

Adolescent and Parent Therapeutic Alliances as Predictors of Dropout in Multidimensional Family Therapy

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The authors examined the relations between adolescent–therapist and mother–therapist therapeutic alliances and dropout in multidimensional family therapy for adolescents who abuse drugs. The authors rated videotapes of family therapy sessions using observational methods to identify therapist–adolescent and therapist–mother alliances in the first 2 therapy sessions. Differences in adolescent and mother alliances in families that dropped out of therapy and families that completed therapy were compared. Results indicate that both adolescent and mother alliances with the therapist discriminated between dropout and completer families. Although no differences were observed between the 2 groups in Session 1, adolescents and mothers in the dropout group demonstrated statistically significantly lower alliance scores in Session 2 than adolescents and parents in the completer group. These findings are consistent with other research that has established a relationship between therapeutic alliance and treatment response.

Keywords: family therapy, alliance, retention, drug use

Family therapy for adolescent drug use and behavior problems has shown considerable promise (Rowe & Liddle, 2003; Sexton, Robbins, Holliman, Mease, & Mayorga, 2003). The success of family interventions is in part the result of their ability to engage and retain adolescents, parents, and other family members in treatment (Stanton & Shadish, 1997). This ability is significant because one of the most consistent findings in the adult and adolescent drug-abuse treatment literature is that retention in treatment is

fundamental to obtaining successful treatment outcomes—reductions in drug use (Stark, 1992).

Available research, however, has only partially illuminated specific aspects of treatment that facilitate retention. Even though controlled trials of family therapy have yielded impressive outcomes, considerable variability remains in engagement, retention, and outcome. This current study investigates that variability by identifying aspects of the clinical interior of an empirically supported family-based treatment. Specifically, we examined in-session processes in multidimensional family therapy (MDFT; Liddle, 2002) to identify potential mechanisms action in prior controlled trials (Liddle & Dakof, 2002; Liddle et al., 2001; Liddle, Rowe, Ungaro, Dakof, & Henderson, 2004). Specifically, this study focuses on identifying the link between family member alliances with the therapist and retention.

Preventing Dropout in Family Therapy

In a review of clinical trial studies, Ozechowski and Liddle (2000) reported that family therapy has consistently outperformed alternative treatments in retaining clients in treatment. With respect to MDFT, research has demonstrated the particular superiority of MDFT over usual community-based treatment in terms of treatment retention and completion rates (Liddle & Dakof, 1995). In an early intervention study, 96% of youths in MDFT completed treatment (120 days) compared with 78% in group therapy

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(Liddle & Dakof, 2002). The 96% retention rate in MDFT also exceeds the 90-day retention rates observed in community-based programs (27% in outpatient, 58% in residential; Hser, Shen, Chou, Messer, & Anglin, 2001).

Family-therapy approaches have succeeded in obtaining the active participation in treatment of key family members as well as the adolescent who uses drugs. Studies indicate that family members, particularly parents, are instrumental in facilitating the adolescent's change process (Huey, Henggeler, Brondino, & Pickrel, 2000; Schmidt, Liddle, & Dakof, 1996).

Although prior studies have demonstrated the success of family therapy in retaining adolescents and family members in treatment, the precise in-session mechanisms of action that predict retention have remained largely unexplored. To address this gap in the research literature, in the current study we explored the link between adolescent and parent alliances with therapists and retention in MDFT with adolescents who abused substances.

Alliances in Family Therapy

Findings from meta-analyses and individual studies have provided strong support for the facilitating role of the therapeutic alliance in psychotherapy outcome (Martin, Garske, & Davis, 2000). However, most of the research on alliance to date has focused on individual therapy with adults, whereas relatively little attention has been devoted to this important topic in the family-based therapies. Most important, research findings with adult populations may have limited generalizability to the family-intervention context in which multiple therapeutic alliances need to be created and maintained (cf. Diamond, Diamond, & Liddle, 2000).

In focusing on the relationship between both adolescent and parent alliances and retention in adolescent drug-abuse treatment, this study extends a line of process research in MDFT. In separate studies, we have established a connection between specific MDFT behaviors and particular proximal outcomes of interest—including the reduction of in-session conflict (Diamond & Liddle, 1996), positive changes in parenting practices (Schmidt et al., 1996), and increases in the engagement of therapy-reluctant teens (Diamond et al., 2000)—sometimes by using culturally specific interventions (Jackson-Gilfort, Liddle, Tejada, & Dakof, 2001).

