



The interactive role of working alliance and counselor-client interpersonal behaviors in adolescent substance abuse treatment

Stephen M. Auerbach¹ (*Virginia Commonwealth University, USA*),
James C. May (*Richmond Behavioral Health Authority, USA*),
Martha Stevens (*Richmond Behavioral Health Authority, USA*), and
Donald J. Kiesler (*Virginia Commonwealth University, USA*)

(Received May 31, 2007 / Recibido 31 de mayo 2007)
(Accepted January 18, 2008 / Aceptado 18 de enero 2008)

ABSTRACT. This descriptive study explored the relationship between client and counselor perceptions of the working alliance and the interpersonal relationship dimensions of affiliation and control, and evaluated the relationship of perceptions of the alliance and of client and counselor interpersonal reactions to each other to client outcome after 3-6 months of treatment for substance abuse. Clients were 39 adolescents. Client and counselor ratings of the working alliance (using the Working Alliance Inventory-WAI) and interpersonal appraisals of each other (using the Impact Message Inventory Circumplex-IMI-C) were obtained during the second week of treatment. Outcome data using the Global Appraisal of Individual Needs (GAIN) and the Child and Adolescent Functional Assessment Scale (CAFAS) were obtained during the second week of treatment and again after three months and six months of treatment. Interpersonally the predominant impact clients and counselors had on each other was friendliness. For both clients and counselors feelings of affiliation with their counterpart was the relationship dimension most strongly associated with the perception of a working alliance. These findings, and significant associations obtained between WAI and IMI measures and outcome measures, have implications for future research on the role of alliance and interpersonal variables in substance abuse clients' response to treatment.

¹ Correspondence: Department of Psychology, Virginia Commonwealth University, 806 W. Franklin Street, Box 842018, Richmond, Va. 23284, USA. E-mail: sauerbac@vcu.edu

KEYWORDS. Substance abuse. Working alliance. Client-counselor relationship. Descriptive study.

RESUMEN. Este estudio descriptivo exploró la relación entre la percepción de la alianza de trabajo entre cliente y consejero y las dimensiones interpersonales de afiliación y control. Evaluó además la relación entre la percepción de alianza y las reacciones interpersonales entre cliente y consejero y el resultado del tratamiento para el abuso de sustancias después de 3-6 meses. Los clientes fueron 39 adolescentes. La evaluación de la alianza de trabajo (usando el *Working Alliance Inventory-WAI*) y las reacciones interpersonales cliente-consejero (usando el *Impact Message Inventory Circumplex-IMI-C*) se realizaron durante la segunda semana de tratamiento. Los resultados del tratamiento se obtuvieron en la segunda semana y a los tres y seis meses usando el *Global Appraisal of Individual Needs (GAIN)* y la *Child and Adolescent Functional Assessment Scale (CAFAS)*. A nivel interpersonal, el vínculo principal entre cliente y consejero fue la amistad. La dimensión de la relación que más se asoció con la alianza de trabajo fue, en ambos casos, el sentimiento de afiliación. Estos resultados, y la relación encontrada entre las medidas del *IMI-C* y el *WAI* y los resultados del tratamiento, tienen importantes implicaciones en la investigación sobre el papel de la alianza de trabajo y las variables interpersonales en la respuesta al tratamiento para el abuso de sustancias.

PALABRAS CLAVE. Abuso de sustancias. Alianza de trabajo. Relación cliente-consejero. Estudio descriptivo.

A good client-therapist relationship is widely recognized as an important component of effective psychotherapy of all types (Bachelor and Horvath, 1999), including counseling of patients with substance abuse disorders (Luborsky, McLellan, Woody, O'Brien, and Auerbach, 1985; Najavits and Weiss, 1994; Saarnio, 2002; United Nations Office on Drugs and Crime, 2002). This relationship has most succinctly been conceptualized and measured in terms of the extent to which a collaborative "working alliance" has been established between therapist and client. Mutual affective bonds between client and therapist, agreement about the goals of treatment, and commitment by each part to the tasks of treatment are conceptualized as the major elements of the working alliance (Bordin, 1979; Horvath, 2001). Current consensus is that alliance measures have a robust albeit moderate relationship with early treatment improvement (Martin, Garske, and Davis, 2000; Meier, Barrowclough, and Donmall, 2005).

