

Process and Treatment Adherence Factors in Group Cognitive–Behavioral Therapy for Partner Violent Men

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This study used multilevel modeling to examine process and treatment adherence factors as predictors of collateral partner reports of abuse following participation in a cognitive–behavioral group treatment program for partner violent men ($N = 107$). Therapist working alliance ratings predicted lower levels of physical and psychological abuse at the 6-month follow-up and were the strongest predictors of outcome. Homework compliance partially mediated associations between early alliance ratings and psychological abuse at follow-up. Greater group cohesion during treatment, assessed by client report, also predicted lower physical and psychological abuse at follow-up. The findings support the promotion of a collaborative therapeutic environment to induce change among partner violent men.

Recent reviews indicate that psychosocial treatment programs for partner violent men have very modest effects (Babcock & LaTaillade, 2000). Physical abuse recidivism rates after treatment are high (15–47%), and verbal abuse levels often remain elevated as well (Edleson & Grusznski, 1989; Gondolf, 1997b). Furthermore, a recent large-scale, randomized trial comparing a 26-week treatment program for intimate partner violence (IPV) perpetrators with a minimal safety planning control condition revealed no significant differences in outcomes (Dunford, 2000). Accumulating evidence indicates that theoretically and technically distinct

treatments for IPV are equally efficacious (Morrel, Elliott, Murphy, & Taft, 2003; O’Leary, Heyman, & Neidig, 1999; Saunders, 1996).

Two conclusions can be drawn from this state of affairs. First, IPV interventions are in need of improvement. Second, we know very little about mechanisms of change in these treatments. Examination of process factors may facilitate important developments in intervention for partner violent men. Some scholars have decried the tendency among clinicians in this field to use confrontational interventions to the potential detriment of working alliance formation and group cohesion (Jennings, 1987; Murphy & Baxter, 1997; Scalia, 1994). Reviewers of the general psychotherapy literature have argued that process factors typically account for a larger proportion of variance in outcome than treatment approach (Krupnick et al., 1996), and distinct treatment approaches may produce similar effects due to factors common to all forms of therapy (Horvath & Luborsky, 1993). Unfortunately, no study to date has examined treatment process variables among a predominantly court-mandated sample of partner violent men.

Among voluntary treatment samples, a positive working alliance (Bordin, 1979) has predicted successful therapeutic outcome across a range of treatment populations and modalities (Horvath & Symonds, 1991; Martin, Garske, & Davis, 2000). The working alliance has predicted outcome among treatment populations with important similarities to IPV clients, including alcoholic patients (Connors, Carroll, DiClemente, Longabaugh, & Donovan, 1997) and couples in marital therapy (Bourgeois, Sabourin, & Wright, 1990). Brown and O’Leary (2000) recently documented an association between Session one observer ratings of the working alliance and reductions in both physical and psychological abuse in a self-referred sample of couples in therapy for male-perpetrated violence. It is interesting that ratings of the men’s alliance were stronger predictors of outcome than were ratings of the women’s

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alliance. These findings represent an important step in applying the working alliance concept to IPV treatment, but are limited by the fact that the participants sought treatment voluntarily as couples, whereas the more common practice in the field involves individuals court-referred to group treatment.

Some psychotherapy researchers have called for investigations into the mechanisms through which the working alliance may contribute to positive outcomes (e.g., Gelso & Carter, 1994; Henry & Strupp, 1994). Conceptually, a strong working alliance should promote treatment adherence, as assessed by factors such as homework compliance and session attendance. Like the alliance, these adherence factors have been associated with successful treatment outcomes (e.g., Luborsky, Chandler, Auerbach, Cohen, & Bachrach, 1971). For the current study, the working alliance was hypothesized to lay the groundwork for treatment adherence and active involvement in the change process.