This study also builds on previous research on alliance in the family-therapy context (Robbins, Turner, Alexander, & Perez, 2003). These investigators demonstrated that patterns of family members' alliances with the therapist predicted retention in functional family therapy (Alexander, Pugh, Parsons, & Sexton, 2000) in a sample of predominately White American, non-Hispanic adolescents. The current study attempts to extend these findings with a very different population and intervention approach, that is, predominately African American adolescents and their families that received MDFT.

The study's main hypothesis was that adolescents and parents who drop out of family therapy demonstrate significantly weaker therapeutic alliances than adolescents and

parents who complete MDFT. We also examined, on a more exploratory basis, changes in the alliance that occurred over the first two treatment sessions and compared the alliances formed by different family members, that is, the adolescent and parent (usually the mother).

Method

Participants

Participants were 30 adolescents who abused drugs and their families who received MDFT for the treatment of adolescent drug use. These participants were selected from the archives of prior research studies (Liddle & Dakof, 2002; Liddle et al., 2001, 2004). Adolescents' mean age was 14.93 years ($SD = 1.11$), and 24 were male adolescents, and 6 were female adolescents. Of the adolescents, 80% were African American ($n = 24$). The remaining adolescents were White, non-Hispanic ($n = 5$), and White, Hispanic ($n = 1$). Adolescents were primarily referred from the juvenile justice (60%) and school (30%) systems, and 10% were self-referred. The majority of adolescents resided in single-parent homes headed by their biological mother ($n = 18$) or mother figure (grandmother, aunt; $n = 8$). Only 4 adolescents lived in a two-parent headed household. More than half of the households also included siblings. Most families resided in urban areas (90%) and reported an annual household income that was at or below poverty: 11 families earned less than \$10,000, 10 families \$10,000–\$25,000, and 9 families greater than \$25,000.

Therapists

Five therapists (three women; two men) provided treatment to family participants. Three therapists were African American, and two were White, non-Hispanic. One therapist had a doctoral degree, and the remaining four had master's degrees. Two therapists had 2 years of clinical experience, two therapists had 3 years of clinical experience, and one therapist had 7 years of clinical experience.

Measures of Pretreatment Characteristics

Demographics. Adolescent age, gender, ethnicity, and family composition were collected as part of the standard intake forms used in the studies from which the participants in this study were selected.

Drug use onset. We identified age of onset of alcohol, marijuana, and other substance use using a standard stem question (i.e., "When was the first time you used . . . ?").

Timeline follow back. Number of days of marijuana use in the past 30 days as reported using the timeline follow back method (TLFB; Sobell & Sobell, 1992) was used as an indicator of pretreatment severity of drug use. The TLFB has been adapted for use with adolescents (Bry & Krinsley, 1992). The TLFB method obtains retrospective reports of daily drug use by using a calendar and other memory prompts to stimulate recall. The TLFB yields consistently high test-retest correlations over periods of up to 1 year (Carey, 1997).

Personal Experiences Inventory. The Personal Experiences Inventory (Winters, 1992) is an adolescent self-report measure designed to identify problems associated with adolescent chemical involvement. The subscale, Personal Involvement With Chemicals, was used as an indicator of the adolescent's pretreatment level of drug involvement. The alpha for this scale was .90 for the current sample.

Child Behavior Checklist (CBCL; Parent Report) and Youth Self-Report (YSR). We assessed adolescent internalizing and externalizing behaviors using the CBCL and the adolescent version of this measure, YSR (Achenbach, 1991; Achenbach & Rescorla, 2001). Both the CBCL and YSR consist of 112 items assessing adolescent symptoms on a continuum as well as two broad-band syndrome scores (internalizing and externalizing) and eight narrow-band syndrome scores (e.g., somatic complaints, anxious-depressed, delinquent problems). High internal consistency, test-retest reliability, construct validity, and criterion-related validity have been reported for both measures (Achenbach, 1991; Achenbach & Rescorla, 2001). The standardized *T* scores for internalizing and externalizing syndromes were used in this study.

