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Psychometric properties of a Spanish-language version of the Short Inventory of Problems

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Abstract

Hispanic Americans are substantially under-represented in clinical and research samples for substance use treatment, with language cited as one of the major barriers to their participation, indicating a need for more validated assessments in Spanish. This study evaluated the psychometric properties of a Spanish version of the Short Inventory of Problems (SIP), used in a multisite, randomized trial conducted for Spanish-speaking substance users. The sample included 405 Spanish-speaking treatment seekers, mostly male (88%) and legally mandated to treatment (71%). The Spanish version of the revised SIP (SIP-RS), as well as other commonly-used assessment measures translated into Spanish, were administered at baseline and at the end of treatment. Internal consistency was excellent ($\alpha = .96$), and construct validity was supported through correlations with composite scores from the Addiction Severity Index (ASI) (e.g., $r = .57$, $p < .01$ for ASI drug composite), and through differential SIP-RS scores according to diagnostic criteria. The SIP-RS also demonstrated an association with substance use and treatment retention, with higher baseline scores associated with significantly less abstinence during treatment ($\beta = -.22$, $p < .01$) and fewer days retained in treatment ($\beta = -.14$, $p < .05$). However, the latter association was moderated by participants' legal status. Nevertheless, this Spanish-translated version of the SIP (SIP-RS) appears to be a reliable and valid assessment of adverse consequences associated with alcohol and drug use, with psychometric properties comparable to the English version.

Substance abuse and dependence are highly prevalent among Hispanics, with almost 10% of the population meeting past-year diagnostic criteria for one of these disorders, the second-highest prevalence rate of substance use disorders among ethnic groups in the U.S. (SAMHSA, 2011). Hispanics also experience a disproportionate number of negative consequences from substance use (Caetano, 2003); even among those diagnosed with abuse or dependence, they have more severe substance use problems than Whites or Blacks (Schmidt, Ye, Greenfield, & Bond, 2007). Despite the high rates and severity of substance abuse and dependence in this population, Hispanics are substantially under-represented in both treatment and research in the U.S. (Miranda et al., 2005) and are more likely to report

an unmet need for mental health or substance abuse treatment than are Whites or African-Americans (Wells, Klap, Koike, & Sherbourne, 2001).

Language issues have been identified as one of the key barriers to substance abuse treatment for U.S. Latinos/Hispanics (Burrow-Sanchez, Martinez, Hops, & Wrona, 2011), as those with limited English proficiency are less likely to use mental health services (Kim et al., 2011), must travel further to access Spanish-language substance abuse treatment services (Guerrero, Pan, Curtis, & Lizano, 2011), and experience confusion and frustration when dealing with English-speaking health care providers (Gonzalez, Vega, & Tarraf, 2010). Also, their inability to complete study assessments that are written in English is a major barrier to Hispanics' participation in clinical research trials (Suarez-Morales et al., 2007). Although several commonly-used mental health measures, such as the Beck Depression Inventory (Penley, Wiebe, & Nwosu, 2003; Wiebe & Penley, 2005) have been validated in Spanish-speaking populations, there remains a pressing need for validation of substance abuse assessments in this population.

The Short Inventory of Problems (SIP), which is an abbreviated version of the Drinker Inventory of Consequences (DrInC; Miller, Tonigan, & Longabaugh, 1995) and Inventory of Drug Use Consequences (InDUC; Tonigan & Miller, 2002), is a widely-used measure for assessing adverse consequences of alcohol and drug use. Multiple psychometric evaluations of the SIP have largely supported its reliability and validity as a measure of consequences of drug and alcohol use in outpatient treatment- seekers (Alterman, Cacciola, Ivey, Habing, & Lynch, 2009; Kiluk, Dreifuss, Weiss, Morgenstern, & Carroll, in press), and other specialized samples (Bender, Griffin, Gallop, & Weiss, 2007; Feinn, Tennen, & Kranzler, 2003; Gillespie, Holt, & Blackwell, 2007; Hagman et al., 2009; Kenna et al., 2005). However, there have been no reports on the psychometric properties of a Spanish version of this assessment tool.

The purpose of the current study was to evaluate the psychometric properties of a Spanish-language version of the SIP used in a multisite, randomized trial among a geographically diverse sample of treatment-seeking Hispanic adult substance users (Carroll et al., 2009). We expected reliability and validity estimates to be similar to the English version (Kiluk et al., in press), with strong relationships between baseline SIP scores and measures of alcohol/drug severity, readiness to change, and treatment retention.