Relatively little research on the therapeutic alliance has been conducted with adolescent clients (Hogue, Dauber, Stambaugh, Cecero, and Liddle, 2006), including those undergoing substance abuse treatment (Williams and Chang, 2000). The present descriptive study (Montero and León, 2007; Ramos-Álvarez, Valdés-Conroy, and Catena, 2006) evaluated short-term (3-6 months) outcomes in substance abusing adolescents who were enrolled in an intensive outpatient treatment program. Early in treatment, both the adolescents and their counselors were administered a measure of the working alliance using a version of the Working Alliance Inventory (WAI; Horvath and Greenberg,

1989), a measure that is anchored in Bordin's (1979) systematic conceptualization of the working alliance that distinguishes among its three major components (bond, goal, task). Client-counselor interactional behaviors were also measured using the Impact Message Inventory-Circumplex (IMI-C; Kiesler and Schmidt, 1993, 2006) which provides measures of how each party impacts the other in terms of control (dominance-submission) and affiliation (friendliness-hostility), as well as indices of the complementarity present in the relationship (how well their behaviors fit or complement each other).

Although relationships have been found to be associated with adolescent substance use (Cairano, Bosma, Miceli, and Settanni, 2008), data on the complex determinants of the quality of the relationship between substance abuse clients and their counselors is sparse (Meier *et al.*, 2005). A major question addressed in this study was whether the IMI-C would provide data on interpersonal mediators of the working alliance through control and affiliation patterns between clients and counselors. Control and affiliation behaviors constitute the defining axes of the interpersonal circumplex and have been found to centrally characterize a wide range of human social interactions (Kiesler, 1983, 1996; Wiggins, 1982). Extrapolating from findings in the doctor-patient interactional literature (Auerbach, Martelli, and Mercuri, 1983; Auerbach, Penberthy, and Kiesler, 2004; Kiesler and Auerbach, 2003) we expected that client perceptions of counselor affiliation and low counselor control would be associated with higher client alliance scores and better client outcomes. Affiliation, in particular, has been linked to positive therapy outcome in the context of the alliance (Bachelor and Horvath, 1999). Further, since greater complementarity involves confirming clients' and counselors' self-presentations and should thus reflect better interactional harmony (Bachelor and Horvath, 1999; Kiesler, 1996), we expected complementary interactions to be associated with higher WAI scores and better client outcomes. Some support for a positive association between client-therapist complementarity and client and patient perceptions of the working alliance has emerged from three studies with general therapy patients (Crowder, 1999; Kiesler and Watkins, 1989; Tracey and Ray, 1984). Prior research with the IMI-C has also indicated promising findings relating physician-patient complementarity to better patient medical outcomes (Kiesler and Auerbach, 2003, 2006). However, no data have been obtained thus far in the context of substance abuse counseling. This study also examined degree of agreement between client and counselor views of the working alliance and its relation to measures of client outcome. Prior research has generally found low levels of agreement but few prior studies have evaluated degree of client-counselor divergence in relation to client outcomes (Meier and Donmall, 2006).

Method

Participants

Forty-two clients entered the treatment program. The 39 clients in the present sample consisted of those on whom sufficient outcome data were obtained to permit analysis. These clients ranged in age from 12 to 19, with an average age of 16.92% were male. All were African American (86%) or of mixed descent (14%). The modal client (45%) had attended high school; 38% attended some grade school through the 8th grade, 10%

graduated high school or attended college. Poverty index ratings indicated that the majority (57%) were in the very poor or poor categories with only 14% classified as upper middle class. Most of the clients had a history of legal charges. They averaged 2.9 arrests in the 30 days prior to entry into the program, and 3.5 arrests lifetime. For the large majority of clients, their admission into the treatment program was prompted by the criminal justice system or connected with their legal problems (64% were remanded to the program on a treatment order as a condition of probation and 29% were involuntary placements through juvenile court). Nine counselors (five females) treated clients enrolled in the study. All had Certified Substance Abuse Counselor accreditation and had an average of ten years of counseling experience. All counselors described their counseling orientation as therapeutic community.