Measures of In-Sessions Process: Alliance

On the basis of the original Vanderbilt Therapeutic Alliance Scale (VTAS) for use in individual therapy with adult patients (Hartley & Strupp, 1983), the VTAS—Revised (VTAS—R) consists of 26 items that are intended to capture the strength of alliance between individual family members and the therapist in the family intervention context (Diamond, Liddle, Hogue, & Dakof, 1999). The VTAS—R has been used to successfully discriminate in-session processes between dropout and completers in prior family therapy research (Robbins et al., 2003). Ratings are based on observations of family members' behaviors and therapist–family member interactions as they occur in the sessions. Each item is rated on a Likert-type scale ranging from 0 (*not at all*) to 5 (*a great deal*). Ratings are generated for each item for parent(s) and adolescent participants. Prior analyses have identified that the VTAS—R consists of three factors: positive working relationship, negative relationship, and superficial/boring session interactions (Robbins et al., 2003). The current study uses items from the positive working relationship factor that was also used in Robbins et al.'s (2003) study. The six items included in this scale are as follows: (a) talks freely, openly, and honestly with the therapist about her/his thoughts, feelings, and behavior; (b) seems to identify with the therapist's method of working, so that she or he assumed part of the therapeutic task; (c) indicates that she or he experiences the therapist as understanding and supporting her or him; (d) acknowledges that she or he had problems that the therapist could help her or him deal with; (e) works together (with the therapist) in a joint effort to deal with problems; and (f) relates in a realistic, honest, straightforward way. It should be noted that Robbins et al.'s factor analysis included the videotape ratings that are used in the current study to permit a comparison across therapy models, therapy sessions, and family member roles. In this analysis, the positive working relationship demonstrated excellent internal consistency across therapy segments, sessions, and family roles, with alphas greater than .94 for each segment in the first two sessions and .93 and .96 for adolescents and parents, respectively (Robbins et al., 2003).

Procedures

Selection of families from archives of prior MDFT studies. The current sample included 13 dropout families and 17 completer families selected from the archives of two clinical trials investigating the efficacy of MDFT with adolescents who used drugs.¹ As in Robbins et al.'s (2003) study, two conditions had to be met for a case to be identified as a dropout. First, the family had to have attended less than eight sessions. The minimum criterion of eight sessions was selected on the basis of extensive discussions among three developers of empirically validated family therapy models

(James F. Alexander, functional family therapy; Howard A. Liddle, MDFT; José Szapocznik, brief strategic family therapy). The selection of this cutoff point was also influenced by individual psychotherapy research demonstrating that approximately 50% of patients are measurably improved by Session 8 (Howard, Kopta, Krause, & Orlinsky, 1986). Second, the therapist had to classify the family as a dropout or a completer. Only cases that met both criteria were included in the study. After all cases from prior clinical trials studies conducted on MDFT had been categorized as a dropout or completer, they were then randomly selected to participate in a larger process study. In the current study, the dropout ($M = 3.86$, $SD = 1.01$; range = 1–7) families received significantly less therapy sessions than completer ($M = 21.00$, $SD = 4.43$; range = 14–29) families.

All families received MDFT (Liddle, 2002), an empirically validated (National Institute on Drug Abuse [NIDA], 1999; U.S. Department of Health and Human Services, 2002) family-based intervention that has been shown to be efficacious in reducing adolescent drug abuse and related behavior problems. Interventions are delivered in individual and conjoint sessions and are designed to promote developmental competence within and between four interrelated systems: (a) family system, (b) parental–adolescent system, (c) individual parent, and (d) individual adolescent. Drug use is addressed directly with the teen in individual sessions and in family sessions, and indirectly in sessions with the parents. In the parent sessions, MDFT intervenes at an individual level using cognitive and affective interventions (Diamond et al., 1999) and, in the context of family sessions, using content and process from individual sessions with the parent and teen. Interventions help parents generate and practice new ways of interacting with their child (Schmidt et al., 1996) and address the youth's relationship and behavior with the parent(s). Extrafamilial interventions focus on improving the family's interactions with important social systems such as school and juvenile justice.

Therapists were trained over a 6-month period working with four to five pilot cases under very close weekly individual and group supervision (pilot/practice cases were live supervised weekly). During the clinical trial studies, therapists were supervised 1 hr per week in an individual supervision session and 2 hr per week in a group supervision session. Therapist competence was established during the training phase of each study and continuously evaluated via weekly review of videotapes and discussion of cases with a clinical supervisor who was expert in MDFT. At least 25% of sessions from all of their cases were rated (videotapes) for adherence by raters who were blind as to completion status.