Method

Overview

Data for this study were drawn from a multisite trial conducted entirely in Spanish and implemented in five outpatient substance abuse treatment programs within the National Drug Abuse Treatment Clinical Trials Network (CTN). The clinical trial evaluated three sessions of motivational enhancement therapy (MET; Miller, Zweben, DiClemente, & Rychtarik, 1992) versus counseling as usual (CAU), delivered in Spanish, within a 28-day timeframe following randomization. This Spanish-language protocol paralleled the design and implementation of an earlier English-version CTN MET trial (Ball et al., 2007). Further details of the Spanish-language multisite study, briefly described below, are reported elsewhere (Carroll et al., 2009; Suarez-Morales et al., 2007).

Participants

All participants met eligibility criteria, including (1) primarily Spanish-speaking, (2) 18 years of age or older, and (3) use of alcohol or any illicit drug at least once within the prior 28 days. A sample of 405 individuals were eligible and randomly assigned to one of the two treatment conditions (three sessions of MET or CAU) during their first month of treatment,

and were followed up 1 and 3-months post-treatment at each outpatient site (i.e., intention-to-treat sample).

Assessments

The assessment battery included: (a) basic demographic characteristics; (b) frequency of substance use (and abstinence), measured with urine- and breathalyzer-confirmed self-report using the Substance Use Calendar (SUC), an assessment adapted from the Time Line Follow Back interview (Fals-Stewart, O'Farrell, Freitas, McFarlin, & Rutigliano, 2000; Sobell & Sobell, 1992); (c) substance use disorder diagnosis, using a Spanish language version of the Composite International Diagnostic Interview (CIDI; Robins, Wing, Wittchen, & Helzer, 1988); (d) a brief version of the Addiction Severity Index – 5th Edition in Spanish (ASI; McLellan et al., 1992); (e) readiness to change, measured with a Spanish version of the University of Rhode Island Change Assessment (URICA; DiClemente & Hughes, 1990), and (f) consequences of substance use, measured with a revised, Spanish-translated version of the Short Inventory of Problems (SIP; Miller et al., 1995). The primary outcome measures were frequency of substance use (assessed via the SUC) and treatment retention (assessed via a treatment utilization form and client records).

The SIP is a 15-item self-report instrument that instructs participants to indicate how often each of the listed consequences of alcohol or drug use has happened to them during the past three months (“*never*,” “*once or a few times*,” “*once or twice a week*,” “*daily or almost daily*”; scored 0–3). Item responses are summed to produce a total score, as well as five subscale scores consisting of three items per subscale (interpersonal, intrapersonal, physical, impulse control, and social subscales). The revised version (SIP-R) that was used in the English CTN MET trial (Ball et al., 2007) was translated into Spanish (SIP-RS) for the current trial, and included a slight modification from prior versions - one of the ‘impulse control’ subscale items, “*I have had an accident while drinking or intoxicated*,” was replaced with “*Drinking or using one drug has caused me to use other drugs more*,” due to the low response rate to the former item in prior versions of the SIP assessing the past three months (see Appendix for list of items).

The SIP, which had not previously been translated or validated in Spanish, was translated into Spanish using standard procedures (Geisinger, 1994). A bilingual team at the University of Miami used a translation and back-translation protocol to translate the assessment into Spanish to protect the integrity of the English-validated assessment (for a more detailed description, see Suarez-Morales et al., 2007). Bilingual clinicians at each of the sites were asked to review the translated SIP-RS and provide additional regional terminology to ensure the instrument’s accessibility to a broad range of Spanish speakers. Changes made by the specific sites were again reviewed by the University of Miami team to resolve inconsistencies. All study research assistants administering the assessments were required to complete a Spanish fluency exercise that involved independent evaluation of audiotapes of their responses to a standardized set of open-ended clinical research questions by a team at the University of Miami to assure adequate Spanish fluency (Carroll et al., 2009).