Because the majority of treatment programs for IPV involve skills training and generalization, home assignments are commonly used. Homework compliance has been found to predict outcome in treatment for depression (Burns & Spangler, 2000), anxiety disorders (Schmidt & Woolaway-Bickel, 2000), and marital problems (Holtzworth-Munroe, Jacobson, DeKlyen, & Whisman, 1989). Homework is quite important in IPV interventions, which typically involve time-limited groups and a heterogeneous client population. Moreover, the skills covered, such as anger self-regulation, communication, and problem solving, require generalization to natural life settings and often involve thoughts and behaviors that are present only in relationship interactions. Homework can also reveal the need for further shaping of relationship skills and may enhance client self-efficacy for further behavior change efforts.

Despite consistent associations between homework compliance and outcome, very few studies have examined predictors of homework compliance (Bryant, Simons, & Thase, 1999). The working alliance or components of the alliance have been related to compliance with treatment plans (Conoley, Padula, Payton, & Daniels, 1994) and medication regimens (Frank & Gunderson, 1990). In addition, considerable research across diverse samples has documented an association between the working alliance and session attendance (Connors et al., 1997; Frank & Gunderson, 1990). This work may have considerable relevance to IPV treatment, as dropout rates typically range from 40% to 60% within the first 3 months of treatment (see Gondolf, 1997a). Studies of dropout from IPV treatment have focused primarily on demographic and background variables (see Daley & Pelowski, 2000, for a review). These factors have accounted for only small amounts of variance in session attendance, and findings have not produced many tangible recommendations for program modification. Although not yet tested directly, available evidence suggests that a positive working alliance may facilitate session attendance in IPV treatment, as clients whose self-reported problems match the treatment content are less likely to drop out (Cadsky, Hanson, Crawford, & Lalonde, 1996), and supportive, alliance-promoting interventions enhance session attendance (Stosny, 1994; Taft, Murphy, Elliott, & Morrel, 2001; Tolman & Bhosley, 1991).

Group cohesion is widely thought of as the quintessential process variable in group therapy. It is surprising, however, that the research literature on group cohesion and therapy outcome is somewhat limited because of a lack of agreement on how to define group cohesion (Bednar & Kaul, 1994) and the need for data

analytic models, developed only in recent years, that can simultaneously account for individual and group level predictors of treatment outcome. Moreover, the relation between group cohesion and related constructs, such as the working alliance, has been conceptually murky (Marziali, Munroe-Blum, & McCleary, 1997). The available evidence suggests that group cohesion is associated with greater treatment effectiveness, and one study has documented this association among a sample of men in sexual-offender treatment programs (Beech & Fordham, 1997).

The current study was designed to elucidate process and adherence factors that may promote active change during the course of a 16-week cognitive-behavioral group treatment program for partner violent men. The following hypotheses were made. *Hypothesis 1:* Two process variables, the working alliance and group cohesion, assessed early and late in treatment, will be associated with lower physical and psychological abuse at 6-month follow-up. *Hypothesis 2:* Two treatment adherence factors, session attendance and homework compliance, will similarly predict outcomes. *Hypothesis 3:* These treatment adherence factors will partially mediate alliance-outcome associations. *Hypothesis 4:* The working alliance and group cohesion will be correlated yet distinct aspects of clients' group experience, as indicated by differential associations with other variables.

Method

Participants

Participants were 107 men who presented for treatment for intimate partner abuse perpetration at the Domestic Violence Center of Howard County, Maryland, between February 1999 and January 2001. All of the participants met the following inclusion criteria: (a) client (and partner) age 18 or older; (b) client provided written consent for partner contact; (c) collateral partner assented to the use of data provided for research on program effects; and (d) client had a documented problem with relationship abuse, as indicated by any one of the following three: a history of physical relationship aggression reported at baseline by self or partner, an arrest report with clear documentation of violence, or extensive psychological abuse (scores above the 90th percentile compared with national norms) on the Conflict Tactics Scale (CTS; Straus, 1979) Psychological Abuse subscale, as reported by self or partner.¹

These 107 participants came from an initial pool of 163 men who presented for intake at the agency research site. Of those excluded, 14