Selection of sessions and segments. Alliances in early sessions were examined because family members who experience little or no alliance (see Diamond et al., 1999) and families that have large adolescent–parent unbalances in alliance with therapists are at increased risk for dropping out of treatment (Robbins et al., 2003).

¹ Families were selected as part of a study investigating core processes in family therapy with youths who abused drugs (National Institutes on Drug Abuse, P50-11328). The larger study involves 120 families selected from three therapy approaches: MDFT, functional family therapy, and brief strategic family therapy. This sample includes 40 families from each modality, with each model contributing 20 dropouts and 20 completers. Because many families dropped after Session 1, data from Session 2 were only available from 13 families. The 40 families that received MDFT were selected from the archives of prior clinical trials studies. The current analyses were conducted on a subset of these 40 families for whom data from Sessions 1 and 2 were available.

To ensure that comparable data were obtained from the dropout and completer groups—who obviously differed in the number of sessions they had—and to allow for analyses of change, we restricted the sample to families who completed at least two sessions of therapy and had those sessions videotaped. Each of Sessions 1 and 2, which averaged approximately 1 hr, were divided into 20-min segments so that rating units would be comparable across sessions.

Selection and training of raters. Raters were three Hispanic, female, graduate students enrolled in master's ($n = 2$) and doctoral ($n = 1$) programs in counseling psychology. Graduate students were sought because of the increased inference involved in making more sophisticated clinical judgments of therapy process (Alexander, Newell, Robbins, & Turner, 1995).

Raters were required to learn the definitions and decision rules provided in the VTAS-R rating manual. During training, raters attended weekly rating meetings and completed weekly homework assignments (e.g., rating sessions, constructing examples). Raters were required to achieve a minimum acceptable intraclass correlation coefficient (ICC) = .70 (compared with Michael S. Robbins) before commencing study ratings. For this type of data, an ICC of .60 is considered adequate, .70 is robust, and .80 is excellent (Shrout & Fleiss, 1979). Following the initial training and calibration phase, raters met monthly to review, discuss, and resolve rating discrepancies, and ensure that the same rating decision rules were being used consistently.

Although therapy sessions consisted of multiple family members, including adolescents, parents, and siblings, only three sets of ratings could be generated for each session, one for the adolescent and two for the parent(s). Raters were instructed to base ratings only on what occurred in the segment being rated. Each rater completed ratings for all 26 items for each individual family member who was present (adolescent, parent figures) for each 20-min segment of every session. However, because tapes were assigned at random, one rater did not necessarily rate all sessions for a case.

Interrater reliability. All three raters independently rated 22 sessions (79 segments) in the larger study. These independent ratings of the same sessions were used to examine interrater reliability. Raters achieved a mean ICC_(1,11) of .84 for the total scale. Raters demonstrated exact agreement on 63% of the comparisons and were discrepant by only 1 point in the Likert scale on 29% of the comparisons. Thus, raters were highly consistent in 92% of the comparisons.

Results

Examination of Pretreatment Characteristics

Preliminary analyses demonstrated significant pretreatment differences between dropout and completer groups. Adolescents who dropped out of treatment were on average older (15.38 vs. 14.59), $F(1, 27) = 4.19, p = .05, \eta^2 = .13$, and reported fewer internalizing (45.62 vs. 53.71), $F(1, 27) = 5.58, p = .025$, and externalizing symptoms (54.08 vs. 62.59), $F(1, 27) = 4.25, p < .049, \eta^2 = .13$, on the YSR than those who completed treatment. The dropouts also were judged by their parents to have fewer externalizing symptoms (60.25 vs. 69.71), $F(1, 27) = 0.88, p = .036, \eta^2 = .31$, as measured by the CBCL. No differences were observed in gender, drug involvement, drug use, age of onset of alcohol and marijuana use, and parent reports of adolescent internalizing symptoms on the CBCL. Variables

with significant pretreatment differences were included as covariates in primary analyses.

Comparison of Alliance in Dropout and Completer Groups

Preliminary analyses. Alliance scores were calculated on the basis of the mean ratings for six-item positive working relationship factors. Scores were generated for each rated member (adolescent and parent[s]) for each segment within each session. We calculated an assessment of internal consistency of the segment ratings using coefficient alpha to estimate the reliability of the scale mean ($\alpha = .93$) and the intraclass correlation to estimate average interitem correlation (ICC = .68). Mean alliance scores across all segments within a session were then calculated for each member (yielding a Session 1 and a Session 2 score for the adolescents and their parent figure[s]). If one of the six items had a missing value, then that value was replaced with the mean of the other five items for that person within the segment.

