prior treatment utilization and unmet treatment need and alcohol use outcomes following brief intervention and the impact of brief intervention on subsequent treatment utilization and unmet treatment need.

Results: In comparison with non-Hispanic Whites, Hispanics at baseline reported heavier drinking, more alcohol problems, greater unmet treatment need, and lower rates of treatment utilization. Among Hispanics, multilevel analyses showed that prior treatment utilization or unmet treatment need did not moderate the effect of BMI on alcohol outcomes. Furthermore, BMI did not significantly impact subsequent treatment utilization or unmet treatment need among Hispanics. Finally, treatment utilization and unmet treatment need at 6 months were not significant mediators between BMI and alcohol use outcomes at follow-up.

Conclusions: The benefits of brief intervention among Hispanics do not appear to be better explained by subsequent engagement in mutual help groups or formal substance abuse treatment. Prior history of treatment, regardless of the severity of alcohol problems, does not appear to influence the impact of brief intervention on alcohol use among Hispanics. These findings support prior results reporting the benefits of brief intervention among Hispanics and demonstrate that these improvements are not related to prior or subsequent treatment utilization.

Key Words: Screening and Brief Intervention, Alcohol, Treatment Seeking, Hispanic Health Disparity.

HISPANICS CURRENTLY REPRESENT 16% of the U.S. population, a percentage that is expected to double over the next few decades (Humes et al., 2011). In southwestern states, the proportion of Hispanics is already at this higher level: Texas, 38%; New Mexico, 46%; Arizona, 30%;

and California, 38% (Ennis et al., 2011). Binge alcohol use is highest among Hispanics compared with all other races and/or ethnicities (NSDUH, 2009). Hispanics have also been found to have higher levels of alcohol problem severity and are more likely to report negative social consequences because of their drinking (Schmidt et al., 2007). In comparison with non-Hispanics, Hispanics have higher rates of alcohol-related consequences, such as driving while intoxicated (Caetano and Clark, 1998, 2000; Galvan and Caetano, 2003), and lifetime arrests for driving under the influence of alcohol (Caetano and Clark, 2000). For any given level of consumption, ethnic minority populations experience more negative health and social consequences of drinking than Whites (Caetano and Clark, 1998). Moreover, Hispanics have longer careers of heavy drinking than their White male counterparts, even if they began drinking later in life (Caetano, 1997). Life course studies further suggest that alcohol problems are more stable over time among Hispanic men in comparison with Whites, and once they experience problems, they are more susceptible to developing new

From the School of Social Work (CAF, GC), Center for Social Work Research, Health Behavior Research and Training Institute, University of Texas at Austin, Austin, Texas; Behavioral Health Services (CAF), Screening and Brief Intervention, University Medical Center at Brackenridge, Austin, Texas; Dallas Regional Campus (RC), School of Public Health, University of Texas, Dallas, Texas; and UT Southwestern School of Health Professions (RC), UT Southwestern Medical Center at Dallas, Dallas, Texas.

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Reprint requests: Craig A. Field, PhD, School of Social Work, Center for Social Work Research, Health Behavior Research and Training Institute, University of Texas at Austin, 1717 West 6th Street, Suite 295, Austin, TX 78703; Tel.: 512-232-0624; Fax: 512-232-0617; E-mail: craig.field@austin.utexas.edu

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problems (Caetano and Kaskutas, 1995, 1996). In addition, Hispanics are more likely than Whites to have recurrent or persistent dependence (Chartier and Caetano, 2010).