¹ A subsample ($n = 81$) of those in the current study participated in a clinical trial examining motivational interviewing as a pregroup preparation strategy (Musser, Murphy, & Taft, 2001). Of those in the current study, 43 received two individual motivational interviews prior to group assignment, 38 received a structured control intake, and 26 received the normal clinical intake at the center, which had similarities to both of the other intake conditions. All of the participants were assigned to the 16-session group CBT program, and all of the data for the current project derive from these CBT groups. For the current study, intake condition was seen as one among many variables that may influence alliance and adherence factors. Other examples include the personal qualities and skill level of the intake therapist (e.g., empathy, self-confidence), personal qualities and skill level of the group therapists, court involvement, client personality factors, client psychopathology, partner abuse problem severity, relationship separation status, and client motivation to change. An analysis of factors that may predict alliance or adherence is beyond the scope of the present study and was considered to be clinically meaningful only if these treatment process factors are first shown to predict outcome.

refused research consent, 6 were deemed ineligible for treatment, 2 met inclusion criteria but were not referred to group (e.g., the client was considered a poor group therapy candidate), and 1 participant was excluded because his partner refused research consent. In all, 13 participants dropped out of treatment during the intake process, and 20 were referred to group but failed to attend a sufficient number of group sessions to complete the early treatment measures of working alliance. An additional 6 dropped out prior to providing later in-session ratings and were excluded from analyses examining these ratings. As indicated in Table 1, no significant differences in demographic and background characteristics emerged between study participants and those not included because of treatment refusal or early dropout.

Abuse data were collected from 87 partners during the pretreatment assessment (81% of cases), with 79 reassessed at 6-month follow-up (91% recontact rate). Collateral interviews were conducted with 6 women identified by clients as a new relationship partner other than the original victim. In 3 of these cases at follow-up, the new partner reported greater abuse than the original victim, and thus these new partner reports were used in data analyses. There were no significant differences on any of the predictor variables in this study between clients whose partners were interviewed at follow-up versus those who were not.

The Treatment

The cognitive-behavioral therapy program (CBT; Murphy & Scott, 1996) contained 16 weekly 2-hr sessions, conducted in a closed-group format by a male-female therapist team with 9-12 clients per group ($M = 10.8$). The majority of therapists were Caucasian (12 of 13). Of the 13 groups, 12 were led by graduate student co-therapists (6 of whom had a master's degree or equivalent), and one was run by a psychologist-graduate-student team. Among all of the co-therapist teams, at least one of the therapists held a master's degree in psychology or equivalent training within a doctoral program (2 or more years), and had conducted at least 3 previous treatment groups with this population under supervision by a doctoral-level psychologist. Co-therapist teams met weekly with a supervising psychologist to review session activities and clinical intervention strategies.

The CBT program was divided into four sequential components designed to enhance motivation to change and to provide self-regulation skills and relationship alternatives to abusive behavior. In the first several weeks, clients explored their motivation to change and commitment to nonviolent relationships using techniques adapted from motivational en-

hancement therapy (Miller & Rollnick, 1991). The second section of the program was devoted to crisis management techniques for difficult relationship situations, such as time out. The third section of the program involved anger management and stress management skills, including self-monitoring of anger cues, rational restructuring of anger-producing thoughts, and applied relaxation exercises. The fourth section of the program involved relationship skill alternatives to coercion and aggression, including communication skills and assertiveness. The last 2 weeks were devoted to wrapping up, reviewing changes made, and articulating goals and plans for continued personal work.

Measures

Working alliance. The working alliance was measured using client and therapist versions of the Working Alliance Inventory (WAI; Horvath & Greenberg, 1986). The WAI was designed to apply to diverse therapy orientations and modalities (Horvath, 1982). The reliability and validity of the measure have been well documented (Horvath & Greenberg, 1986; Tracey & Kokotovic, 1989; Tryon & Kane, 1993). The long form of the client version (36 items) and short form of the therapist version (12 items; Tracey & Kokotovic, 1989) were used for the current investigation. Items for both versions are rated on a 7-point Likert scale and tap Bordin's (1979) bond, task, and goal components of the construct. Global WAI scores were used because of past findings of the strength of a global factor and high intercorrelations among subscales (Connors et al., 1997; Tracey & Kokotovic, 1989). The average of early ratings (3rd and 5th sessions) and late ratings (11th and 13th sessions) were used, as each pair of ratings was highly correlated. The WAI total scores demonstrated good internal consistency (client $\alpha = .92-.96$; therapist $\alpha = .96-.98$), supporting the presence of a global working alliance factor in this sample. The internal consistency estimates for both the client and therapist versions were very similar to those obtained in diverse individual therapy samples (Horvath & Greenberg, 1986; Tracey & Kokotovic, 1989; Tryon & Kane, 1993). Also consistent with prior work (Hatcher, Barrends, Hansell, & Guttfreund, 1995), this study revealed moderate associations between client and therapist ratings of the working alliance both early ($r = .35$) and late ($r = .45$) in treatment.