An important analytic problem to address in the current study was the pattern of missing data that is typical in MDFT. For example, in nearly every family, separate therapy contact occurs with the entire family, with parent figures only or with the adolescent only. As a consequence, alliance scores are available during some sessions (or some segments within a session) only for the part of the family that was present during the segment.

To accommodate for this planned pattern of missing data, we first estimated missing scores for adolescents and parents during Session 1 or Session 2 using the expectation maximization algorithm in the SPSS 10 Missing Values Analysis program. This procedure provided 15 missing values (7 adolescent 20-min segment scores, and 8 mother 20-min segment scores). Analyses of missing data (using Little's missing completely at random statistic) were not significant, $c^2(2) = 0.60, p = .74$, indicating that the pattern of missing values was not significantly different from a random pattern. Also, it should be noted that the final analyses included 137 values; 122 values were directly observed, and 15 were estimated.

Examination of primary hypothesis. We tested the primary hypothesis using a series of $2 \times 2 \times 2$ (Retention Status \times Family Role \times Session) repeated measures analyses of covariance in which alliance was the dependent variable. Retention status was a between-family effect, whereas role (adolescent vs. parent) and session (1 vs. 2) were analyzed as within-family effects. We conducted four separate analyses of covariance using a different covariate on which there were observed pretreatment differences between the dropout and completer families (adolescent age, adolescent reports of internalizing and externalizing on the YSR, and parent reports of adolescent externalizing on the CBCL). There were no differences in the patterns of results across these analyses. As such, only the findings that used the adolescent reports of externalizing disorders as the covariate are reported. Data from other analyses are available on request.

The results of the analysis (see Table 1) indicated that the

Table 1
Summary of Analysis of Covariance for the Effects of Engagement Status, Session, and Role (Youth vs. Mother), Using Alliance as the Dependent Variable and YSR Externalizing T Score as a Covariate

Source	<i>df</i>	<i>M</i> ²	<i>F</i>	Significance
YSR externalizing <i>T</i> score	1	5.20	5.72	.024
Engagement status	1	0.79	0.88	.36
Error	27	0.91		
Session	1	0.02	0.17	.68
Session × YSR Externalizing <i>T</i> Score	1	0.00	0.01	.94
Session × Engagement Status	1	1.07	9.29	.005
Error (session)	27	0.12		
Role	1	2.96	5.87	.02
Role × YSR Externalizing <i>T</i> Score	1	1.23	2.43	.13
Role × Engagement Status	1	1.37	2.73	.11
Error (role)	27	0.50		
Session × Role	1	0.07	0.20	.66
Session × Role × YSR Externalizing <i>T</i> Score	1	0.06	0.18	.68
Session × Role × Engagement Status	1	0.09	0.26	.61
Error (Session × Role)	27	0.35		

Note. YSR = Youth Self-Report.

adolescent reports of externalizing disorders as a covariate was statistically significant, $F(1, 27) = 5.72, p = .02, \eta^2 = .18$. Tests for heterogeneity of covariance of Externalizing × Role, $F(1, 27) = 2.43, p = .13, \eta^2 = .08$, or Externalizing × Session, $F(1, 27) < 1.00$, were not significant. The results also indicated that the retention status main effect, $F(1, 27) = 0.88, p = .36, \eta^2 = .03$, was not statistically significant. The role main effect, however, was significant, whereby the alliance scores for parents ($M = 2.86$) were significantly higher than for the adolescents ($M = 2.33$), $F(1, 27) = 5.87, p = .02, \eta^2 = .18$, Cohen's $d' = 0.95$. The observed power for detecting the role effect was .65. Results also demonstrated a significant Session × Retention Status interaction, $F(1, 27) = 9.29, p = .005, \eta^2 = .26$. The observed power for detecting this interaction was .84.