Data Analysis

Psychometric analyses included internal consistency, factor analysis, and Pearson Product Moment correlations. Because of the inconsistency within the literature regarding the latent structure of the SIP, Exploratory Factor Analysis (EFA) was conducted. Concurrent validity was evaluated by examining the correlations of the SIP-RS scores with ASI composite scores. Analysis of variance (ANOVA) was used to examine differences in SIP-RS scores according to participant characteristics. Finally, multiple regression analyses were conducted to evaluate the predictive utility of baseline SIP-RS scores in terms of the association with

treatment retention and substance use through the 3 month follow-up period. These regression analyses controlled for demographic variables such as age, gender, and years of education, as well as baseline readiness scores from the URICA, and the amount of substance use prior to treatment.

Results

Participants

Baseline characteristics for the sample (N=405) are reported elsewhere (Carroll et al., 2009). In summary, the vast majority were male (88%) and mandated to treatment by the legal system (71%), with an average age of 32.5 years (sd=9.1). The largest percentages of the sample were born in Mexico (49%), married or cohabitating (41%), and employed full-time (43%). On average, participants reported living in the United States for 14.7 years (sd=12.1), with 9.6 years of education (sd=3.2). Their self-reported primary substances of abuse were as follows: alcohol (60%), cocaine (22%), marijuana (9%), opioids (6%), methamphetamine (3%), and benzodiazepines (<1%). They reported using their primary substance of abuse an average of 9.3 days (sd=9.0) during the month prior to the baseline assessment. Average SIP-RS total scores at baseline were 18.4 (sd=13.8), with ASI composite scores as follows (mean, sd): medical = 0.12, 0.25; employment = 0.72, 0.24; alcohol = 0.18, 0.20; drug = 0.08, 0.11; legal = 0.15, 0.18; family = 0.15, 0.19; psychiatric = 0.17, 0.23.

Reliability and Validity

The SIP-RS demonstrated excellent internal reliability, as measured by Cronbach's alpha, for the total score ($\alpha = .96$) and good reliability within each of the subscale scores (α range from .82 to .86). Results of EFA indicated the presence of one factor, with a total eigenvalue = 9.57, accounting for 64% of the variance. Results also indicated one factor when the sample was separated according to gender, with a total eigenvalue of 9.67, accounting for 64% of the variance in the male sample ($n = 358$), and a total eigenvalue of 9.15, accounting for 61% of the variance in the female sample ($n = 47$). Table 1 displays the item's factor loadings according to gender, with loadings ranging from .56 (item 7) to .87 (item 3).

Inter-scale correlations for the SIP-RS demonstrated that all subscale scores were highly correlated with the total score (ranged from .88 to .94), as well as with each other, with correlations ranging between .74 (*Interpersonal* with *Impulse Control*) and .83 (*Social* with *Interpersonal*). Table 2 displays the correlations of SIP-RS total and subscale scores with the composite scores from the ASI, the readiness score from the URICA, and the self-reported days of drug use during the 28 days prior to randomization. The SIP-RS total score and nearly all subscale scores were significantly correlated with all ASI composite scores, as well as the URICA readiness score, and self-reported use of drugs during the past 28 days. The strongest correlations were observed between the SIP-RS total score and the ASI drug composite ($r = .57, p < .01$), as well as with the ASI psychiatric composite ($r = .56, p < .01$). Although still reaching statistical significance, the weakest correlations were observed between the SIP-RS total score and the ASI employment composite ($r = .18, p < .05$), and the ASI legal composite ($r = -.11, p < .05$), with the latter correlation in the opposite direction. Also, the SIP-RS total score was strongly related to the number of self-reported days of substance use during the month prior to baseline assessment ($r = .45, p < .01$) as well as to the readiness score from the URICA ($r = .45, p < .01$).

Relationship with Participant Characteristics

In this sample, participants' age had a small positive correlation with SIP-RS total scores ($r = .27, p < .01$), as did the number of years of education ($r = .20, p < .01$). Results of ANOVAs examining differences in SIP-RS total scores at baseline, displayed in Table 3,