Group cohesion. Group cohesion was measured with the Cohesion subscale of the Group Environment Scale (GES; Moos, 1986). This subscale contains nine true-false items measuring group members' involvement with, and concern for, one another (e.g., "Members of this group feel close to each other"). It is 1 of 10 subscales on the overall GES, which has

Table 1
Descriptive Statistics for Demographic/Background Variables and Tests of Significance

Variable	Participants ($N = 107$)	Eligible nonparticipants ($N = 33$)	Statistic	p
Quantitative				
<i>F</i>				
Age				
<i>M</i>	36.22	34.06	1.45	.23
<i>SD</i>	8.89	9.04		
Annual income				
<i>M</i>	30,406.54	25,328.13	1.76	.19
<i>SD</i>	22,627.74	23,504.84		
Education				
<i>M</i>	13.20	12.88	0.43	.52
<i>SD</i>	2.47	2.35		
Categorical				
χ^2				
Employed (% full- or part-time)	94.4	84.4	3.39	.13
Married and living together (%)	25.2	12.5	2.31	.15
Court referred/cases pending (%)	87.9	75.0	3.17	.09
Minority status (%)	45.8	59.4	1.82	.23

good psychometric properties (e.g., Hartsough & Davis, 1986). The Cohesion subscale was chosen to promote direct comparisons with related constructs such as the working alliance (see Cota, Evans, Dion, Kilik, & Longman, 1995; MacKenzie & Livesley, 1986), as it assesses a unidimensional construct and contains no mention of group facilitators. Group members completed this measure prior to their 4th and 12th sessions to facilitate comparisons with early and late WAI ratings.

Homework compliance. Homework compliance was measured using procedures outlined by Primakoff, Epstein, and Covi (1986). The original version of the scale has been called the Assignment Compliance Rating Scale (ACRS) by Bryant et al. (1999). It is the most widely used instrument for measuring this construct. At each treatment session, the group therapists collected a written homework summary from each group member. One of the group therapists used the ACRS to rate each client on a 7-point scale ranging from "The client did not attempt the assigned homework" to "The client did more of the assigned homework than was requested." Ratings from Sessions 5–14 were used in the analyses, as it was hypothesized that early working alliance ratings (gathered in Sessions 3 and 5) would predict subsequent homework compliance. A total homework compliance score was obtained by averaging the ACRS ratings across treatment Sessions 5–14 for each client, yielding a reliable composite (Cronbach's $\alpha = .89$).

Session attendance. Session attendance was the total number of group treatment sessions attended by each client.

Abusive behavior. Abusive behavior was measured using the CTS (Straus, 1979) and the Multidimensional Measure of Emotional Abuse (MMEA; Murphy & Hoover, 1999; Murphy, Hoover, & Taft, 1999). Only collateral partner reports of abuse were analyzed in the current study, as such ratings have been found to be less affected by social desirability than self-reports (Arias & Beach, 1987). Ratings referred to the 6 months prior to intake at baseline and to the 6 months after scheduled completion of treatment at follow-up. The CTS is the most widely used measure of abusive relationship behavior and exhibits sound psychometric properties (Straus, 1979, 1990). The current study used the CTS subscales assessing physical abuse (9 items) and psychological abuse (6 items). Frequency of abusive behavior was rated on a scale ranging from 0 (*never*) to 6 (*more than 20 times*) for each item. Psychological abuse items were recoded to reflect the actual frequency of these behaviors within the time period assessed, with total scores ranging from 0 to 150. Physical abuse scores were computed by summing the number of positively endorsed items, with total scores ranging from 0 to 9. This computation method, known as the *variety score*, has desirable psychometric properties (Moffitt et al., 1997). Variety scores reduce skewness caused by a small number of high-rate offenders and estimation errors common in the recall of high-frequency behaviors, and circumvent the need to weight different aggressive acts by their presumed severity.