In spite of these health disparities, Hispanics with alcohol abuse or dependence are significantly less likely than Whites to receive formal treatment (Schmidt et al., 2007). Health disparities related to treatment utilization remain evident in many studies even after taking into account differences in insurance coverage, income, and education across racial and ethnic groups (Schmidt and Weisner, 2005; Schmidt et al., 2006). Treatment services for Hispanics are limited, due in part to insufficient availability of bicultural and bilingual clinicians (Alegria et al., 2006). For example, Zemore and colleagues (2009) showed that although Spanish-speaking Hispanics may be more likely to consider treatment, they may be less likely to pursue treatment because of concerns regarding communication with providers and perceived lack of a shared racial and ethnic background. In addition, Hispanics compared with non-Hispanic Whites often report higher levels of economic and logistical reasons such as concerns about paying or finding services (Schmidt et al., 2007; Zemore et al., 2009). Stigmatized views of alcohol problems also remain a significant barrier to treatment utilization and are particularly influential among Latino men in comparison with non-Latinos (Keyes et al., 2010; Schmidt et al., 2007; Zemore et al., 2009). When they do seek treatment, Hispanics often present with characteristics that tend to be associated with lower rates of success (e.g., lower income, less education, more extensive family histories of alcoholism, poorer physical health, greater unemployment, and legal problems) compared with Whites (LeFauve et al., 2003; Lowman and Lefauve, 2003). Brief motivational intervention (BMI) is a public health approach to reduce alcohol use, prevent alcohol problems, and increase treatment utilization, and is often provided in the medical setting where patients who would not otherwise present for treatment of alcohol problems present for medical treatment of health problems commonly associated with heavy drinking and alcohol dependence (Bien et al., 1993; Booth et al., 1998; Miller and Rollnick, 2002; Monti et al., 1999). Given the growth of the Hispanic population in the United States, their increased risk for alcohol-related problems, and limited access to treatment, brief alcohol interventions may provide a viable strategy to help reduce these alcohol-related health disparities among Hispanics.

Prior to our research reported elsewhere (Field and Caetano, 2010b; Field et al., 2010), most studies examining ethnic differences following interventions for alcohol problems have either been underpowered to detect differences (see, e.g., Lowman and Lefauve, 2003) or included minority participants who were already seeking formal treatment for alcohol problems (Hettema et al., 2005). In a large randomized trial comparing the effectiveness of brief intervention and treatment as usual (TAU) among Hispanics and non-Hispanics, our prior research demonstrates that brief alcohol interventions in comparison with TAU effectively reduced

alcohol use among Hispanics presenting for medical treatment of an alcohol-related injury (Field et al., 2010). Among Hispanics, but not non-Hispanics, those who received a brief alcohol intervention were significantly more likely to reduce the average standard drinks consumed per week, percent days heavy drinking, and the maximum amount consumed on 1 occasion (Field et al., 2010). Upon further investigation, we found that ethnic matching between patient and provider moderated the effect of brief intervention among Hispanics (Field and Caetano, 2010b). Hispanics who received brief intervention from Hispanic providers were significantly more likely to benefit from brief intervention in comparison with Hispanic patients who received brief intervention from a non-Hispanic provider. We hypothesized that ethnic concordance between patient and provider may have impacted the effectiveness of the intervention through several mechanisms, including cultural scripts and ethnic-specific preferred channels of communication (Trandis et al., 1984). Further supporting this conceptualization of our findings, cultural scripts have been found to be strongest among foreign-born Hispanics and less acculturated Hispanics (Sabogal et al., 1987), which we also observed (Field and Caetano, 2010b).

Alternative explanations for our findings are that brief intervention was more effective among Hispanics because they were less likely to have sought treatment prior to brief intervention or that the brief intervention influenced subsequent engagement in treatment, which may have subsequently affected drinking outcomes. It is conceivable that patients with no prior history of treatment for alcohol problems may be more likely to benefit from brief interventions, regardless of their dependence status, because they are more responsive to opportunistic interventions conducted in the medical setting. If so, Hispanics who have limited access and are less likely to utilize treatment may be more likely to respond to brief intervention. Alternatively, brief interventions have been shown to promote treatment entry, increase adherence to treatment, and promote attendance to treatment (Bien et al., 1993; Booth et al., 1998; Miller and Rollnick, 2002; Monti et al., 1999). Participation in alcohol treatment is clearly associated with improved outcomes (Dawson et al., 2006; Field and Caetano, 2010a; Weisner et al., 2003). For instance, Weisner and colleagues (2003) found clear benefits of treatment. Specifically, 30-day abstinence rates 1 year after baseline were 57% for the treatment sample and 12% for the population sample. Nonproblematic drinking at follow-up also favored the treated sample (40 vs. 23%).