Instruments

- The Working Alliance Inventory-Short Form (WAI; Horvath and Greenberg, 1989; Tracey and Kokotovic, 1989). The WAI Short Form is a 12-item instrument designed to assess the client's participatory relationship with a treatment provider. In the present study clients and counselors completed an adolescent adaptation of the short version of the WAI sometime between the second and fifth treatment session. This adapted version contained some items that were reworded for simplification and items couched in the negative were changed to the affirmative, but item content did not change. Tracey and Kokotovic (1989) found that the WAI measures the general *Alliance* dimension as well as the three specific alliance factors of *Task*, *Bond*, and *Goal*. Busseri and Tyler (2003) report 12-item alpha reliabilities $> .90$ for both the counselor and client versions, and subscale alpha reliability coefficients between $.73$ and $.91$.
- Impact Message Inventory-Circumplex (IMI-C; Kiesler and Schmidt, 1993, 2006). The IMI-C is a self-report inventory designed to measure the cognitive, affective, and behavioral reactions of one person to another during dyadic transactions such as psychotherapy. The current study used a 28-item version of the 56-item IMI-C. The IMI-C short form produces four scale scores (*Dominant*, *Hostile*, *Submissive*, *Friendly*) and two axis scores: *Control* (dominant minus submissive) and *Affiliation* (friendly minus hostile). In the present research, counselors and clients filled out the IMI-C on each other (in terms of how they feel when they are with the other person) sometime between the second and fifth treatment session, concurrently with the WAI (IMI-C data were also obtained on a subset of client-counselor pairs after three months of treatment). In addition to the separate *Control* and *Affiliation* behaviors of each of the interactants, administration to both interactants allows for a measurement of the degree of complementarity or "fit" between their *Control* and *Affiliation* behaviors. Better complementarity (as indicated by lower scores) occurs based on correspondence on the *Affiliation* axis (that is, friendly behavior elicits or "pulls" friendly behavior and hostile behavior pulls corresponding hostility) and reciprocity on the *Control* axis (such that dominant behavior elicits submission whereas submissive behavior pulls for dominance). A median alpha reliability of $.73$ has been obtained

for the four scale scores using the 28-item IMI-C (Auerbach *et al.*, 2002). Construct validity evidence is presented in Kiesler and Schmidt (1993, 2006).

- Global Appraisal of Individual Needs (GAIN; Dennis, Titus, White, Unsicker, and Hodgkins, 2002). The GAIN is a structured interview administered to clients that evaluates their biopsychosocial functioning, diagnostic, clinical, legal and vocational status, substance abuse, and service utilization. Dennis, Titus, White *et al.* (2002) provide data on internal consistency, validity, and norms regarding the key indices. In the present study GAIN–I was administered at the outset of treatment and GAIN–90 was administered at the quarterly follow-up intervals. The following GAIN scales were evaluated in the present study: a) *Substance Problem Index* ($\alpha = .94$): a 16 item scale that counts the number of problems related to substance abuse that a client endorses having in the past month; b) *Substance Frequency Index* ($\alpha = .82$): an 8-item scale measuring frequency of substance abuse over the past 90 days; c) *Emotional Problem Index* ($\alpha = .82$): a 7 item scale measuring extent to which emotional problems have impeded fulfillment of over the past 90 days; d) *Environmental Risk Index* ($\alpha = .68$): a 21 item scale measuring degree of involvement with people who engage in illegal activities or substance abuse related activities; e) *Illegal Activity Index* ($\alpha = .86$): a 5 item scale measuring recency of involvement in illegal activity and extent of dependence on illegal activity for financial support over the past 90 days; and f) *General Crime Index* ($\alpha = .82$): a 19 item scale providing a count of the number of illegal activities engaged in over the past 90 days.
- Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000). The CAFAS is a 315-item rating scale, completed by a trained staff member, which assesses degree of impairment in client functioning due to emotional, behavioral, or psychiatric problems. It provides indexes of *Role Performance* (with school/work, home, and community subscales), *Behavior Toward Others*, and *Moods/Self-Harm* (with moods/emotions and self-harmful behavior subscales). Hodges (2003) reports alpha reliabilities of .63 - .67 for the total CAFAS score and inter-rater reliabilities of .92 - .96 for the total score and .73 - .99 for the individual subscales. The staff member who completed the CAFAS had no knowledge of clients' scores on the IMI, WAI, or GAIN.