The MMEA consists of 28 emotional abuse items. The response format assesses the frequency of specific behaviors, ranging from 0 (*never*) to 6 (*more than 20 times*) in the specified interval. The MMEA consists of four subscales: Restrictive Engulfment, Hostile Withdrawal, Denigration, and Dominance/Intimidation. Inasmuch as the current study was concerned with the overall perpetration of emotional abuse, the total of the four subscales was analyzed, reflecting the overall frequency of emotionally abusive behaviors perpetrated by clients during the 6 months before treatment and the 6 months after treatment. Internal consistency (Cronbach's alpha) for the MMEA total score was .94 at both pretreatment and 6-month follow-up.

Procedures

The baseline assessment consisted of two sessions of approximately 2-hr each with the client and a 1-hr confidential phone interview with the relationship partner. After intake, eligible clients were assigned to the next available treatment group. Ratings of the working alliance and group

cohesion were gathered during the first few minutes of the relevant treatment sessions. Clients who were absent were asked to complete the ratings at the subsequent session. In order to reduce response bias, clients were informed that group therapists would not have access to their alliance ratings.

Near the end of each session, therapists provided a standardized homework assignment with a written form, instructions to clients on completing the assigned tasks, and a space for clients to describe other self-change efforts outside of session during the week. Clients returned the written part of the assignment during the subsequent session, and one of the two group therapists used the written form to rate homework compliance each week. A small number of clients who reported reading difficulties were invited to come in before sessions in order to complete the written portion of the assignments with a therapist. If a client was absent, all of the written materials from that session, including the assigned homework, were mailed to the client's home immediately after the session.

Analyses

Initial analyses included the calculation of descriptive statistics for all of the study variables and intercorrelations among the eight predictors. Because participants in this study were nested within treatment groups, independence of observations could not be assumed. Therefore, the hypotheses were tested using random coefficients regression with the Hierarchical Linear Modeling statistical package (HLM5; Raudenbush, Bryk, Cheong, & Congdon, 2000). For these analyses, pretreatment abuse assessed prior to group formation was considered a control (Level 1) variable. For the two psychological abuse outcomes, the pretreatment control was the frequency of behaviors assessed by the respective measures. For the physical abuse outcome, a pretreatment dichotomous physical abuse/no abuse variable was used, as this variable was more strongly associated with the outcome than pretreatment physical abuse variety scores. The eight predictors constituted the Level 2 variables in the multilevel analyses. The variances of the intercept and slope and the covariance between them were free parameters. In all, 24 regression analyses were conducted, eight Level 2 predictor variables crossed with the three abuse outcomes, each controlling for pretreatment (Level 1) abuse. Inasmuch as the physical abuse variety score outcome was a count of events, rather than a continuous score, the Poisson regression module of HLM5 was applied to these data. Mediational hypotheses were likewise evaluated using HLM5.

To handle missing data, multiple imputation procedures were used prior to the calculation of the correlations and HLM analyses. A total of 10 imputations were implemented using the PRELIS component of the LISREL 8.51 software (Jöreskog & Sörbom, 2001). PRELIS uses a Markov Chain Monte Carlo approach (Schafer, 1997) to impute data. After calculation of the correlations and application of each of the HLM5 procedures, parameter estimates and their standard errors were combined using formulas provided by Rubin (1987).

Results

Table 2 presents descriptive statistics for all study variables. Intercorrelations among the predictor variables are presented in Table 3. Early WAI ratings were not associated with session attendance. Early therapist WAI ratings predicted subsequent homework compliance. As expected, significant intercorrelations were revealed between client ratings of group cohesion and WAI ratings. Group cohesion ratings were not significantly associated with session attendance or homework compliance. The two treatment adherence factors, session attendance and homework compliance, were significantly correlated with each other.

