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Treatment Process Predictors of Program Completion or Dropout among Minority Adolescents Enrolled in a Brief Motivational Substance Abuse Intervention

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Abstract

This study documented significant differences in alliance in a predominantly Latino sample of adolescents who either completed or dropped out of a Guided Self-Change treatment program. Therapeutic alliance, working alliance and patient involvement were assessed via ratings of audio-recorded segments of participants' counseling sessions. Descriptive discriminant function analysis identified working alliance goals, patient participation and therapist warmth and friendliness variables as significantly predictive of completion status. These results were confirmed via follow-up logistic regression analyses. The use of brief clinical tools to monitor and manage alliance among adolescents receiving treatment who are at risk for drop-out is discussed.

Keywords

therapeutic alliance; adolescent; substance abuse; treatment; drop-out; minority

Although prevalence rates for adolescent substance use have shown modest declines in recent years, the prevalence of alcohol and other drug (AOD) use problems and substance use disorders (SUDs) in national samples highlight the need for effective universal and selected AOD abuse interventions (Chen, Killea-Jones & Vega, 2005; Johnston, O'Malley, Bachman, & Schulenberg, 2008). Reviews of the effectiveness of specific intervention and treatment modalities suggest that family-based interventions and cognitive-behavioral interventions have significant empirical support for positive behavioral outcomes (Santisteban et al., 2002; Stewart-Sabin & Chaffin, 2003; Waldron et al., 2001). While the effectiveness of substance abuse interventions for adults has substantial empirical support, comparable evaluations of interventions for adolescents are supported by a smaller body of evidence (Dees, 2008). The primary goal of the current study was to determine if specific treatment alliance variables differentiated between treatment completers and dropouts in a sample of minority adolescent substance abuse treatment clients early in the treatment process. The significance of this study is twofold, including: (a) clarification of the role of alliance-related variables in early drop-out from interventions for AOD use problems, and (b) generation of evidence supporting the importance of early assessment and enhancement of therapist-client alliance in AOD interventions directed to minority adolescents.

Brief motivational interventions (BMIs) have been identified as particularly promising for use in efforts to reduce or eliminate adolescent AOD use problems (Dees, 2008; Monti, Colby & O'Leary, 2004). The promise of this particular approach to intervention for adolescent AOD use problems stems in part from accumulating empirical support for BMI variants including Motivational Enhancement Therapy (MET; Miller, 2004) and Motivational Interviewing (MI; Miller & Rollnick, 2002), as well as from the developmental appropriateness for children and adolescents of interventions guided from this conceptual framework (Erikson, Gerstle, & Feldstein, 2005; Stern, Meredith, Gholson, Gore, & D'Amico, 2007). In particular, the use of BMIs is suitable for intervention efforts with adolescents, given their potential ambivalence with regard to agreeing to abstinence as a primary goal of AOD treatment (Grus, 2001; Miller, 2004). For example, Guided Self-Change (GSC; Sobell & Sobell, 1993, 1998) is a BMI that has been evaluated and demonstrated potential as an efficacious intervention for AOD use problems among youth (e.g., Gil, Wagner & Tubman, 2004; Sobell & Sobell, 2005). The current study examined group differences in treatment process variables in an adapted version of GSC for adolescents. The adapted GSC intervention was delivered in an NIAAA-funded randomized clinical trial (RCT; R01 AA12180: PI E. F. Wagner). Guided Self-Change uses motivational, behavioral and cognitive engagement strategies along with the client's personal experiences to personalize treatment targets and change strategies, as well as to implement substance use cessation or reduction goals (Gil, Tubman, & Wagner, 2001).

Treatment Process Variables and Treatment Completion Status

One understudied domain of BMIs such as GSC, recently adapted for use with adolescents, concerns how specific treatment process factors are associated with clients' participation and completion of intervention protocols. Studies have found that therapeutic alliance in more established psychotherapeutic modalities is associated consistently with the quality of treatment outcomes (Horvath & Symonds, 1991; Horvath & Luborsky, 1993; Safran & Muran, 1995). Findings from meta-analytic reviews document that alliance demonstrates an average effect size of .22 in the prediction of client treatment outcomes (Martin, Garske & Davis, 2000). Of particular significance for the current study are the treatment process variables of therapeutic alliance, working alliance and client involvement.