indicated significant differences according to: (1) gender, with higher scores for females as compared to males; (2) current substance use disorder diagnosis, with post-hoc comparisons indicating those meeting criteria for current substance dependence reported higher scores than those with substance abuse, who also reported higher scores than those who did not meet criteria for a current substance use disorder; (3) primary substance of abuse, with the range of scores from lowest to highest: alcohol, methamphetamine, marijuana, cocaine, and opioids [the lone participant reporting benzodiazepines as the primary substance of abuse responded “never” to each item on the SIP-RS], with post-hoc comparisons indicating SIP-RS differences were significant except between alcohol and methamphetamine users, cocaine and opioid users, or marijuana and methamphetamine users; and (4) whether the participant was legally mandated to treatment, with higher scores for those not legally mandated compared to those legally mandated. Further analysis revealed group differences according to the participant’s primary substance of abuse based on whether or not they were legally mandated to treatment ($\chi^2 = 48.94, p < .01$). For instance, 100% of those reporting methamphetamine ($n = 12$) and 81% of those reporting alcohol ($n = 197$) as their primary substance of abuse were legally mandated to treatment, whereas 63% reporting marijuana ($n = 22$), 48% reporting cocaine ($n = 42$), and 46% reporting opioids ($n = 12$) as their primary substance of abuse were legally mandated to treatment. Additional differences according to participants’ legal status were found for the self-reported number of days of primary substance use during the month prior to treatment ($F(1,404) = 75.03, p < .01$), with those legally mandated reporting less substance use than those not legally mandated (mean, $sd = 5.1, 7.1$ vs. $12.6, 9.6$, respectively), as well as differences on URICA readiness scores ($F(1,404) = 22.11, p < .01$) with those legally mandated reporting less readiness than not mandated (mean, $sd = 9.2, 1.9$ vs. $10.2, 1.9$).

Predictive Validity

Results of multiple regression analyses demonstrated baseline SIP-RS total scores were strongly associated with the frequency of substance use during the 28-day treatment period ($\beta = -.16, p < .01$) and through the 3-month follow-up period ($\beta = -.22, p < .01$), with higher scores associated with a smaller percentage of self-reported days abstinent from all drugs, while controlling for demographic characteristics and baseline readiness scores from the URICA. However, these relationships were no longer significant after controlling for the amount of substance use prior to treatment or for the baseline ASI drug composite scores.

In terms of the association with retention in treatment, results of multiple regression indicated higher SIP-RS scores were associated with fewer days retained in treatment at the outpatient clinic through the 3-month follow-up period ($\beta = -.14, p < .05$), after controlling for demographic characteristics as well as baseline readiness scores from the URICA, substance use prior to treatment, and ASI drug composite scores. However, this relationship is complicated by the difference in treatment retention according to whether or not participants were legally mandated to treatment ($F(1,387) = 17.81, p < .01$), with those legally mandated to treatment remaining in treatment longer (mean = 92.4 days, $sd = 38.2$) than those not mandated (mean = 72 days, $sd = 53.4$). Because of this difference, additional multiple regression analyses included participants’ legal status as well as an interaction term (SIP-RS x legal status) as predictors of days retained in treatment, still controlling for the variables mentioned above. Results indicated a moderating effect of participants’ legal status on the relationship between SIP-RS scores and treatment retention, as the interaction term was associated with days retained in treatment ($\beta = -.29, p < .01$). Subsequent regression analyses, revealed higher SIP-RS scores were associated with fewer days retained in treatment for those legally mandated to treatment ($\beta = -.14, p < .05$), but SIP-RS scores were not associated with days retained in treatment for those not legally mandated ($\beta = .12, p = .25$).

Discussion

This study sought to evaluate the psychometric properties of a Spanish-translated version of the Short Inventory of Problems (SIP-RS) within one of the first multisite randomized clinical trials conducted entirely in Spanish (Carroll et al., 2009; Suarez-Morales et al., 2007). Overall, results indicated this Spanish-translated version performed similarly to the English language SIP-R used in another large multisite clinical trial (Kiluk et al., in press). The measure demonstrated excellent internal consistency and sound evidence of construct validity as an assessment of consequences of drug and alcohol use. The SIP-RS also displayed evidence of predictive validity, with higher baseline SIP-RS scores associated with fewer days retained in treatment over the course of a four-month period, however legal status appears to moderate this relationship. This is the first study to demonstrate the reliability and validity of a Spanish-language version of the SIP.