Procedure

All clients were enrolled in the MAATCH (Multi-Systems Approach to Adolescent Treatment, Care, and Habilitation) project, a federally (USA) funded comprehensive treatment program designed for inner-city, at-risk, substance abusing youth and their families (May, 2002). The main criteria for clients' placement in the MAATCH program were that they met American Society of Addiction Medicine criteria for severity of substance abuse (high frequency of use along with severe problems in school, at home, and in overall social functioning associated with drug usage) and secondarily that they faced incarceration or placement in a group home if they did not agree to the intensive level of treatment provided by MAATCH. Clients received three months of intensive outpatient treatment at one of two designated specialty facilities. Among the criteria for

successful completion of this phase of treatment was 45 days of continued abstinence verified by random urine screens. This treatment component was followed by a less intensive outpatient phase that lasted approximately three months. During this six-month treatment period clients met with their counselors between once and twice weekly. Baseline data from clients on all outcome instruments, and data from both clients and counselors on the client-counselor relationship measures, were obtained during the second week of treatment at the third counseling session. All subsequent outcome data reported in the present study were collected after clients had completed three months of outpatient treatment and again after six months of outpatient treatment (prior to their entry into the aftercare-community reintegration phase of treatment). Detailed descriptions of the treatment protocols, design, and measures can be found in May (2002).

Results

Data were analyzed using SPSS Version 13. Missing values on the relationship variables were imputed using the SPSS Missing Values Analysis 7.5 (EM method). Data on the outcome measures (CAFAS and GAIN) consisted of the mean of the scores obtained at 3 months and at 6 months for each scale. Complete data were obtained on the CAFAS. On the GAIN, for 10 subjects either the 3 month or 6 the month score was missing; for these subjects the available score was used as the estimate of 3-6 month outcome.

Counselor and client perceptions of the working alliance

Descriptive data on the WAI for the 39 counselor-client pairs are presented in Table 1. Client scores in the present sample were somewhat lower than those reported by Tetzlaff *et al.* (2005) in a sample of 600 substance abusing adolescents from the Cannabis Youth Treatment Study (Dennis, Titus, Diamond, *et al.*, 2002); no previous data have been reported for this version of the WAI on counselors. It may be noted that clients' perception of the extent of the working alliance was higher than that of counselors, although only the *Task* subscale difference was significant. Consistent with prior research (Meier and Donmall, 2006) none of the respective counselor-client WAI scores were significantly correlated.

TABLE 1. Working Alliance Inventory (WAI)-Client and counselor ratings.

	<i>Client</i>		<i>Counselor</i>		<i>t</i> (38)	<i>r</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
WAI-Total	63.76	16.46	59.28	12.18	1.49	.17
WAI-Goal	21.23	6.24	20.38	4.42	.72	.07
WAI-Task	21.92	5.93	19.43	4.34	2.22*	.09
WAI-Bond	20.61	6.01	19.48	4.24	1.12	.28

* $p < .05$ (2-tail)

Counselor and client interpersonal behaviors: Impact Message Inventory-Circumplex

Client and counselor reactions to each other were evaluated using the four basic scales of the IMI-C: friendliness and hostility (which comprise the Affiliation dimension), dominance and submission (which comprise the *Control* dimension). Table 2 presents the means, standard deviations, and intercorrelations among the IMI-C scores. It may be noted that the predominant impact clients had on counselors and that counselors had on clients was friendliness. In each case friendliness scores were higher than scores on the other three dimensions ($F_{(3, 114)} = 22.71$ and 8.02 respectively, both $p < .001$) and scores on the other three dimensions did not differ significantly from each other. When client and counselor ratings of each other were compared, no significant differences were obtained on any of the four scales. The four scale scores were also not significantly correlated, although mutual ratings of submissiveness ($r = .27$) and hostility ($r = .28$) approached significance ($p < .10$).

TABLE 2. Impact Message Inventory (IMI-C)-Client and counselor ratings.

	<i>Client ratings of counselor</i>		<i>Counselor ratings of client</i>		<i>t(38)</i>	<i>r</i>
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Dominance	1.72	.72	1.87	.64	1.00	.14
Submission	1.86	.62	2.07	.55	1.83	.27
Friendliness	2.67	.76	2.46	.60	1.34	.01
Hostility	1.70	.76	1.85	.73	1.07	.28

We were able to obtain IMI-C data on a second occasion after approximately 3 months of treatment from a subset of 24 client and counselor pairs. We found that within this subset clients viewed counselors as significantly less friendly ($F_{(1, 23)} = 4.22$; $p = .05$) and also tended (non-significantly) to view counselors as being more dominant than they did early in treatment. No other client or counselor changes approached significance.