Herein, we conduct a post hoc, secondary data analysis to evaluate whether: (i) Hispanic patients with alcohol-related injuries reflect the trends in drinking and treatment utilization observed in general population surveys of Hispanics, (ii) prior treatment utilization influences the effectiveness of BMIs on drinking outcomes among Hispanics, and (iii) BMIs impact subsequent treatment utilization among Hispanics. The overall intent of this evaluation is to

determine whether observed improvements in drinking outcomes among Hispanics might, in part, be explained by increased treatment utilization. In this study, we examined rates and changes in unmet treatment need in addition to traditional methods of examining treatment utilization. We defined unmet treatment need as patients who met criteria for alcohol dependence, but had not received formal substance abuse treatment. Therefore, using unmet treatment accounts for the severity of alcohol problems and assesses treatment utilization among patients for whom formal treatment is most likely indicated. Given the potentially high rates of alcohol dependence and corresponding low rates of treatment utilization, unmet treatment need offers an alternative conceptualization of treatment utilization that warrants investigation among Hispanics.

MATERIALS AND METHODS

Recruitment

This study is an analysis of data collected in a randomized clinical trial that evaluated ethnic differences in the effect of a BMI on alcohol use among an ethnically/racially diverse population (Caetano, R.; NIAAA: R01 013824; Clinical Trial Registration: NCT00132262). Participants recruited for this study were patients admitted to a Level-1 trauma center who were screened positive for at-risk drinking. Procedures for this study were approved by the Institutional Review Boards of the University of Texas Health Science Center at Houston and the trauma center in which patients were recruited. The study obtained a certificate of confidentiality from the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Study recruitment took place from 2003 to 2005.

Screening

Screening for alcohol problems among patients followed a sequential criteria: (i) clinical indication of acute intoxication, alcohol use, or positive blood alcohol concentration; (ii) self-reported drinking 6 hours before the injury event; (iii) self-reported drinking at NIAAA risk levels; that is, 7 drinks/wk women, 14 drinks/wk men and more than 4 drinks/d in men, more than 3 drinks/d in women (NIAAA, 2007); and (iv) positive on 1 or more items of the CAGE questionnaire (Ewing, 1984). Specific details of the screening process have been described elsewhere (Field et al., 2009). Given that the primary aim of the parent study was to evaluate ethnic differences in response to BMI, study recruitment was limited to self-identifying White, Hispanic, and Black patients. This analysis is limited to non-Hispanic Whites ($n = 668$) and Hispanics ($n = 537$) and excludes non-Hispanic Blacks who have similar alcohol-related health disparities as Hispanics.

Assessment and Intervention

After recruitment and consent, patients were assessed on a number of demographic, injury, and behavioral health domains. The behavioral health domain included current and past alcohol use, alcohol-related consequences, and treatment seeking behaviors, in the last year. Following assessment, patients were randomized to a TAU or BMI. During the time of the project, the TAU condition at the trauma center consisted of the patient receiving written materials about excessive drinking. The treatment in the study consisted of patients receiving a BMI (Field and Caetano, 2010a; Field et al., 2005, 2010). Follow-ups were conducted at 6 and 12 months, with Hispanic participants having a lower likelihood of completing a

6-month assessment (OR = 0.59, 95% CI = 0.43 to 0.83), but having no difference in follow-up rate at 12 months.