In terms of factor structure, EFA indicated the presence of one overall factor both in the full sample and within gender subsamples. All loadings were considered to be in the excellent range ($>.71$), with the exception of item 7 (from .56 to .67 across subsamples), which was still considered to be 'good' to 'very good' according to standard interpretations (Tabachnick & Fidell, 2007). This item, although included as a replacement to an item with a low response rate in prior versions of the SIP, also had a low response rate here (83% responded 'never' or 'once') similar to the English-version SIP-R (Kiluk, et al., in press), and may need to be reconsidered in future version. Overall however, results of factor analysis, coupled with the high internal reliability for the total score, support the notion of one overall construct of adverse consequences, consistent with prior interpretations of the SIP (Allensworth-Davies, Cheng, Smith, Samet, & Saitz, 2012; Alterman et al., 2009; Bender et al., 2007; Blanchard et al., 2003a). These findings support the use of the SIP total score when reporting results, as is most common in the literature (e.g., Blondell, et al., 2011; Brower, Krentzman, & Robinson, 2011; Clark, et al., 2012), with limited use of the three-item subscale scores.

Construct validity was evident through significant correlations between SIP-RS scores and composite scores from the ASI, as well as the difference in SIP-RS scores according to diagnostic criteria (i.e., greater reported consequences for those meeting criteria for substance dependence versus abuse versus no diagnosis). As expected, the strongest correlations were present between SIP-RS scores and the drug, alcohol, and psychiatric composites from the ASI, as well as the readiness score from the URICA, which is consistent with findings on the English-language SIP-R (Kiluk et al., in press). This latter finding provides further evidence that self-reported negative consequences involve a level of problem awareness/acceptance that may serve as an impetus for treatment-seeking and readiness to change (Blanchard, Morgenstern, Morgan, Labouvie, & Bux, 2003b; Finney & Moos, 1995). The weak correlations between SIP-RS scores and the legal and employment composite scores from the ASI offer some evidence of discriminant validity, since these areas are not directly addressed on the 15-item SIP-RS. Lastly, while the positive correlation between age and SIP-RS scores is consistent with the English version (Kiluk, et al., in press), the positive correlation with years of education was surprising, as fewer years of education are often associated with greater substance use (Townsend, Flisher, & King, 2007), and hence greater consequences. However, this relationship may be due to participants' legal status, as those not legally mandated to treatment reported greater years of education than those legally mandated (10.3 vs. 9.2 years). Because those not legally mandated also reported greater adverse consequences (i.e., higher SIP-RS scores), then a positive relationship between years of education and SIP-RS scores would result. Alternative explanations might relate to item comprehension issues for those with less education, or the possibility of a spurious finding, but these seem less likely.

Several subgroup differences in baseline scores on this Spanish-language SIP-R according to participant characteristics paralleled findings on the English-language SIP-R (Kiluk et al., in press). Women reported greater adverse consequences than men, which is consistent with evidence of women's heightened vulnerability to the adverse consequences of substance use (Arfken, Klein, di Menza, & Schuster, 2001; Greenfield, et al., 2007; Hernandez-Avila, Rounsaville, & Kranzler, 2004). While only 12% of the current sample was female, their mean scores were similar to findings in a larger sample (Kiluk et al., in press). Reported consequences were also different according to the type of primary substance abused, with cocaine and opioid users reporting greater consequences than marijuana or alcohol users, again consistent with findings on the English version (Kiluk et al., in press) and prior literature on differences in encountered consequences across substances of abuse (Gillespie, Neale, Prescott, Aggen, & Kendler, 2007). However, this last finding is confounded with the differential proportions of participants within each primary substance use category who were legally mandated to treatment, as those legally mandated reported significantly fewer adverse consequences than those not legally mandated. Differences according to whether individuals were mandated to treatment strengthens the notion that problem awareness/acceptance may trigger voluntary treatment seeking, as readiness scores from the URICA also differed by legal status. On the other hand, those legally mandated may be under-reporting because of fear the information might get reported to authorities, or it may be a function of the SIP's lack of coverage of legal consequences (which may justify greater coverage of this area in future versions).

One of the most intriguing findings in this study was the predictive validity of the SIP-RS. Although it's reasonable that frequency of substance use and severity of addiction prior to treatment were better predictors of substance use rates during treatment (Ahmadi et al., 2009; Alterman, Bovasso, Cacciola, & McDermott, 2001; Hillhouse, Marinelli-Casey, Gonzales, Ang, & Rawson, 2007), it is interesting that greater frequency of adverse consequences would be associated with a shorter stay in treatment, regardless of readiness to change, substance use, or severity of addiction. However, the relationship was moderated by legal status, with higher SIP-RS scores associated with fewer days retained in treatment for those legally mandated to treatment, while no such relationship was present for those without the legal mandate. In general, we found that those legally mandated to treatment remained in treatment longer than those not legally mandated, which is likely due to the external pressure and potential legal consequences of early treatment drop out. Yet even when mandated to treatment, those who experienced greater adverse consequences prior to treatment had shorter stays in treatment than those with fewer adverse consequences. Such individuals may be at risk for early treatment drop out due to frustration over the slower rate of change compared to those experiencing fewer adverse consequences, may have greater addiction severity requiring more intensive interventions, or they may have underlying problems with impulsivity, which affects treatment retention (Moeller et al., 2001; Patkar et al., 2004). But any firm conclusions regarding the predictive validity in this subset should be tempered, as there were several differences according to participants' legal status (e.g., days of substance use, URICA readiness scores) that complicate the findings, even though these variables were controlled for in regression analyses. Future studies are needed to explore these relationships further.