Interrelationships of client and counselor alliance and interpersonal behaviors

Table 3 presents the intercorrelations between client and counselor WAI scores and their corresponding IMI-C *Affiliation*, *Control*, and *Complementarity* scores. It may be noted that client affiliation (as rated by counselors) was highly correlated ($r = .70$) with counselors' perception of a positive alliance, with all three WAI subscales contributing to this association. Consistent with this, clients' perception of a positive alliance was significantly correlated with counselor affiliation (as rated by clients) with this association primarily carried by the relationship of *Affiliation* to the client *Bond* score ($r = .58$). Second, there were no significant relationships between any *Control* dimensions and total WAI scores, although there was an inverse relationship between counselors' view of level of agreement about the goals of treatment and the extent to which they viewed the client as controlling. Third, the correlation ($r = -.30$) between total complementarity and counselor total WAI (indicating better complementarity associated with counselor's perception of a stronger alliance) approached significance ($p = .06$). Little differentiation was found among WAI subscales in terms of their relationship to complementarity

(range = .27 to .29). Finally, to assess the extent to which clients and counselors agreed there was a working alliance an absolute difference score (irrespective of direction) was computed between client and counselor WAI scores. It may be noted in Table 3 that better complementarity (particularly on the affiliation dimension) was associated with better client-counselor agreement on the strength of the working alliance (lower WAI difference scores).

TABLE 3. Correlations of WAI and IMI scores.

	Client Affiliation	Client Control	Counselor Affiliation	Counselor Control	IMI Indexes		
					Affiliation Complementarity	Control Complementarity	Total Complementarity
WAI-Client							
Total	.07	.03	.42*	-.21	-.12	.08	-.05
Goal	.04	.03	.29	-.11	-.03	.06	-.01
Task	.02	.06	.29	-.18	-.07	.13	.03
Bond	.14	-.01	.58**	-.29	-.24	.02	-.17
WAI-Counselor							
Total	.70**	-.24	.17	-.26	-.27	-.14	-.30
Goal	.62**	-.33*	.06	-.26	-.26	-.09	-.27
Task	.66**	-.14	.19	-.23	-.28	-.10	-.29
Bond	.70**	-.22	.23	-.26	-.20	-.20	-.29
WAI-Client/ Counselor Difference							
Total	-.18	-.02	-.16	.15	.42*	-.11	.26
Goal	-.22	.15	-.10	.14	.31	-.06	.21
Task	-.18	.07	-.15	.14	.34*	-.01	.27
Bond	-.14	.08	-.25	.31	.43*	-.02	.33*

* $p < .01$; ** $p < .001$

Client-counselor relationship and client outcome

In order to evaluate the association between client-counselor relationship variables as assessed by the WAI and IMI-C and client outcomes (GAIN and CAFAS measures), partial correlation coefficients were computed in which the client's baseline score on the outcome variable served as the control variable.

First, no significant relationships were obtained between CAFAS total scores and any WAI variables. Surprisingly, clients' view of the therapeutic alliance was unrelated to any GAIN measures. In contrast, however, counselors' view of the therapeutic alliance was associated with the GAIN Emotional Problem Index and the General Crime Scale (see Table 4). Second, the absolute difference (irrespective of direction) between client and counselor WAI scores was associated with higher GAIN Substance Frequency Index and Illegal Activity Scale scores (representing poorer functioning) (see Table 5).

TABLE 4. Partial correlations of counselor WAI and client GAIN scores.

	<i>Counselor WAI Indexes</i>			
	<i>Total Score</i>	<i>Goal</i>	<i>Task</i>	<i>Bond</i>
GAIN – General Crime Index	-.33*	-.21	-.30	-.42**
GAIN – Emotional Problem Index	-.41**	-.42**	-.42**	-.30

* $p < .05$; ** $p < .01$

TABLE 5. Partial correlations of client-counselor WAI: Difference scores and client GAIN scores.