Measures for the Current Study

Treatment utilization for alcohol problems was measured using the Treatment History Interview from Project MATCH (Miller, 1996). At baseline, this measure assesses lifetime (i) attendance to an Alcoholics Anonymous meeting, (ii) admission to an alcohol detox program, (iii) admission to an alcohol recovery home or other residential program, (iv) admission to an outpatient program (not a residential program), and (v) attendance to a drinking driver program (often mandated for DWI offenses) or other services related to alcohol problems. Treatment utilization assessed at 6 and 12 months was limited to the follow-up period. Unmet treatment need at baseline was defined as meeting criteria for alcohol dependence with no prior treatment history. Alcohol dependence identified was measured using the long form of the Composite International Diagnostic Interview (Robins et al., 1989). Drinking outcomes were based on participant self-reported quantity and frequency of alcohol use (Greenfield, 2000) in the last year at the baseline and the past 6 months at 6- and 12-month follow-up interviews. For this trial, 1 standard drink was defined as 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of distilled spirits (Dawson, 2003). Percent days heavy drinking were calculated by dividing how frequently participants consumed 5 or more standard drinks on 1 occasion by their frequency of drinking. Percent days abstinent were calculated from participants' frequency of drinking. Last, all participants were asked at each assessment to report the maximum number of drinks consumed on 1 occasion in the last year at baseline or during the 6 months prior to the follow-up assessments at 6 and 12 months. Participant alcohol-related problems were assessed with the Short Inventory of Problems (SIP) +6, which is based on the DRINC (Soderstrom et al., 2007). This measure contains 6 subscales of different areas of consequences related to alcohol use, which include physical, interpersonal, intrapersonal, impulse control, social responsibility, and injury (Miller, 1995; Soderstrom et al., 2007). Health insurance status was determined at baseline by asking patients what type of health insurance they had from among 9 possible insurance programs that included commercial insurance and local or federally funded insurance providers or no insurance. A dichotomous insurance variable was then created based on these responses (i.e., insurance yes/no).

Analyses

To address the above-proposed research questions, a series of analyses were conducted. Analyses for the group differences, BMI treatment effects, and treatment utilization and unmet treatment need as mediators were conducted using PASW 18 (PASW, 2010). The multilevel modeling moderator analyses were conducted with HLM 6 (Raudenbush et al., 2004).

Group Differences. The first sets of analyses compare alcohol use, alcohol problems, treatment utilization, and unmet treatment need among Hispanics and non-Hispanic Whites. Independent sample *t*-tests were used to detect mean differences between Hispanics and non-Hispanic Whites for the baseline alcohol use measures that included percent days abstinent, percent days heavy drinking, maximum number of drinks per drinking day, and alcohol-related problems. Chi-squared difference tests were used to test: (i) baseline proportional differences for alcohol dependence, (ii) proportional differences for involvement in alcohol treatment prior to study recruitment and at 6 and 12 months postintervention, and (iii) differences at baseline, 6 and 12 months for unmet treatment need. In addition, we examined the potential influence of insurance status on these group differences, using logistic regression predicting

treatment utilization and unmet treatment need based on race and insurance status.

Moderator Effects. This project also sought to test the moderating effects of alcohol treatment utilization and unmet treatment need at baseline on drinking outcomes following BMI among Hispanics. These interaction effects were examined using a multilevel modeling framework. Separate analyses were conducted to test these moderating effects for each of the 4 alcohol use outcome variables including percent days abstinent, percent days heavy drinking, maximum number of drinks per drinking day, and alcohol-related problems. In the level-1 equations of these analyses, 1 continuous alcohol use outcome was included along with binary dummy-coded time variables representing the 6- and 12-month follow-up assessments. In the level-2 equations for each of the outcomes, main effects for prior treatment and interaction effects for BMI \times prior alcohol treatment were included as uncentered variables, or the main effects for unmet treatment need and the interaction effects of the BMI \times unmet treatment need were included as uncentered variables. The level-2 equations also included gender, age, work status, injury type (intentional or unintentional), level of education, marital status, and injury severity as control variables.