We examined the significant Retention Status × Session interaction effect further by comparing the change in Session 1 and Session 2 alliance scores separately for the adolescents and parents in the dropout versus completer groups using a dependent samples *t* test. The results indicated that the Session 1 to Session 2 change in alliance was statistically significant for the dropout adolescents, $t(13) = 2.80, p = .015$, Cohen's $d' = 1.55$, and parents, $t(13) = 3.95, p = .002$, Cohen's $d' = 2.19$ (see Figure 1). Following Cohen's (1977) guidelines, these effect sizes would be considered large. The Session 1 to Session 2 changes in alliance were not statistically significant for the completer adolescents, $t(13) = 0.39, p = .70$, Cohen's $d' = 0.22$, or parents, $t(13) = 0.34, p = .74$, Cohen's $d' = 0.19$. Thus, the findings indicated that a significant reduction in alliance occurred for the dropout families from Session 1 to Session 2, but this decline did not occur for the completer families.

Exploring possible therapist effects. We conducted an exploratory analysis to assess possible differences among the therapists on the alliance dependent variable. We performed a 2 (Retention Status) × 5 (Therapist) × 2 (Role) ×

2 (Session) mixed factorial analysis of variance with the role and session independent variables treated as within-family effects. Because of the small sample size per therapist, we did not include the externalizing covariate in this analysis. In this analysis, the role main effect, $F(1, 20) = 20.15, p = .001, \eta^2 = .50$, power = .99, and the Retention Status × Session interaction effect remained significant, $F(1, 20) = 9.27, p = .006, \eta^2 = .32$, power = .82.

Discussion

This study highlights the importance and complexity of the therapeutic alliance in family therapy with adolescents who abuse drugs. The main finding that the alliances of both parent(s) and youth(s) declined over the first two therapy sessions in families who dropped out of treatment, but not in those who remained, is especially noteworthy. First, this finding suggests that there are observable indicators in early sessions that signify problems in the therapeutic relationship. Second, the findings suggest that if these process factors are not addressed adequately, then the likelihood of treatment dropout increases. Third, the findings support the importance of studying patterns of alliance in family-based therapies, a form of treatment that relies on the successful formation of multiple relationships (also see Robbins et al., 2003).

Variability in Intervention Processes

Although both the dropout and completer cases in this study received the same manual-guided, family-based treatment—MDFT—their responses to it in terms of the alliance and retention were variable. This raises the possibility that MDFT may be more effective in forming alliances with some adolescents and parents than with others. However, this interpretation assumes that therapists provided the same interventions in the same manner to both