	<i>WAI Difference Score Indexes</i>			
	<i>Total Score</i>	<i>Goal</i>	<i>Task</i>	<i>Bond</i>
GAIN – Substance Frequency Index	.34*	.13	.36*	.19
GAIN – Illegal Activities Scale	.35*	.38*	.39*	.21

* $p < .05$; ** $p < .01$

The only IMI-C scale score associated with the CAFAS rating of behavioral functioning was counselor control which was highly negatively correlated with the CAFAS score (partial $r_{(36)} = -.60$; $p < .001$). This indicated that the more controlling (higher in dominance and lower in submission) clients viewed their counselors, the more positive behavioral changes were achieved by clients. The CAFAS subscales most strongly associated with counselor control were school ($r = -.59$), home ($r = -.61$) and community ($r = -.53$). The substance abuse subscale was correlated ($r = -.30$; $p < .10$). Only one IMI-C measure was associated with a GAIN measure. Counselor's view of the extent to which clients were affiliative (high in friendliness and low in hostility) was associated with better functioning (less problems) on the Emotional Problem Index (partial $r_{(36)} = -.43$; $p < .01$).

Discussion

Study strengths and limitations

The present study provided data on a relatively small number of clients, but sampled a difficult population of inner-city substance abusing adolescents all of whom had histories of multiple illegal activities. The sample was not large enough to analyze client effects nested within counselors. A strength was the use of theoretically-anchored widely recognized measures to evaluate the client-counselor relationship. Regarding outcome measures, the GAIN is becoming a standard measure in the field and the CAFAS provided an independent behavioral rating of client functioning.

WAI findings

WAI results obtained in this study were generally consistent with those obtained for the general areas of counseling and psychotherapy (Bachelor and Horvath, 1999). First, clients' perception of the alliance tended to be stronger than counselors', particularly

on the WAI *Task* scale. Second, the WAI subscales or total score for clients and counselors were not correlated significantly with each other. These results suggest that similar patterns of associations with outcome may be uncovered among studies of adolescent drug clients.

IMI-C interpersonal behaviors

IMI-C results confirm findings previously obtained with physician-patient medical interactions (Auerbach *et al.*, 2002; Kiesler and Auerbach, 2003). First, almost universally substance abuse clients and counselors, just as physicians and patients, are predominantly characterized by friendly, non-hostile, interactions. Second, the mean interpersonal scores obtained by counselors and clients do not show differences in strength, falling within similar ranges of intensity.

We were able to obtain a second, later time sampling of client and counselor interpersonal interactions which suggested that the relationship of interpersonal patterns from early to later in the client-counselor interaction may provide important information. Specifically, about 3 months later in their sessions clients came to view their counselors as less friendly and somewhat more dominant than they did during the first three of their counseling sessions. This change in interpersonal relations over time suggests that the same interpersonal pattern between client and counselor that may facilitate a positive working alliance early in treatment may contribute to an inhibitory effect later in treatment. Kiesler (1996) argued that this change may ultimately be positive because successful psychotherapy depends upon the interactants' successful negotiation of an "unhooking" process in which the client and counselor "move from rigid and extreme complementary transactions early in therapy to non-complementary positions in the change-oriented middle phase of therapy, to a later transactional pattern that exhibits mild and flexible complementarity" (p. 261).

Associations among WAI and IMI-C scores

An important finding was that feelings of interpersonal affiliation between client and counselor predicted strong WAI scores for both participants, with the stronger association being with the WAI *Bond* score. The latter confirmed an earlier finding by Kiesler and Watkins (1989). An almost significant trend was partially consistent with another finding from Kiesler and Watkins indicating that a pattern of complementary behavior between client and counselor found early in therapy is associated with a more positive alliance for counselors (but not for clients). Further, the present study was the first to show that better complementarity was associated with smaller discrepancies between the clients' and counselors' view of the working alliance.

Associations between WAI and IMI-C variables and client outcome

Two important outcome findings were obtained in our sample of adolescent substance abusers. First, only the counselor's perception of the alliance was associated any GAIN outcome index. Second, a larger absolute discrepancy in perception of the alliance between client and counselor was associated with poorer independently rated behavioral functioning later in treatment. The need for assessing both the client's and the counselor's

view of the working alliance has been recognized (Gaston, 1990), but few prior studies have evaluated the role of the relation of divergence between clients' and therapists' perceptions and patient outcome. Although a prior study with adult substance abusers found no relation between the client-counselor WAI discrepancy and treatment retention (Meier and Donmall, 2006), this understudied area clearly merits continued scrutiny in future research.