Effects of BMI. Also of interest was testing the effects of BMI on postintervention treatment utilization and unmet treatment need for Hispanic participants. To test these outcomes, binary logistic regression models were used to examine the effects of the BMI on the outcome of postintervention treatment utilization and unmet treatment need at the 6- and 12-month follow-ups among Hispanic participants. Because prior research has shown that insurance status may effect treatment utilization, a binary logistic regression analysis was also conducted that controlled for insurance status at baseline.

Mediation Effect of Treatment Utilization and Changes in Unmet Treatment on Drinking Outcomes. Mediation effects were also tested. Specifically, treatment utilization at 6 months and unmet treatment need at 6 months were both individually tested as mediators

between BMI and the 4 alcohol use outcomes at 12 months. Mediation effects were tested using the Baron and Kenny (1986) method.

RESULTS

Baseline Demographics and Differences

In comparison with non-Hispanic Whites, Hispanics were significantly more likely to be male. Hispanics were also generally younger than non-Hispanic Whites. Hispanics were more likely to be employed than non-Hispanic Whites, and Hispanic individuals reported less education than non-Hispanic Whites. Hispanics were also more likely to be married, uninsured, and admitted for treatment of an intentional injury. Hispanics were more likely to be foreign born (54%) and most self-identified as being of Mexican descent (85%). Among those who were employed, there was a significant difference in reported household income. Employed Whites were more likely ($\chi^2 = 131.0$, $df = 2$, $p < 0.001$, results not shown) to report household income $> \$50,000$ per year (see Table 1).

Group Differences in Drinking and Alcohol Problems at Baseline

Independent sample *t*-tests revealed significant differences between Hispanic participants in the study compared with non-Hispanic Whites at baseline. Hispanic participants reported significantly greater percent days abstinent, percent days heavy drinking, and maximum amount consumed in

Table 1. Baseline Characteristics of Study Participants and Difference Tests

Group	Category in group	Hispanic	Non-Hispanic Whites	χ^2	df	<i>p</i>	OR	95%CI
Condition	Brief motivational intervention	263 (49%)	326 (48.8%)	0.0	1	0.95	1.01	(0.80–1.26)
	Treatment as usual	274 (51%)	342 (51.2%)					
Gender	Male	475 (88.5%)	524 (78.4%)	21.1	1	0.00	0.48	(0.34–0.66)
	Female	62 (11.5%)	144 (21.6%)					
Hispanic origin	Mexican	449 (85.2%)	—	—	—	—	—	—
	Other	78 (14.8%)	—					
U.S. nativity	U.S. born	246 (45.8%)	654 (97.9%)	427.34	1	0.00	0.02	(0.01–0.03)
	Foreign born	291 (54.2%)	14 (2.1%)					
Work status	Working	414 (77.1%)	467 (69.9%)	7.8	1	0.01	0.69	(0.53–0.90)
	Not working	123 (22.9%)	201 (30.1%)					
Income	$< \$20,000$	304 (62.2%)	203 (33.1%)	114.9	2	0.00	—	—
	$\$20,001–\$50,000$	152 (31.1%)	252 (41%)					
	$> \$50,001$	33 (6.7%)	159 (25.9%)					
Education	High school	120 (22.3%)	248 (37.1%)	30.7	1	0.00	0.49	(0.38–0.63)
	No high school	417 (77.7%)	420 (62.9%)					
	College	68 (12.7%)	264 (39.5%)					
Marriage status	No college	469 (87.3%)	404 (60.5%)	107.6	1	0.00	0.22	(0.17–0.30)
	Married	179 (33.3%)	178 (26.6%)					
Insurance status	Not married	358 (66.7%)	490 (73.4%)	6.4	1	0.01	1.38	(1.07–1.76)
	Insured	127 (23.6%)	311 (46.6%)					
Injury type	Uninsured	410 (76.4%)	357 (53.4%)	67.5	1	0.00	0.36	(0.28–0.46)
	Intentional	147 (27.4%)	79 (11.8%)					
Age	Unintentional	390 (72.6%)	589 (88.2%)	47.2	1	0.00	2.81	(2.01–3.80)
	Mean (SD)	29 (9.2) ^a	35 (11.8) ^a					

^aMean (SD).