Therapeutic alliance has been defined as the collaborative and affective bond between therapist and client (Bordin, 1976; Martin et al., 2000). Working alliance refers to the collaborative partnership between therapist and client and includes three central components: bonds, tasks, and goals (Bordin, 1976; Greenson, 1967; Horvath & Greenberg, 1989). Client involvement has received less attention in empirical studies but is defined by the quality of the client's participation in therapy, as well as hostility or resistance to therapy (Garfield, 1994). The conceptualization of client involvement also includes client optimism, perceived task relevance, and the degree of responsibility accepted for treatment satisfaction (Greenberg & Pinsof, 1986). While therapeutic alliance and working alliance have been used interchangeably in some existing treatment process research studies, the current study defined these constructs separately, and assessed bivariate relations among specific measures to determine their empirical independence in the current sample.

While predictive relations between treatment process and treatment outcome variables have provided valuable indicators of treatment success, supplementary evidence may be provided by investigating relations between treatment process variables and treatment completion status. General factors identified as significant predictors of treatment dropout among adolescents with AOD use problems include: parental stress; adolescent anti-social behavior; aversive parenting practices; parental psychopathology; economic deprivation; and referral source (Gould, Shaffer, & Kaplan, 1985; Kazdin, Stolar, & Marciano, 1995). Better long-term outcomes are associated with treatment completion, highlighting the importance of understanding fully factors and processes that may lead to drop-out from treatment (Zweben & Zuckoff, 2002). However, treatment completion or dropout from substance use treatment among adolescents is generally understudied, and research findings are mixed (Piper et al., 1999; Robbins, Turner, Alexander, & Perez, 2003).

Rationale for the Current Study

The current study used a restricted, non-mandated, predominantly Hispanic/Latino sample of 14- to 19-year-old males: (a) to assess relations between therapeutic process variables and treatment drop-out from a BMI addressing AOD use problems; while, (b) minimizing potential extraneous variables (e.g., those associated with referral status). This study extends existing research by using specific treatment process variables to distinguish among adolescent male clients receiving treatment services on the basis of completion status. At present, few studies have documented associations between specific treatment process variables and treatment dropout among ethnic or racial minority adolescents undergoing treatment for substance use problems. Dropout by adolescents enrolled in substance abuse interventions is a common problem and premature termination of treatment participation represents a lost opportunity to reduce AOD use and associated externalizing and health risk behaviors (Liddle et al., 2001; Winters, Latimer, & Stinchfield, 1999).

The primary goal of the current study was to determine if specific treatment process variables (i.e., therapeutic alliance, working alliance and client involvement), differentiated subgroups of adolescent substance abuse treatment clients (i.e., treatment completers, dropouts) early in the treatment process. The study evaluated the following hypothesis: Therapeutic alliance, working alliance, and client involvement will differentiate, by completion status, minority adolescents receiving treatment services in the context of a BMI for AOD use problems. No hypothesis was evaluated regarding which specific alliance-related variables would differentiate between the two groups of male adolescent clients. Multivariate analyses (descriptive discriminant function analysis, logistic regression analysis) were then used to determine which alliance-related variables were most useful for differentiating between groups of adolescents, based on completion status.

Method

Participants

The current study included a subgroup of male clients ($N = 58$) selected from the larger community-based RCT of the GSC protocol. Analyses were conducted on a restricted sample predominantly composed of Hispanic/Latino males, 14 to 19 years old ($M = 16.32$

years, $SD = 1.16$ years), who were non-mandated participants in the larger study. The larger evaluation study delivered GSC treatment to a predominantly male (over 90.0%) sample of more than 400 adolescents, ranging in age from 13 to 21 years, referred from the Miami-Dade County juvenile justice system, as well as other non-judicial community sources, including alternative schools, from 2000 to 2005. Clients included in the current study were predominately (96.6%) members of minority groups. The sample included Hispanic-White ($n = 43$, 74.1%), African-American ($n = 10$, 17.2%), White/non-Hispanic ($n = 2$, 3.4%) and Hispanic-Black ($n = 2$, 3.4%) adolescents. One participant identified his ethnicity as Other.