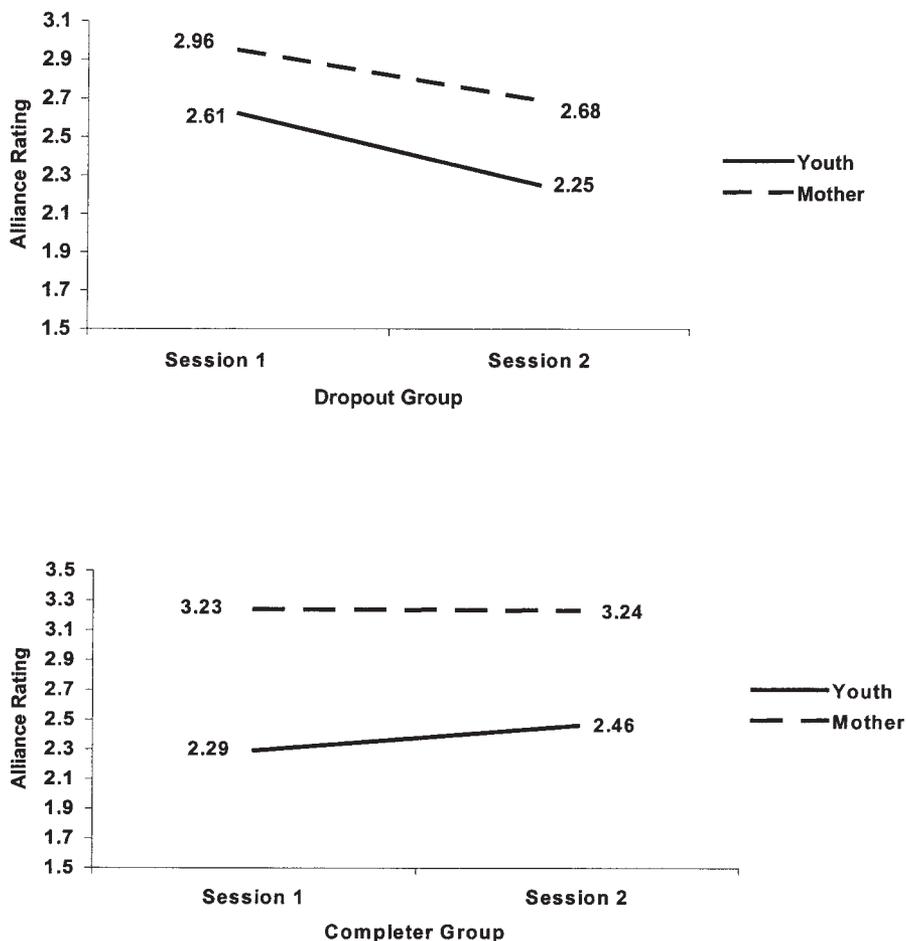


Figure 1. Adjusted alliance means that use Youth Self-Report externalizing as the covariate from Sessions 1 and 2 for dropout and completer groups.

groups of families. Unfortunately, although the clinical trial studies from which the current sample was selected included adherence and fidelity checks, the current study did not include an analysis of therapist interventions, and, consequently, this question cannot be answered. Thus, it is equally possible that there was some variability in how the therapy was administered to different families according to their unique characteristics or on therapist variables such as competence in the approach or overall clinical skill. Nonetheless, prior research studies on MDFT provide some guidance about the types of therapist interventions that may be particularly important for facilitating alliances—for example, therapists who are in too much of a hurry to engage in problem solving with the teen (Diamond et al., 1999), or parent (Schmidt et al., 1996), and do not follow the protocolized steps of the MDFT approach to engagement with the parent (parental reconnection interventions) and teen (adolescent engagement interventions; Diamond et al., 1999).

The fact that the therapeutic alliance predicted dropout across different family members is important. MDFT is a treatment that assesses and intervenes into multiple system

levels and domains of functioning. This framework requires not only multiple interventions but also simultaneous interventions within its different target spheres. The results of this study provide support for a theory and conceptual basis of MDFT—the importance of individual-level interventions as part of the engagement process (Liddle, 1995). This finding is contrasted with the results of Robbins et al. (2003) that demonstrated that differences at the family level (i.e., unbalances in alliance with the therapist) predicted retention. Hence, although both the current study and Robbins et al.’s (2003) study of functional family therapy demonstrated that the pattern of alliance is an important predictor of retention, the nature of this relationship appears to be unique across different family-based treatments.

Although the results of this study highlight the important role that alliance may play in understanding treatment retention in family therapy, additional research on the change process in family-based treatment is needed to disentangle the factors associated with variability in alliance, therapist interventions, and retention. It is worth noting that therapist’s ethnicity and gender did not influence the current

results, which is consistent with our prior experience that these types of static therapist characteristics have not consistently predicted clinical outcomes. Our general interpretation is that these characteristics may be less relevant than what therapists say and do in the clinical context. In other words, how the intervention is done appears to be more important than who does the intervention.

Given our emphasis on how interventions are implemented, a next critical step is to identify the interventions that predicted improvement in alliances for adolescents and parents. Another fruitful area of research might be the relationship of alliance formation and process to the planned change-focused processes and techniques that are attempted in the next stage of treatment. That is, little is known about how the therapeutic relationship changes, intentionally or not over the course of treatment, and whether there are changes in the therapeutic alliances as more behavior change strategies are implemented.

Another important set of findings is the pretreatment differences that were observed between dropouts and completers. In designing the study, our conventional thinking was that older adolescents with higher rates of externalizing problems would be more difficult to retain in treatment. However, we observed the opposite finding; that is, dropouts were younger and demonstrated less pathology. With respect to differences in levels of internalizing and externalizing, it is possible that family members that report more adolescent problems, including the adolescent, may be more likely to view therapy as relevant to their current situation. For example, parents of adolescents with higher rates of externalizing disorders may be more distressed about the adolescent's current problems and, as such, may be relatively easier to engage and retain in treatment than parents of adolescents with fewer behavior problems. Engagement may be facilitated because both adolescents and parents recognize there are problems that need to be dealt with. Consistent with this interpretation is the fact that adolescents who use drugs and who report more internalizing symptoms have been shown to fare better in treatment (Randall, Henggeler, Pickrel, & Brondino, 1999). Additional research is needed to determine whether these differences between dropouts and completers are stable across samples and whether they are associated with specific in-session processes.