^b*t*-value.

the last year than did non-Hispanic participants. Hispanic participants also reported significantly higher levels of problems in the area of social responsibility area (i.e., lack of social responsibility, such as money issues or failing to meet social expectations) than did non-Hispanic White participants (see Table 2).

At baseline, chi-squared tests (see Table 3) showed that Hispanics were more likely to meet diagnostic criteria for alcohol dependence than non-Hispanic Whites. Hispanics were less likely to report alcohol treatment prior to recruitment into the study and more likely to have an unmet treatment need than non-Hispanic Whites. Controlling for insurance status, Hispanics were less likely to have prior treatment and more likely to have an unmet treatment need at baseline (results not shown).

Moderator Effects of Prior Treatment and Unmet Treatment Need

Multilevel analyses showed no significant moderation effects for the BMI \times prior alcohol treatment interaction on the outcomes of percent days abstinent, percent days heavy drinking, maximum number of drinks per drinking day, and

alcohol-related problems among Hispanics. Similarly, the multilevel analyses showed no significant moderation effects for the BMI \times unmet treatment need interaction for alcohol use outcomes among Hispanics.

Follow-Up Differences for Treatment Utilization and Unmet Treatment Need

Chi-squared tests were used to examine differences between Hispanics and non-Hispanic Whites for treatment utilization and unmet treatment need at 6 and 12 months postintervention (see Table 4). Hispanics were significantly less likely to seek treatment than non-Hispanic Whites at the 6-month follow-up. However, there were no significant differences in treatment seeking between Hispanics and non-Hispanic Whites between the 6- and 12-month follow-ups. There were also no significant differences in unmet treatment need among Hispanics and non-Hispanic Whites at 6-month follow-up. There were no significant differences in unmet treatment need among Hispanics and non-Hispanic Whites between 6- and 12-month follow-ups. Controlling for insurance status, Hispanics were less likely to seek treatment at 6 months with no differences between Whites in treatment

Table 2. Mean Differences Between Hispanic Compared to Non-Hispanic Caucasians

Drinking measure	M Hispanic	SD Hispanic	M non-Hispanic Whites	SD non-Hispanic Whites	<i>t</i>	df	<i>p</i>
PDA	72.9%	0.3	64.9%	0.3	-4.82	1,193.8	0.00
PDHD	71.6%	0.4	57.1%	0.4	-6.28	1,182.6	0.00
Max	2.55	0.6	2.47	0.6	-2.37	1,203	0.02
Short Inventory of Problems (SIP) physical	1.35	2.3	1.33	2.3	-0.13	1,203	0.89
SIP interpersonal	0.97	2.2	0.87	2.1	-0.81	1,203	0.42
SIP intrapersonal	1.58	2.8	1.50	2.7	-0.46	1,203	0.65
SIP impulse control	1.30	2.2	1.23	2.0	-0.54	1,203	0.59
SIP social responsibility	1.56	2.7	1.23	2.4	-2.21	1,082	0.03
SIP injury	1.48	2.2	1.51	2.2	0.24	1,203	0.81

PDA, percent days abstinent; PDHD, percent days heavy drinking.

Table 3. Proportional Differences for Hispanics Compared with Non-Hispanic Caucasians

Alcohol variable	<i>n</i> Hispanic	% Hispanic	<i>n</i> Non-Hispanic Whites	% Non-Hispanic Whites	χ^2	df	<i>p</i>	OR (95% CI)
Alcohol dependence	233	51.2	248	40.2	12.8	1	0.00	1.56 (1.22–1.99)
Prior alcohol treatment	153	28.5	302	45.6	36.7	1	0.00	0.48 (0.37–0.61)
Baseline unmet treatment need	139	30.7	76	12.4	53.7	1	0.00	3.12 (2.28–4.26)

Table 4. Proportional Differences for Hispanics Compared with all Other Participants to Non-Hispanic Caucasians