Measures

Therapeutic Alliance and Client Involvement—The Vanderbilt Psychotherapy Process Scale - Short (VPPS-S; Smith, Hilsenroth, Baity, & Knowles, 2003) was used to evaluate the constructs of therapeutic alliance and client involvement. The VPPS-S is a modified version of the original Vanderbilt Psychotherapy Process Scale (VPPS; Gomez-Schwartz, 1978) and its 44 items use a 5-point Likert response format ranging from *not at all* (1) to *a great deal* (5). The Vanderbilt Psychotherapy Process Scales have been designed as general purpose instruments (Suh, Strupp & O'Malley, 1986) to be rated by uninvolved, external observers, from actual therapy sessions or from video- or audio-taped sessions (O'Malley, Suh & Strupp, 1983). This study utilized the external rater format of the VPPS-S to rate segments of audio-taped client therapy sessions.

The VPPS-S items assess six dimensions of therapist and client attitudes and behaviors: Negative Relationship (VNR), Therapist Exploration (VTEXP), Patient Psychic Distress (VPPD), Therapist Warmth and Friendliness (VTWFR), Patient Dependency (VPD), and Patient Participation (VPPAR). Excellent internal consistencies for individual subscales (α ranged from .81 to .96), as well as the predictive validity of a broad dimension of “client involvement” (comprised of the Patient Participation and Patient Dependency subscales) have been documented. Given the strong psychometric properties of the VPPS-S subscales, the patient participation subscale of the VPPS-S was used to measure client involvement. Inter-rater reliability, indexed via Pearson correlation coefficients for VPPS-S subscales, ranged from .79 to .94 (Smith et al., 2003).

Working Alliance—The Working Alliance Inventory - Short (WAI-S; Horvath & Greenberg, 1989), consists of 12 items scored using a 7-point Likert response format ranging from *does not correspond at all* (1) to *corresponds exactly* (7). Items are distributed among three subscales: Agreement on Tasks, Agreement on Goals, and Agreement on Bonds. This measure captures Bordin's (1976) conceptualization of alliance dimensions including tasks, goals, and bonds (Horvath & Greenberg, 1989). The α coefficients ranged across subscales from .84 to .93, with most coefficients at the higher end of this range (Horvath, 1988). In addition, Tichenor and Hill (1989) reported high internal consistency ($\alpha = .98$) and high interrater reliabilities (.75 – .92) for the Observer version of the WAI-S.

Treatment Completion—Treatment completion was recorded as a dichotomous variable, defined as whether an adolescent completed treatment or dropped out of the GSC intervention prior to treatment completion (i.e., after the first or second therapy session).

Client termination following the first or second therapy session was selected as the definition of intervention non-completion because alliance building exercises are emphasized in the early sessions of the GSC intervention protocol. Clients who terminated following the first or second session were hypothesized not to have become engaged in the intervention with an assigned therapist.

Procedure

A sample of 58 participants from the larger GSC evaluation was selected for inclusion in analyses for the current project. First, all clients who dropped out from the GSC RCT following the first or second session and who were male, age 14 to 19 years, and not mandated to treatment ($n = 29$) were selected. Second, GSC program completers ($n = 29$) were matched to the selected GSC program dropouts, for age and self-reported racial or ethnic group. Adolescents classified as completers finished all five GSC therapy sessions. This sampling strategy with matching was employed to minimize potential extraneous variables and it generated a smaller, restricted, homogenized sample. Mandated clients were excluded as a partial control for the potential extraneous influences of psychopathology and juvenile justice system involvement. Female clients were excluded from planned analyses due to their small numbers in the larger GSC RCT sample (i.e., $< 10\%$). Participants were selected from both the individual and family GSC treatment formats. Since a smaller percentage of participants received the family GSC treatment format, participants in the family GSC condition were oversampled.

To guarantee that comparable data were collected from the dropout and completer groups, segments of the middle of the first or second counseling session for each participant, were selected for the coding of process variables relevant to the GSC treatment protocol. Session 2 was selected originally for coding in order to maximize levels of alliance that had been formed. However, this criterion was expanded to include Session 1 to increase the number of participants who could be matched and included in analyses. To obtain sufficient statistical power to conduct the study, the expansion of the session selection criterion was required. Raters listened to 15-minute recorded segments of the GSC therapy session sampled and generated ratings using the VPPS-S and the WAI-S. Graduate and undergraduate student raters were selected and trained to a pre-specified criterion level for both the VPPS-S and the WAI-S. Training consisted of a total of 15 hours of practice over three sessions. Procedures for training to criterion level for the VPPS were derived from O'Malley et al. (1983).