The results from the primary HLM5 analyses are displayed in Table 4. All of the findings were in the predicted direction. Late

Table 2
Descriptive Statistics for All Study Variables

Variable	Statistic	
	<i>M</i>	<i>SD</i>
Quantitative		
Early client WAI	193.77	32.17
Early therapist WAI	54.21	11.86
Late client WAI	201.56	34.31
Late therapist WAI	55.47	12.62
Session 4 cohesion	6.87	1.95
Session 12 cohesion	7.45	1.78
Homework compliance	29.06	14.36
Session attendance	13.47	2.89
Pretreatment CTS psychological abuse frequency	47.83	38.18
Pretreatment MMEA frequency	146.45	148.63
Follow-up CTS psychological abuse frequency	19.96	26.83
Follow-up MMEA frequency	64.82	94.96
Follow-up CTS physical abuse variety score	0.29	0.88
Categorical		
	%	
Pretreatment physical abuse in prior 6 months	50.6	
Follow-up physical abuse in prior 6 months	13.9	

Note. WAI = Working Alliance Inventory; CTS = Conflict Tactics Scale; MMEA = Multidimensional Measure of Emotional Abuse.

therapist WAI ratings significantly predicted all three outcomes. Early therapist WAI ratings significantly predicted the two psychological abuse outcomes, and the association between this predictor and physical abuse approached significance. Neither early nor late client WAI ratings were significantly associated with outcomes, although the effect of late ratings on the two CTS outcomes approached significance. Both early and late group cohesion ratings predicted lower physical abuse at follow-up. Late group cohesion ratings were significantly associated with the CTS psychological abuse scores, and their association with the MMEA approached significance. Homework compliance was significantly associated with both psychological abuse measures, and the association between session attendance and physical abuse approached significance.

The HLM5 analyses testing the mediational hypotheses followed the approach outlined by Baron and Kenny (1986). The preliminary conditions for demonstrating mediation (significant associations between the predictor and mediator and between the predictor and outcome) were met only for early therapist WAI ratings and homework compliance in predicting the two psychological abuse outcomes (see Tables 3 and 4). To determine if homework compliance partially accounted for the alliance–outcome associations, separate HLM5 models were specified for each outcome, with both the mediator and predictor entered as Level 2 variables. As Table 5 indicates, the conditions for partial mediation were met for the CTS psychological abuse outcome and not the MMEA. For both outcomes, the effect of early WAI ratings remained significant when controlling for homework compliance.

Discussion

The findings indicate the importance of treatment process and adherence factors in group CBT for partner violent men. Most notable were the robust associations between the working alliance, as rated by therapists, and levels of physical and psychological abuse during the 6 months after treatment. Therapist alliance ratings were the strongest predictors of outcomes in all of the analyses. Client alliance ratings did not significantly predict outcome, although some associations with late-session client alliance ratings approached significance. Greater homework compliance was associated with lower psychological abuse after treatment, with some evidence that this factor may partially mediate the association between early therapist alliance ratings and psychological abuse. As expected, higher group cohesion likewise predicted lower abuse after treatment. The independence of group cohesion and working alliance was indicated by the significant, yet moderate, correlations between measures of these two constructs.

The association between the working alliance and outcomes extends the working alliance literature to a predominantly court-mandated treatment sample of partner abusive men. Prior research has demonstrated the importance of the working alliance across a range of treatment populations and modalities (Horvath & Symonds, 1991; Martin et al., 2000) and among populations with important similarities to the current sample (Brown & O'Leary, 2000; Connors et al., 1997). These findings suggest that a positive therapist–client bond and agreement on the goals and tasks of therapy are critical ingredients of positive therapeutic change in

Table 3
Intercorrelations Among Predictor Variables

Variable	1	2	3	4	5	6	7	8
1. Early client WAI	—							
2. Early therapist WAI	.35**	—						
3. Late client WAI	.78**	.34**	—					
4. Late therapist WAI	.32**	.76**	.41**	—				
5. Session 4 cohesion	.34**	.12	.26**	.12	—			
6. Session 12 cohesion	.41**	.18	.48**	.30**	.47**	—		
7. Homework compliance	.13	.36**	.22*	.47**	.03	.06	—	
8. Session attendance	-.09	.15	-.03	.19	.09	-.03	.35**	—

Note. WAI = Working Alliance Inventory.
* $p < .05$. ** $p < .01$.