Treatment variable	<i>n</i> Hispanic	% Hispanic	<i>n</i> Non-Hispanic Whites	% Non-Hispanic Whites	χ^2	df	<i>p</i>	OR (95% CI)
Treatment seeking at 6 months	29	9.2	96	18.9	14.8	1	0.00	0.44 (0.28–0.68)
Treatment seeking 6–12 months	39	15.1	74	17.1	0.47	1	0.49	0.86 (0.57–1.32)
Unmet treatment need seeking care at 6 months	5	19.2	11	12.2	0.83	1	0.36	1.77 (0.54–5.46)
Unmet treatment need seeking care at 6–12 months	8	22.9	11	15.5	0.86	1	0.35	1.62 (0.58–4.47)

seeking at 12 months (results not shown). Also controlling for insurance, Hispanics were more likely than Whites to have an unmet treatment need at 6 and 12 months.

Effects of BMI on Treatment Utilization and Unmet Treatment Need

Logistic regression models testing the effects of: (i) BMI condition on treatment utilization for Hispanic participants at 6- and 12-month follow-ups and (ii) BMI and insurance status on unmet treatment need at the 6- or 12-month follow-up (i.e., those who had baseline unmet treatment need and did not seek treatment subsequent to discharge) were not significant. The results of the binary logistic regression models that examined the effects of BMI and insurance status on treatment seeking and unmet treatment need at 6 and 12 months showed no significant effects.

Mediation Effects

For the mediation effects tested in this study (results not shown), the relationship between the BMI on the dependent variables did not demonstrate significant relationships, with the exception of maximum amount consumed ($p = 0.02$). The relationships between BMI and the mediator of treatment utilization at 6 months and the mediator of unmet treatment need at 6 months were not significant. Therefore, further analyses were not conducted to examine the potential mediating effects of treatment utilization on drinking outcomes following brief intervention.

DISCUSSION

This study presents a post hoc analysis of clinical trial data on the potential effects of prior treatment utilization and unmet treatment need on drinking outcomes following brief intervention and the potential effects of brief intervention on treatment utilization and unmet treatment need among Hispanics. First, as in the general population, Hispanic injured patients with at-risk drinking have higher rates of alcohol dependence and engage in heavier drinking. The elevated percent days abstinent, percent days heavy drinking, and maximum amount consume observed herein also suggest a binge drinking pattern more commonly reported among Hispanics, in general, and Mexican and Mexican Americans, in particular (Caetano et al., 2008a). In the context of brief intervention following admission for medical treatment of an alcohol-related injury, this is particularly noteworthy because this pattern of drinking is commonly associated with injury (Babor and Higgins, 2001; Babor et al., 2007; Gentilello et al., 1999; Schermer et al., 2006). Similar to general population surveys, Hispanics in this study were significantly less likely to have sought treatment in the past, regardless of the severity of their alcohol problems or insurance status. These results replicate general population surveys indicating increased alcohol use, alcohol problems, and less treatment

utilization among Hispanics, regardless of severity of alcohol problems, in a clinical sample of heavy drinkers.

Second, prior treatment utilization, or lack thereof, did not appear to influence drinking outcomes following brief intervention among Hispanics, regardless of the severity of alcohol problems associated with the injury. Third, brief intervention did not appear to influence subsequent engagement in formal treatment, regardless of the severity of alcohol problems or insurance status. Finally, subsequent treatment engagement, regardless of the severity of alcohol problems at baseline, did not mediate the effect of brief intervention on alcohol use. While these findings constitute a post hoc, secondary data analysis, they strongly suggest that our prior research reporting the benefits of brief intervention on drinking outcomes among Hispanics does not appear to be better explained by subsequent engagement in mutual help groups such as Alcoholics Anonymous or formal inpatient or outpatient treatment for substance abuse (Field et al., 2010).