Raters scored 15-minute segments of a sample therapy session that had been rated, compared their ratings to the criterion rating, and received feedback regarding the congruence of the compared ratings. Raters also received materials that described concrete and behavioral operational definitions for each specific rating. Raters continued to score additional tape segments until they exceeded the criterion rating standard for inter-rater reliability for the VPPS-S ($r = .70$) and the WAI-S ($r = .80$). Two of the four raters exceeded the inter-rater reliability criteria rating standards for the VPPS-S ($r = .72$) and WAI-S ($r = .81$). Only one of the two raters was blind to the objectives of the study. Presentation of the VPPS-S and WAI-S rating forms were counterbalanced to minimize ordering effects.

Data Analysis

Data analyses were conducted using the SPSS for Windows package, Version 14.0 (SPSS, 2005). Pearson bivariate correlations described relations among ratings of the treatment process variables. Descriptive discriminant function analysis (DDA) was used to identify which WAI-S and VPPS-S subscales contributed significantly to separation between groups of program participants on the basis of their treatment completion status (Sherry, 2006). Last, a logistic regression analysis was conducted as a follow-up test to the DDA procedures.

Results

Preliminary Analyses

Mean WAI-S and VPPS-S scale scores in the current study demonstrated similar patterns of mean scores reported in previous studies of working alliance constructs across therapeutic modalities, delivery formats, and populations (e.g., Shirk & Karver, 2003). The bivariate correlation between total scores of the WAI-S and the VPPS-S was significant ($r = .81, p < .01$), reflecting substantial covariation in ratings of client-therapist dyads for these measures. Scores for the WAI-S and VPPS-S subscales were also significantly intercorrelated ($r = -.72$ to $.76, p < .01$). In addition, total WAI-S and VPPS-S scores were significantly correlated with the VPPS-S Patient Participation subscale, ($r = .77, p < .01$ and $r = .86, p < .01$, respectively). Intercorrelations among the WAI-S Task, Bond and Goal subscales were also statistically significant and ranged from $.83$ to $.94, p < .01$. In addition, a majority of the intercorrelations among the VPPS-S subscales were statistically significant, but they exhibited a broader range, with absolute magnitudes of r ranging from $.23$ to $.79, p < .01$.

Treatment Process Variables by Completion Status

Univariate descriptive statistics were calculated by completion status (i.e., treatment completion or dropout) for all therapeutic process variables included in the current study. Means and standard deviations for the WAI-S and VPPS-S subscales are summarized in Table 1. Univariate ANOVAs indicated significant mean group differences for all WAI-S subscales and all VPPS-S subscales except for the VPPS-S Negative Relationship subscale. Participants in the treatment completion group received significantly higher mean ratings for all WAI-S subscales. Similarly, treatment completers received significantly higher ratings for several VPPS-S subscales including: Therapist Exploration; Therapist Warmth and Friendliness; Patient Dependency; and, Patient Participation. In contrast, treatment completers received significantly lower mean ratings for Patient Psychic Distress.

DDA for the WAI Subscales

An examination of the discriminant functions identified a significant relation between the three WAI subscales and treatment completion status: Canonical correlation = $.632$, effect size $R^2_{c.} = 39.9\%$, Wilks' $\lambda = .601$, $\chi^2 = 27.74$ (3 *df*), $p < .001$. An examination of the standardized discriminant function coefficients and structure coefficients revealed which WAI subscales were predictive of completion status. Table 2 summarizes both sets of coefficients for these analyses. Specifically, the WAI-S Goal subscale, followed by the

WAI-S Task and Bond subscales were predictive of client completion status. The three subscales were all positively correlated with the discriminant function. Classification results for the study participants confirmed that 79.3% of the cases were classified correctly using the WAI-S subscale scores, compared with 20.7 % of the cases that were classified correctly by chance. Thus, 23 of 29 participants were classified correctly as completing the GSC intervention and 23 of 29 participants were classified correctly as dropping out of the GSC intervention.