Clinical Implications

The results of this study suggest that by as early as the second session of MDFT, therapists have important information about the therapy process. That is, the strength of the therapeutic alliance with different family members is useful in predicting the family's risk to end therapy. Therapists must attend to the level of alliance with both the youths and parents very early in treatment (Session 1 and 2) to reduce the risk of dropout. This attention to connecting with multiple individuals in the treatment context is consistent with recent trends in adolescent drug-abuse treatment for implementing comprehensive, multicomponent programs that simultaneously address multiple individuals and spheres of

influence (Kumpfer, Alvarado, & Whiteside, 2003). In the current era, therapists are expected to simultaneously address the multiple needs of the individual, not just his or her drug use, including attending to medical, psychological, familial, social, vocational, and legal problems (NIDA, 1999). Despite this complexity, the current findings provide evidence of observable in-session behaviors that are related to a key clinical outcome, that is, retention. More important, we believe that these family behaviors are dynamic and malleable. As such, therapists may adjust their interventions to influence the formation of alliances with multiple family members. As noted above, prior research provides some guidance for the types of therapist interventions that may be useful in forming alliances; however, the next step in our own program of research is to identify specific therapist interventions that facilitate the formation of alliances with adolescents and parents.

Limitations

One limitation of the current study is that only a single intervention, MDFT, was examined. Other types of family therapy that focus exclusively on systemic aspects of family functioning may yield a different pattern of results. For example, in those that work predominantly with the entire family, family level alliances (discrepancy—parent minus adolescent) may be better predictors of dropout than individual-level alliance scores (Robbins et al., 2003).

Another limitation is that only a single measure was used to assess the therapeutic alliance, and then only in the first two sessions of therapy. Although this was an independent, observational measure, important information about how the therapist and family members perceived treatment and the alliance is not included in these analyses. This study also did not evaluate the alliance beyond Session 2 and how later changes in it may have been related to retention.

Finally, the sample size was small, and the participants were relatively homogeneous in terms of race and income. All of these factors limit the study's generalizability. It should be noted that the current study had adequate statistical power (.82) to detect the observed Retention Status \times Session interaction effect ($\eta^2 = .32$) with six families per therapist. The study would have adequate statistical power (.80) to detect the observed Therapist \times Retention Status effect with 26 instead of 6 families per therapist with $\eta^2 = .10$. Furthermore, the study would have adequate statistical power (i.e., .83) to detect the observed Therapist \times Retention Status \times Session effect ($\eta^2 = .30$) with 10 instead of six families per therapist. However, despite observed power to examine the current hypotheses, the small sample size precluded analyses examining whether therapist/family, racial/ethnic, and gender match; level of therapist training; and rater race/ethnicity changes influenced the results of the current study.

Conclusion

The family is now understood as critically important to the genesis and understanding of adolescent substance-

abuse disorders (Hawkins, Catalano, & Miller, 1992). Consensus now exists about the importance of involving the family in treatment and prevention efforts (Dishion & McMahon, 1998); however, working with families requires specialized training. One aspect of the training in gaining competence in empirically supported family-based approaches involves acquiring new knowledge and skill in making the transformation from developing and maintaining individual therapeutic relationships to multiple therapeutic relationships, including therapeutic relationships with relevant members of social systems of influence in the family and teen's life (Liddle, 2005).

Although the clinical articles and manuals of family-based therapies, including MDFT, include significant attention to the distinct relationships between the therapist and the teen and the parent and the teen, relatively little empirical work has focused the nuances of forming these parallel relationships simultaneously and using these relationships therapeutically. This study, an empirical investigation of the predictive potential of the tandem therapeutic alliances of the parent and teen with the therapist, extends the MDFT process research program that addresses factors, including therapist variables, that account for therapeutic engagement and retention. These factors are vitally important to clinical outcome. However, more clarity and detail about the factors that contribute to success and how these individual variables form the patterned mosaic of process called therapy is needed. Treatment duration is one of the strongest predictors of success in drug-abuse treatment. Without a sufficient dose of therapy, we know that treatment cannot work. Furthermore, the critical step toward engagement and retention is the therapeutic relationship. No single investigation can solve all of the mysteries of the therapeutic alliance and its connection to treatment response, but we hope this study takes another step in the needed direction.

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