The current findings appear to support our prior conclusion that the increased effectiveness of BMI among Hispanics, particularly when these interventions are provided by Hispanic providers, may be a function of cultural scripts (Field and Caetano, 2010b; Field et al., 2010). More than being indicative of personal values, cultural scripts are values and beliefs that characterize a particular culture or ethnic group (Trandis et al., 1984). Among Hispanics, 2 important cultural scripts are “simpatia” and “familism” (Sabogal et al., 1987; Trandis et al., 1984). “Simpatia” refers to a Hispanic cultural script that encourages a certain level of conformity and empathy for the feelings of other people and to behave with dignity and respect toward others (e.g., Gloria and Perego, 1996; Marin, 1990). Simpatia has also been described as a general tendency toward avoiding interpersonal conflict and striving for harmony in interpersonal relations (Trandis et al., 1984). This general tendency may have positively influenced Hispanics’ response to opportunistic BMI following medical treatment of an alcohol-related injury. Similarly, ethnic-specific preferred channels of communication may have also influenced Hispanic’s response to brief intervention in the medical setting (Marin and Marin, 1990; Sabogal et al., 1987; Trandis et al., 1984). In the context of this study, Hispanic patients have shown greater willingness to adhere to the advice of medical professionals who are overwhelmingly perceived as one the most credible sources of information (Marin and Marin, 1990). Thus, increased trust in healthcare professionals may have also increased the overall responsiveness of Hispanic patients to the intervention and lead to improved drinking outcomes.

“Familism” is another core value in the Hispanic culture, and family-related consequences associated with substance abuse have been found to be of central concern to Hispanics. In the Hispanic culture, family relationships are bound by a strong sense of loyalty and reciprocity (Sabogal et al., 1987). Hispanics report greater willingness to talk with family members regarding

alcohol problems (Marin et al., 1990a,b; Sabogal et al., 1987). For example, Hispanics report they would be less embarrassed by talking about these issues with family members and that relatives using substances would be more likely to be responsive (Marin et al., 1990b). Thus, familism may have contributed to the likelihood that additional social support would have been provided to Hispanics and that Hispanics would have been more likely to follow the advice of family members. Additional social support such as this has been suggested as an important potential mechanism of change in alcohol treatment, especially for Hispanics (Arroyo et al., 1998; Gentilello et al., 1999). It is worth noting that the measure of treatment utilization used in this study did not include informal help seeking behaviors that may have positively impacted outcomes among Hispanics. A broader conceptualization of treatment utilization that captures informal help seeking and social support may help elucidate the positive effects of brief intervention among Hispanics and non-Hispanics alike. The provision of brief intervention in medical settings, such as the trauma care system, may provide a unique opportunity to increase linkages to more intensive treatment when applicable in this at-risk, underserved, and growing population.

Despite the potential clinical significance of these findings, there are several limitations to this study that should be taken into account. First, 6-month follow-up was less likely among foreign-born Hispanics (Field et al., 2010). However, there were no significant differences in 12-month follow-up rates. Moreover, foreign-born Hispanics who were randomly assigned to BMI were no more likely to be lost to follow-up than those randomly assigned to TAU (Field et al., 2010). In addition, because the study took place in the trauma care setting, this sample is predominately made up of younger men. This sample consists of primarily Mexican-born and Mexican American Hispanics. However, Mexican Americans constitute about 60% of the U.S. Hispanic population and are currently the largest Hispanic subgroup. Mexican American men also represent a particularly vulnerable population with regard to heavy drinking and alcohol problems among Hispanics, as evidenced in recent general population surveys of Hispanic national subgroups (Caetano et al., 2008a,b). Nevertheless, the current findings may not hold true for Hispanics other than Mexicans or Mexican Americans, female Hispanics, or Hispanics being provided brief intervention in medical settings other than the trauma department. These limitations should be kept in mind when interpreting the findings from this study and evaluating their potential generalizability. With regard to the potential influence of cultural scripts as an underlying mechanism of change, this study did not directly measure the use of cultural scripts. Future research should account for these

factors in the study design to better appreciate this potential mechanism of change among Hispanics.

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