The primary limitation of this study is the limited number of measures administered in the parent clinical trial, which constrained our ability to fully evaluate concurrent and discriminant validity in detail. Also, the reliability of many of the Spanish-translated versions of previously validated English-language assessment instruments used in this study has not been established. However, the research team implementing this clinical trial followed specific back-translation procedures to protect the integrity of the instruments, and ASI composite scores reported here are comparable to those in a nationally representative

sample of over 8,400 substance abuse treatment seekers (McLellan, Cacciola, Alterman, Rikoon, & Carise, 2006). Another limitation is the lack of a valid post-treatment assessment to evaluate change over time. Although the SIP-RS was administered at the end-of-treatment, due to an error in assessment administration, both the baseline and end-of-treatment SIP-RS evaluated the frequency of adverse consequences during the past three months, yet the active treatment period was only four weeks. Because the measured time frame overlapped between the two time points, any evaluation of change over time would be considered flawed and was excluded from this analysis. Lastly, this sample of Hispanics was relatively homogenous, consisting of mostly males (88%) and those legally mandated to treatment (71%), which considerably limits the generalizability of these findings. It is unclear if the same reliability/validity results reported here would be found in a more diverse Hispanic population. It should be noted however, this sample of participants was gathered from five different outpatient substance abuse treatment facilities across the US, and thus is considered fairly representative of the population of Hispanic treatment-seeking substance users. Future psychometric studies may benefit from incorporating non-treatment-seeking samples to enhance generalizability.

In conclusion, this Spanish-translated revised version of the SIP (SIP-RS) appears to be a reliable and valid assessment of adverse consequences associated with alcohol and drug use, with psychometric properties comparable to the English version. This assessment may prove to be a useful outcome measure for evaluating the efficacy of treatments for substance use disorders, and it may have the potential to identify individuals at risk for early treatment drop-out, although future replication of these findings is warranted. Given the growing population of Hispanics in the United States with limited English proficiency, greater effort should be placed toward validating substance abuse assessment instruments for Spanish-speakers, with a particular focus on diverse Hispanic populations. This may not only alleviate some of the barriers to participation in clinical trials, but will also provide more accurate evaluation of treatment effects in these populations.

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Table 1

Factor loadings from EFA according to gender

Item #	Total sample (N=405)	Male (N=358)	Female (N=47)
1	.77	.77	.77
2	.79	.77	.83
3	.85	.85	.87
4	.81	.81	.85
5	.81	.82	.79
6	.79	.79	.81
7	.66	.67	.56
8	.81	.81	.76
9	.83	.84	.72
10	.82	.81	.85
11	.79	.79	.75
12	.79	.79	.84
13	.82	.83	.71
14	.83	.83	.81
15	.81	.82	.74

Table 2

Correlation of SIP-RS with Other Measures at Baseline (n=405)

	Physical	Social	Intra-personal	Inter-personal	Impulse control	Total score
ASI medical	.23**	.18**	.24**	.25**	.20**	.24**
ASI employment	.11*	.21**	.15**	.18**	.19**	.18*
ASI alcohol	.43**	.39**	.40**	.39**	.33**	.43**
ASI drug	.51**	.54**	.58**	.47**	.53**	.57**
ASI legal	-.15**	-.10*	-.12*	-.05	-.08	-.11*
ASI family/social	.29**	.34**	.35**	.33**	.33**	.36**
ASI psychiatric	.47**	.51**	.56**	.51**	.50**	.56**
Days of any drug use during past 28	.46**	.45**	.44**	.35**	.38**	.45**
URICA – readiness	.39**	.38**	.46**	.43**	.38**	.45**