DDA for the VPPS-S Subscales

An examination of the discriminant functions identified a significant relation between the six VPPS-S subscales and treatment completion status: Canonical correlation = .631, effect size of $R^2_c = 39.8\%$, Wilks' $\lambda = .602$, $\chi^2 = 26.87$ (6 *df*), $p < .001$. An examination of the standardized discriminant function coefficients and structure coefficients revealed which VPPS-S subscales were predictive of client completion status. Table 3 summarizes both sets of coefficients for these analyses. Specifically, all VPPS-S subscales except for the VPPS-S Negative Relationships subscale were predictive of completion status. All VPPS-S subscales were positively correlated with the discriminant function, except for the VPPS-S Negative Relationship and Psychic Distress subscales. Classification results for the study participants confirmed that 82.8% of the cases were classified correctly using the VPPS-S subscale scores, compared with 17.2% of the cases that were classified correctly by chance. Thus, 24 of 29 participants were classified correctly as completing the GSC intervention and 24 of 29 participants were classified correctly as dropping out of the GSC intervention.

Logistic Regression Follow-Up Tests

Logistic regression analyses were conducted as a follow-up test to the descriptive discriminate function analyses. Logistic regression was used to predict treatment completion status from the continuous, treatment process subscale variables examined in the current study. Two separate direct logistic analyses were performed. The first logistic regression analysis was performed using the three working alliance (WAI-S) subscales. Completion status was best predicted by the Goal subscale of WAI-S. The second logistic regression analysis included the six subscales of the VPPS-S as predictors. Completion status was best predicted by the Therapist Warmth and Friendliness and the Patient Participation subscales of the VPPS-S. Therefore, the findings of the previously conducted DDAs were confirmed through the results of logistic regression analyses, which are summarized in Table 4. The findings of the logistic regression analyses increase confidence that the assessment of indices of therapeutic alliance is appropriate to obtain salient indicators of risk for dropping out of interventions for substance use problems among Latino or other minority youth.

Discussion

The results of the study demonstrated significant covariation among ratings of therapeutic alliance, working alliance and client involvement variables and suggest that treatment process is an important antecedent to successful treatment outcome. The Goal dimension of the WAI-S, as well as the Patient Participation (i.e., client involvement) and the Therapist Warmth and Friendliness subscales of the VPPS-S were associated significantly with

treatment completion status in the GSC intervention. Both the working alliance and client involvement constructs appear to be core components of successful relationships between therapists and adolescent clients receiving GSC for AOD use problems. Strong working alliances between GSC therapists and some clients in the larger GSC RCT were likely facilitated by GSC activities in the first session such as: allowing clients to collaborate on forming their treatment plans, including their AOD reduction goals, and discussing openly ambivalence about changing AOD use behaviors.

These findings extend previous research by using specific treatment process variables to differentiate among ethnic or racial minority male adolescent clients receiving treatment services for substance use problems based on completion status. Despite current knowledge regarding relations between alliance quality and successful therapeutic outcomes, therapeutic process-outcome research investigating the role of alliance with regard to drop-out remains sparse, but receiving increased attention. Recent meta-analytic reviews (e.g., Karver, Handelsman, Fields & Bickman, 2006) have emphasized the importance of further investigation of the roles of alliance, and in particular working alliance mechanisms, in promoting specific therapeutic outcomes. However, the client participation construct has not been as heavily studied or promoted in the research or clinical literatures. Although further clarification is warranted, assessing client involvement early in therapeutic relationships and bolstering clients' participation in therapy may increase retention in intervention protocols (Thompson, Bender, Lantry, & Flynn, 2006).

Additional research investigating associations between alliance constructs and dropout from treatment or intervention protocols can (a) enhance efforts to screen and identify clients at risk for dropout and (b) provide information on effective strategies to reduce client dropout. Previous studies of dropout have been plagued by a range of methodological limitations (Reis & Brown, 1999). To address some of these limitations, the current study assessed therapeutic alliance, working alliance, and client involvement constructs to describe multivariate between-group differences associated with completion status among minority male adolescents enrolled in a BMI for AOD use problems. The results of this study yielded promising implications for AOD use interventions and future research.