Conclusions

The present findings indicate the need for further exploration of the interpersonal relationship determinants of an effective client-counselor working alliance. Although this exploratory study did not provide definitive findings, it suggests that both the affiliation and control dimensions of the interpersonal circumplex merit continued evaluation in this regard. Consistent with Bachelor (1995) we found that for both counselors and clients affiliation was the relationship dimension most strongly associated with the perception of a working alliance. Also worthy of further exploration is the finding that client perception of higher control on the part of the counselor was positively associated with independently rated behavioral change on the part of the client. This result was contrary to our expectation based on previous data obtained in the context of the physician-patient relationship (Kiesler and Auerbach, 2003). However, together with the finding of minimal relationships between any IMI interpersonal control and WAI measures, it suggests that client perception of increased counselor control (high dominance, low submission) may be a positive interpersonal dynamic that is especially potent in substance abuse counseling and one that may be unrelated to the perception of a working alliance with the counselor.

References

- Auerbach, S.M., Clore, J.N., Kiesler, D.J., Orr, T., Pegg, P., Quick, B., and Wagner, C. (2002). Relation of diabetic patients' health-related control appraisals and physician-patient interpersonal impacts to patients' metabolic control and satisfaction with treatment. *Journal of Behavioral Medicine*, 25, 17-31.
- Auerbach, S.M., Martelli, M., and Mercuri, L.G. (1983). Anxiety, information, interpersonal impacts, and adjustment to a stressful health care situation. *Journal of Personality and Social Psychology*, 44, 1284-1296.
- Auerbach, S.M., Penberthy, A.R., and Kiesler, D.J. (2004). Opportunity for control, interpersonal impacts, and adjustment to a long-term, invasive health care procedure. *Journal of Behavioral Medicine*, 27, 11-29.
- Bachelor, A. (1995). Clients' perception of the therapeutic alliance: A qualitative analysis. *Journal of Counseling Psychology*, 42, 323-337.
- Bachelor, A. and Horvath, A.O. (1999). The therapeutic relationship. In M.A. Hubble, B.L. Duncan, and S.D. Miller (Eds.), *The heart and soul of change: What works in therapy* (pp. 133-178). Washington, D.C.: American Psychological Association.
- Bordin, E.S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research, and Practice*, 16, 252-260.