*
 $p < 0.05$ **
 $p < 0.01$

Table 3

Baseline SIP-RS Total Score Differences

Variable	SIP-R Total Score		F	p
	Mean	sd		
Gender			11.94	<.001
Male	17.6	13.7		
Female	24.9	13.6		
Current Diagnostic Criteria			34.26	<.001
No abuse or dependence	14.4 ^{b,c}	12.9		
Abuse	18.9 ^{a,c}	13.9		
Dependence	27.0 ^{a,b}	11.8		
Primary drug			27.66	<.001
Alcohol	13.3 ^{b,c,d}	11.8		
Cocaine	28.5 ^{a,c,e}	12.2		
Marijuana	21.3 ^{a,b,d}	13.0		
Opioids	30.4 ^{a,c,e}	12.0		
Methamphetamine	13.5 ^{b,d}	10.3		
Benzodiazepines	0	0		
Legally mandated			143.70	<.001
No	29.4	11.1		
Yes	13.8	12.2		

^{a, b, c, d, e} Post-hoc comparisons significant at $p < .05$

Appendix

SIP-RS Items and Instructions (English translation in parentheses)

INSTRUCCIONES: Aquí hay un número de situaciones que los bebedores o los que usan drogas experimentan algunas veces. Lea cada uno cuidadosamente e indique que tan a menudo le ha ocurrido cada uno a usted durante los últimos 3 meses (Nunca, Una vez o Unas pocas veces, etc.). Si uno de los puntos no le aplica, marque 'Nunca'.

(INSTRUCTIONS: Here are a number of events that drinkers or drug users sometimes experience. Read each one carefully and indicate how often each one has happened to you DURING THE PAST 3 MONTHS (Never, Once or a few times, etc.). If an item does not apply to you, bubble in 'Never'.)

- 1 He estado infeliz por consumir (tomar, usar) bebidas o drogas.
(I have been unhappy because of my drinking or drug use.)
- 2 Por consumir (tomar, usar) bebidas o drogas, he perdido peso o no he comido apropiadamente.
(Because of my drinking or drug use, I have lost weight or not eaten properly.)
- 3 He fallado en hacer lo que se espera de mí, por consumir (tomar, usar) bebidas o drogas.
(I have failed to do what is expected of me because of my drinking or drug use.)
- 4 Me he sentido culpable o avergonzado(a) (pena) por consumir (tomar, usar) bebidas o drogas.
(I have felt guilty or ashamed because of my drinking or drug use.)
- 5 He tomado riesgos tontos cuando he estado bebiendo (tomando) o usando drogas. (*I have taken foolish risks when I have been drinking or using drugs.*)
- 6 Cuando he estado bebiendo (tomando) o usando drogas, he hecho cosas impulsivas que he lamentado mas tarde.
(When drinking or using drugs, I have done impulsive things that I regretted later.)
- 7 El beber (tomar) o el usar una droga me ha causado usar otras drogas. ^{*}
(Drinking or using one drug has caused me to use other drugs more.)
- 8 Mi salud física se ha dañado por consumir (tomar, usar) bebidas o drogas. (*My physical health has been harmed by my drinking or drug use.*)
- 9 He tenido problemas de dinero por consumir (tomar, usar) bebidas o drogas.
(I have had money problems because of my drinking or drug use.)
- 10 Mi apariencia física se ha dañado por consumir (tomar, usar) bebidas o drogas.
(My physical appearance has been harmed by my drinking or drug use.)
- 11 Mi familia se ha lastimado (herido) por consumir (tomar, usar) bebidas o drogas.
(My family has been hurt by my drinking or drug use.)
- 12 Una amistad o una relación cercana se ha dañado por consumir (tomar, usar) bebidas o drogas.
(A friendship or close relationship has been damaged by my drinking or drug use.)
- 13 Mi beber (tomar) o uso de droga se ha metido en el camino de mi crecimiento como persona.
(My drinking or drug use has gotten in the way of my growth as a person.)
- 14 Mi beber (tomar) o uso de droga ha dañado mi vida social, mi popularidad, o mi reputación.
(My drinking or drug use has damaged my social life, popularity, or reputation.)
- 15 He gastado mucho o perdido mucho dinero por consumir (tomar, usar) bebidas o drogas.
(I have spent too much or lost a lot of money because of my drinking or drug use.)

* Item modified from prior versions of the SIP