Clinical Implications for AOD Use Interventions

The findings of this study may provide several important clinical implications for implementation of interventions for AOD use problems among male adolescents. Overall, the findings suggest that alliance may be a significant precursor to successful treatment, and highlight the importance of future research to find ways to incorporate standardized alliance-building strategies into the delivery of clinical services to adolescents. This study underscored the importance for counselors to attend to working alliance when delivering AOD use interventions to minority male adolescent clients.

The use of working alliance or client involvement measures as clinical screening tools may help practitioners to identify clients at risk for disengagement and subsequent premature dropout from AOD intervention or treatment services. The findings of the current study identified specific components of working alliance (e.g., agreement on goals) as associated most strongly with the completion status in the GSC RCT. Clinicians who identify clients at

high risk for dropout can focus intensively on aligning the goals of an intervention with those of the client by setting appropriate, individualized goals, clarifying misperceptions, or adapting treatment strategies (Johansson & Eklund, 2006). In addition, therapist attitude toward and acceptance of the minority adolescent client, as well as the ability of the therapist to engage the client in the initial therapy session appear to be significantly related to the client's dropout from the intervention. Incorporating a proactive monitoring and adaptation strategy into an initial counseling session would ensure that elements of alliance are assessed and managed adequately, and may reduce risk for premature termination among minority adolescent clients.

Future studies are warranted that use working alliance and client involvement measures as tools to identify and track specific groups of adolescents who are at risk for dropout from AOD intervention or treatment protocols. For example, alliance between therapist and adolescent can be enhanced by focusing on relationship-building activities, including the discussion and clarification of client goals, and reflection on the subjective experiences of the adolescent (Diamond, Liddle, Hogue, & Dakof, 1999; Thompson et al., 2006). Excerpts from GSC therapy sessions for both completers and dropouts are presented in Tables 4 and 5 to illustrate between-group differences in treatment process dimensions, such as goal agreement. Discussion of client statements can be used to examine client knowledge and expectancies, build contrast, and clarify intentions and goals.

The results of the current study may be applied to Latino male adolescents who experience unique barriers to engagement in substance use treatment. For example, the unique cultural experiences of Latinos in the United States (e.g., acculturation-related stressors) underscore the importance of attending to factors that promote appropriate utilization of mental health services and successful treatment outcomes (Alegria et al., 2002; Gloria & Peregoy, 1996; Takeuchi, Alegria, Jackson, & Williams, 2007). Given the cultural contexts of delivery of substance use treatment services, it will be useful to explore further how treatment process variables can be tailored to maximize successful therapeutic outcomes among Latinos (Bernal, Bonilla, Padilla-Cotto & Perez-Prado, 1998). According to Anez et al. (2005), building alliance that takes into account cultural factors with Latino clients may decrease treatment barriers and drop-out from treatment. The positive findings of existing research highlight working alliance and client involvement as key factors related to treatment engagement and success, and support the results of the current study.

Limitations and Directions for Future Research

Despite the identification of therapeutic process factors that were associated significantly with GSC intervention completion status, potential limitations of this study must be acknowledged. First, participants were selected and matched on a limited number of demographic characteristics. Although additional variables could have been included in the matching procedure, this decision would have restricted further statistical power for analyses. While the use of restrictive inclusion criteria potentially improved the internal validity of the study by decreasing the number of potential confounds (e.g., gender, criminal history), the findings may not be generalizable to other samples and populations. While the two raters trained to the specified criterion for acceptable inter-rater reliability, only one was

completely blind to the hypotheses of the study. Using identical raters for all measures assessed may have inflated shared variance across subscales of the WAI-S and the VPPS-S. The use of only one VPPS-S subscale to measure client involvement may have constrained analyses. Therefore, findings for the client involvement construct could impact the external validity of the study. Last, the sample included in the current study was limited largely to male, ethnic and racial minority, non-mandated youth. Future studies are needed that examine the generalizability of the findings of the current study among more diverse samples of youth.