Table 4
Hierarchical Linear Modeling Primary Analyses

Variable	CTS physical abuse			CTS psychological abuse frequency			MMEA frequency		
	<i>B</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>t</i>	<i>p</i>
Early client WAI	-0.011	-1.331	.213	-0.071	-.901	.387	-0.286	-1.428	.181
Early therapist WAI	-0.029	-2.192	.053	-0.328	-3.464	.006	-1.231	-4.513	.001
Late client WAI	-0.012	-1.923	.083	-0.070	-1.874	.087	-0.237	-1.223	.247
Late therapist WAI	-0.031	-3.654	.005	-0.261	-3.604	.005	-0.980	-3.453	.006
Session 4 cohesion	-0.899	-2.236	.049	-5.563	-1.923	.080	-17.052	-1.727	.112
Session 12 cohesion	-0.734	-2.327	.042	-5.406	-2.252	.046	-17.065	-2.166	.053
Homework compliance	-0.284	-1.987	.094	-1.141	-3.138	.010	-3.481	-2.476	.031
Session attendance	-1.102	-2.118	.060	-3.332	-0.816	.486	-14.613	-1.050	.317

Note. Analyses controlled for pretreatment levels of the outcomes. WAI = Working Alliance Inventory; CTS = Conflict Tactics Scale; MMEA = Multidimensional Measure of Emotional Abuse.

group CBT for abusers. As has been argued for angry clients (DiGuiseppe, Eckhardt, Tafrate, & Robin, 1994), the development of a strong working alliance may take on heightened importance with clients who blame others for their aggressive acts and display resistance to therapist change efforts. The findings further indicate that alliance-promoting techniques may enhance treatment effects with partner violent men. Previous work has demonstrated that interventions that appear to promote a positive working alliance exert a beneficial impact on treatment retention with these clients (Stosny, 1994; Taft et al., 2001; Tolman & Bhosley, 1991).

The finding that therapist working alliance ratings predicted outcome more strongly than did client ratings runs counter to early work documenting the superiority of client ratings (Horvath & Symonds, 1991). A recent meta-analysis, however, found that the source of alliance ratings did not moderate the strength of alliance-outcome associations (Martin et al., 2000). A recent study of alcoholism treatments found that therapist ratings in general predicted outcome more strongly than did client ratings (Connors et al., 1997). It appears that the superiority of client alliance ratings was overestimated in early literature reviews, and perhaps therapist ratings may have greater predictive validity in populations that display high initial resistance to treatment. It is also likely that social desirability or other response factors influenced client ratings of the alliance. Clients may have provided overly positive ratings of therapists because they feared negative repercussions (e.g., negative reports to probation officers). As suggestive evidence for this phenomenon, the average client alliance ratings were very similar to self-referred treatment-seeking samples in other areas of treatment research despite common alliance problems noted by therapists.

The findings for homework compliance represent an important step in understanding how the working alliance may promote change in compliance-oriented treatments, particularly in light of studies showing that homework compliance is a strong predictor of outcome in various treatment populations (Burns & Spangler, 2000; Holtzworth-Munroe et al., 1989; Schmidt & Woolaway-Bickel, 2000). The results indicate that alliance-enhancing interventions may influence outcome by promoting client engagement in active behavior change efforts. These results are particularly noteworthy given that in the group therapy context, assignments were not tailored to the individual needs of the client, and partic-

ipant reading difficulties may have lowered associations with homework compliance. Conversely, session attendance was not significantly associated with the working alliance or outcome. Limited variability in session attendance, perhaps due in part to fear of negative legal consequences for nonattendance, may have attenuated associations involving this variable. In this study, 88% of the participants who made it to group received a credible dose of treatment (attendance of at least 75% of scheduled sessions). In a prior study at the same treatment site, low session attendance was a strong predictor of follow-up physical abuse and criminal recidivism (Taft et al., 2001). In the current sample, the association between session attendance and physical abuse approached significance, despite the relatively low rate of physical abuse recidivism (13.9%).