- Busseri, M.A. and Tyler, J.D. (2003). Interchangeability of the Working Alliance Inventory and Working Alliance Inventory, Short Form. *Psychological Assessment*, 15, 193-197.
- Ciairano, S., Bosma, H.A., Miceli, R., and Settanni, M. (2008). Adolescent substance use in two European countries: Relationships with psychosocial adjustment, peers, and activities. *International Journal of Clinical and Health Psychology*, 8, 119-138.
- Crowder, D.A. (1999). Early termination status in adult outpatient psychotherapy: Relationship to interactional variables. *Dissertation Abstracts International*, 60, 4212-B.
- Dennis, M.L., Titus, J.C., Diamond, G., Donaldson, J., Godley, S.H., Tims, F.M., *et al.* (2002). The Cannabis Youth Treatment (CYT) experiment: Rationale, study design, and analysis plans. *Addiction*, 97 (Suppl. 1), 16-34.
- Dennis, M.L., Titus, J.C., White, M.K., Unsicker, J.I., and Hodgkins, D. (2002). *Global Appraisal of Individual Needs (GAIN): Administration guide for the GAIN and related measures*. Bloomington, IN: Chestnut Health Systems.
- Gaston, L. (1990). The concept of the alliance and its role in psychotherapy: Theoretical and empirical considerations. *Psychotherapy*, 27, 143-153.
- Hodges, K. (2000). *Child and adolescent functional assessment scale* (2nd Rev.). Ypsilanti: Eastern Michigan University.
- Hogue, A., Dauber, S., Stambaugh, L.F., Cecero, J., and Liddle, H.A. (2006). Early therapeutic alliance and treatment outcome in individual and family therapy for adolescent behavior problems. *Journal of Consulting and Clinical Psychology*, 74, 121-129.
- Horvath, A.O. (2001). The alliance. *Psychotherapy*, 38, 365-372.
- Horvath, A.O. and Greenberg, L.S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology*, 36, 223-233.
- Kiesler, D.J. (1983). The 1982 Interpersonal circle: A taxonomy for complementarity in human transactions. *Psychological Review*, 90, 185-214.
- Kiesler, D.J. (1996). *Contemporary interpersonal theory and research: Personality, psychopathology, and psychotherapy*. New York: Wiley.
- Kiesler, D.J. and Auerbach, S.M. (2003). Integrating measurement of control and affiliation in studies of physician-patient interaction: The interpersonal circumplex. *Social Science and Medicine*, 57, 1707-1722.
- Kiesler, D.J. and Auerbach, S.M. (2006). Optimal matches of patient preferences for information, decision making and interpersonal behavior: Evidence, models and interventions. *Patient Education and Counseling*, 61, 319-341.
- Kiesler, D.J. and Schmidt, J.A. (1993). *The Impact Message Inventory: Form IIA Octant Scale Version*. Menlo Park, CA: Mind Garden.
- Kiesler, D.J. and Schmidt, J.A. (2006). *Manual for the Impact Message Inventory-Circumplex (IMI-C)*. Menlo Park, CA: Mind Garden.
- Kiesler, D.J. and Watkins, L.M. (1989). Interpersonal complementarity and the therapeutic alliance: A study of relationship in psychotherapy. *Psychotherapy*, 26, 183-194.
- Luborsky, L., McLellan, A.T., Woody, G.E., O'Brien, C.P., and Auerbach, A. (1985). Therapist success and its determinants. *Archives of General Psychiatry*, 42, 602-611.
- Martin, D.J., Garske, J.P., and Davis, M.K. (2000). Relation of the therapeutic alliance with outcome and other variables: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 68, 438-450.
- May, J.C. (2002). *Multi-System Approach to Adolescent Treatment, Care, and Habilitation*. Richmond, VA: Richmond Behavioral Health Authority.
- Meier, P.S., Barrowclough, C., and Donmall, M.C. (2005). The role of the therapeutic alliance in the treatment of substance misuse: A critical review of the literature. *Addiction*, 100, 304-316.

- Meier, P.S. and Donmall, M.C. (2006). Differences in client and therapist views of the working alliance in drug treatment. *Journal of Substance Use*, 11, 73-80.
- Montero, I. and León, O.G. (2007). A guide for naming research studies in Psychology. *International Journal of Clinical and Health Psychology*, 7, 847-862.
- Najavits, L.M. and Weiss, R.D. (1994). Variations in therapist effectiveness in the treatment of patients with substance abuse disorders: An empirical review. *Addictions*, 89, 679-688.
- Ramos-Álvarez, M.M., Valdés-Conroy, B., and Catena, A. (2006). Criteria of the peer-review process for publication of experimental and quasi-experimental research in Psychology. *International Journal of Clinical and Health Psychology*, 6, 773-787.
- Saarnio, P. (2002). Factors associated with dropping out from outpatient treatment of alcohol-other drug abuse. *Alcoholism Treatment Quarterly*, 20, 17-33.
- Tetzlaff, B.T., Kahn, J.H., Godley, S.H., Godley, M.D., Diamond, G.S., and Funk, R.R. (2005). Working alliance, treatment satisfaction, and patterns of posttreatment use among adolescent substance abusers. *Psychology of Addictive Behaviors*, 19, 199-207.
- Tracey, T.J. and Kokotovic, A.M. (1989). Factor structure of the Working Alliance Inventory. *Psychological Assessment*, 1, 207-210.
- Tracey, T.J. and Ray, P.B. (1984). Stages of successful time-limited counseling: An interactional examination. *Journal of Counseling Psychology*, 31, 13-27.
- United Nations Office on Drugs and Crime. (2002). *Contemporary drug abuse treatment: A review of the evidence base*. United Nations, N.Y.: United Nations Office on Drug and Crime.
- Wiggins, J.S. (1982). Circumplex models of interpersonal behavior in clinical psychology. In P.C. Kendall and J.N. Butcher (Eds.), *Handbook of research methods in clinical psychology* (pp. 183-221). New York: Wiley.
- Williams, R.J. and Chang, S.Y. (2000). A comprehensive and comparative review of adolescent substance abuse treatment outcome. *Clinical Psychology: Science and Practice*, 7, 138-166.