While the findings of the current study are congruent with some existing treatment process research identifying significant conceptual and empirical overlap among the therapeutic alliance, working alliance and client involvement constructs, other studies have conceptualized these constructs as distinct (Hartley & Strupp, 1983; Hogue et al., 2006; Principe, Marci, Glick, & Ablon, 2006; Schönberger, Humle, & Teasdale, 2006). Although the current study identified substantial covariation among treatment process constructs, longer taped segments of therapist-client interactions might have contained sufficient additional information for observers' ratings to make distinctions among the three constructs. Continued efforts to refine existing measures (e.g., Hatcher & Gillaspay, 2006) and to investigate how specific alliance constructs enhance AOD treatment outcomes are timely and significant, and in particular with regard to minority client populations who experience unique barriers to treatment engagement.

The findings of both the current and previous studies (e.g., Diamond, Liddle, Hogue, & Dakof, 1999; Thompson et al., 2006) suggest that treatment process is associated significantly with improved therapy outcomes. Yet, further controlled studies of the effects of incorporating standardized alliance-based screening tools and alliance-building exercises into interventions and clinical practice are warranted. Future studies incorporating alliance-building strategies that reflect the factors most predictive of treatment completion (e.g., clarification of client goals, enhancement of client participation) may yield especially meaningful results. With regard to Latino youth, future research should investigate further the strategy of working alliance enhancement as a means to tailor interventions to address the unique acculturation-related needs of these youth and to reduce barriers to successful completion of clinical interventions. Last, although there are numerous published process-outcome studies investigating alliance for multiple therapeutic modalities, there has been to date a lack of completion-dropout studies investigating therapeutic alliance in the context of BMIs, such as GSC. Given the growing popularity of BMIs in AOD treatment delivery settings (e.g., Monti, Colby, & O'Leary, 2004), additional empirical attention to the implementation of BMIs is needed with regard to both process-outcome and completion-dropout studies.

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Table 1

Standardized Discriminant Function and Structure Coefficients for the Two Treatment Completion Status Groups for WAI-S Variables

Function 1	Coefficient	r_s	r_s^2
WGOAL	.95	.990	98.01%
WTASK	-.26	.805	64.80%
WBOND	.34	.801	64.16%

Table 2

Standardized Discriminant Function and Structure Coefficients for the Two Treatment Completion Status Groups for VPPS-S Variables

Function 1	Coefficient	r_s	r_s^2
VPPS Patient Participation	.347	.781	61.00%
VPPS Psychic Distress	-.153	-.606	36.72%
VPPS Patient Dependency	.341	.743	55.20%
VPPS Therapist Warmth & Friendliness	.359	.775	60.06%
VPPS Negative Relationship	.051	-.276	7.62%
VPPS Therapist Exploration	.156	.760	57.76%

Table 3

Summary of Logistic Regression Analysis Predicting Treatment Completion Status

Variable	B	SE	Wald statistic
WGOAL	-.245	.06	16.44**
VTWFR	-.138	.066	4.37*
VPPAR	-.126	.058	4.67*

Note.

*
 $p < .05$.**
 $p < .001$.

Table 4

Excerpts From GSC Therapy Sessions For Treatment Completers

Completion Status	Excerpt
Completer	(T) What did you get out of this exercise?
	(C) I realize more...my friends getting arrested and I don't want to.
	(T) You must be very strong...I am very impressed.
Completer	(T) What are the positive things of using drugs?
	(C) Getting high...better time...everybody more loose...everybody acts all different...everybody happy.
	(T) All right that's it! That's your problem use right there.
Completer	(T) You really have a lot of good things about stopping...that's excellent.
	(C) I don't want to be a burnout.
	(T) Good, it really sounds like you thought this through.

Note. (T) = Therapist, (C) = Client

Table 5

Excerpts From GSC Therapy Sessions For Treatment Dropouts

Completion Status	Excerpt
Dropout	(T) How confident are you that you will reduce or stop your use?
	(C) I am pretty sure I can, but I don't know about stopping.
	(T) You're saying that you don't want to change.
Dropout	(T) Have you thought about stopping...how important is it for you?
	(C) I don't want to stop using marijuana.
	(T) No?
	(C) No.
Dropout	(T) Um...
	(T) What other cons are there besides getting arrested?
	(C) Mess up your body.
	(T) What else?
	(C) It's fun.
	(T) Is that positive or negative?
	(C) Positive.

Note. (T) = Therapist, (C) = Client