Group cohesion appears to be another important factor in CBT for partner violent men, particularly given that such interventions are conducted almost exclusively in the group format. Associations between group cohesion and the working alliance were statistically significant but considerably lower than those found in previous studies (Budman et al., 1989; Marziali et al., 1997), and the pattern of associations with other variables indicates that these two constructs reflect distinct aspects of the group treatment experience. Thus, the findings do not support the notion that group cohesion is simply the group therapy equivalent of the working alliance (Budman et al., 1989).

Some alternative explanations for study findings should be considered. One is that therapist working alliance ratings may

Table 5
Tests of Mediation Models

Variable	<i>B</i>	<i>t</i>	<i>p</i>
CTS psychological abuse frequency			
Early therapist WAI	-0.254	-2.743	.021
Homework compliance	-0.670	-2.450	.034
MMEA frequency			
Early therapist WAI	-1.109	-4.222	.002
Homework compliance	-1.254	-1.723	.115

Note. Analyses controlled for pretreatment levels of the outcomes. CTS = Conflict Tactics Scale; WAI = Working Alliance Inventory; MMEA = Multidimensional Measure of Emotional Abuse.

reflect group member's treatment adherence or progress in therapy, rather than a separate alliance construct. Some findings were not consistent with this explanation, however. First, early working alliance ratings predicted psychological abuse outcomes even when controlling for pretreatment abuse and homework compliance. It is not likely that therapists would have a clear sense of successful behavior change or differential homework compliance during this early phase of group treatment. In addition, the treatment adherence variables and working alliance ratings had different patterns of associations with the other variables of interest, suggesting that therapists were not merely providing ratings based on treatment compliance. Finally, considerable evidence from the larger working alliance literature suggests that the alliance is not simply a measure of current therapeutic progress, but represents a distinct process factor that influences subsequent outcomes (Horvath, 1994).

In addition to influencing treatment adherence factors, the working alliance may contribute to positive outcomes through other mechanisms not specifically examined in the current study. For example, a positive, supportive therapeutic relationship may directly reduce clients' anger or unneutralized aggression stemming from childhood abuse and maltreatment (Scalia, 1994). Similarly, therapist support and empathy may disconfirm negative interpersonal schemas such as the belief that all relationships are based on coercive control (Murphy & Baxter, 1997). Prior research in other fields has demonstrated that a positive working alliance facilitates interpersonal functioning in general and the ability to garner social support from others (Kivlighan & Shaughnessy, 1995). Finally, a positive working alliance may have facilitated motivation to change, contributing to client self-change efforts that were not adequately captured by homework compliance or session attendance.

Other limitations of the current study bear note. First, sampling was limited to one program in one locale. It is possible that findings would not generalize to other treatment sites with different populations or treatment orientations. Another limitation involves the failure to interview partners of some men included in the sample. The prospect of selection or attrition biases was mitigated somewhat by the fact that no significant differences were revealed between clients whose partners were interviewed at follow-up and those whose partners were not on any of the predictor variables of interest. Likewise, more than 90% of partners who completed the initial baseline interview also completed the follow-up interview, which represents a relatively high retention rate in this area of research (Gondolf, 1997b; Saunders, 1996).

Future research should examine factors that predict the development of the working alliance, group cohesion, and treatment adherence. The examination of associations between personality disorder characteristics and group processes may warrant particular attention, given that domestic abuse perpetrators possess high levels of narcissistic, antisocial, and borderline traits (Gondolf, 1999; Hamberger & Hastings, 1991), which are thought to hinder alliance formation (Frieswyk et al., 1986). In addition, personality factors may interact with treatment approach to influence outcomes with partner violent men (Saunders, 1996). Future examinations of treatment process factors may uncover the mechanisms for these interactions, complementing the growing literature on typologies of domestic abuse perpetrators (e.g., Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000).

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