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The Relationship between Alliance and Client Involvement in CBT for Child Anxiety Disorders

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Abstract

Objective—Little is known about the nature of the relationship between the alliance and client involvement in child psychotherapy. To address this gap, we examined the relationship between these therapy processes over the course of cognitive-behavioral therapy (CBT) for child anxiety disorders.

Method—The sample was 31 child participants ($M_{age} = 9.58$ years, SD = 2.17, range 6–13 years, 67.7% boys; 67.7% Caucasian, 6.5% Latino, 3.2% Asian/Pacific Islander, and 22.6% mixed/other) diagnosed with a primary anxiety disorder. The participants received a manual-based individual CBT program for child anxiety or a manual-based family CBT program for child anxiety. Ratings of alliance and client involvement were collected on early (session two) and late (session eight) treatment phases. Two independent coding teams rated alliance and client involvement.

Results—Change in alliance positively predicted late client involvement after controlling for initial levels of client involvement. In addition, change in client involvement positively predicted late alliance after controlling for initial levels of the alliance. The findings were robust after controlling for potentially confounding variables.

Conclusions—In CBT for child anxiety disorders, change in the alliance appears to predict client involvement; however, client involvement also appears to predict the quality of the alliance. Our findings suggest that the nature of the relationship between alliance and client involvement

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may be more complex than previously hypothesized. In clinical practice, tracking alliance and level of client involvement could help optimize the impact and delivery of CBT for child anxiety.

Keywords

Alliance; client involvement; CBT; child anxiety

A substantial body of research supports the efficacy of cognitive behavioral therapy (CBT) for child anxiety (Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004). However, all children do not respond equally well to CBT. Approximately 30–40% of children still meet diagnostic criteria for a primary anxiety disorder at post-treatment in clinical trials (Cartwright-Hatton et al., 2004). Some investigators have suggested that CBT outcomes might be improved by studying therapy processes that may predict outcomes, such as the alliance and client involvement (e.g., Chu et al., 2004). Both alliance and client involvement are considered critical to the success of CBT for child anxiety, yet little is known about the relation between these therapy processes. Research that contributes to a better understanding of how these processes relate to one another over the course of CBT could improve our understanding of how CBT works and possibly identify ways to optimize the delivery and maximize the impact of CBT (Chu, Suveg, Creed, & Kendall, 2010).

The alliance refers to the affective quality of the client-therapist relationship and the level of client-therapist agreement on therapeutic activities (McLeod, 2011). A strong alliance is believed to help optimize outcomes in CBT for child anxiety (Chu et al., 2004; Shirk & Karver, 2006); however, a conclusive link between alliance and outcomes has not been established in CBT for child anxiety (e.g., Chiu, McLeod, Har, & Wood, 2009; Liber et al., 2010). Findings point to consistent effects where alliance predicts outcomes, whether alliance is assessed early or late in therapy or by diverse reporters (child, therapist, observer). However, effect sizes are small, with the mean weighted effect size reported in a recent meta-analysis as r = .14 (McLeod, 2011). One possibility is that multiple therapy processes convey benefits to treatment, but it is difficult to isolate the singular effect of one.

Client involvement is defined as the client's level of participation in therapeutic activities and has been linked to positive outcomes in CBT for child anxiety (Chu & Kendall, 2004). Although related, alliance and involvement are unique constructs. Alliance is multidimensional and interactive, incorporating aspects of the relational bond between client and therapist and agreement on specific tasks in therapy. Involvement tends to reflect an aspect of the client, focusing on behavioral/emotional participation or engagement. A solid alliance is likely useful for most therapies, but involvement may be particularly important for CBT for child anxiety, where skill-building and exposure exercises are aided by active client participation (Chu et al., 2004). It is hypothesized that a strong alliance influences CBT outcomes via involvement (Shirk & Karver, 2006). Indeed, some assert a strong alliance may be a necessary prerequisite to achieving involvement in CBT, especially in exposure tasks that are emotionally challenging for the client.

Though the alliance is believed to facilitate involvement, few studies have evaluated the relation between these processes over the course of treatment. Using observational measures to assess alliance and involvement, Karver et al. (2008) found that alliance measured at

session three was positively associated with involvement at session four. However, most studies have not focused on in-session client involvement. Rather, studies have attempted to approximate involvement through treatment attendance, where alliance has been positively correlated with better treatment attendance (McLeod, 2011). Though important, studies focused on attendance only provide tentative support to the hypothesis that the alliance is related to involvement. Attendance and involvement are closely related, but they are not redundant as different factors may predict the two constructs (Nock & Ferriter, 2005). For example, environmental factors (e.g., transportation) may influence attendance more than involvement. Thus, to evaluate whether the alliance influences involvement, it is important to focus specifically on client in-session involvement in therapeutic activities.

In this paper, we examine whether the quality of the child-therapist alliance predicts the level of in-session involvement and vice versa in manual-guided CBT for children diagnosed with anxiety disorders. Within the child psychotherapy field, most conceptual and empirical work has focused on alliance predicting client involvement; however, in adult psychotherapy some suggest that involvement predicts the alliance (Hill, 2005), though this has not been the focus of empirical or conceptual work in the child psychotherapy field. We seek to clarify the nature of the relation between these processes for two reasons. First, such research may help expand our understanding of the mechanisms at work in CBT for child anxiety. Second, this research may help identify ways to optimize the delivery and outcome of CBT for child anxiety. Thus, we sought to contribute to research designed to optimize the delivery of efficacious treatments for children.

We took six steps to strengthen the interpretability of our findings. First, we studied the relation between the alliance and involvement in an efficacious treatment. Second, independent teams of trained raters provided ratings of alliance and involvement to minimize potential sources of bias. Third, the alliance and involvement were assessed during the skill building (session two) and exposure (session eight) phases of the CBT program allowing us to examine the relation between the constructs over the course of CBT. Fifth, alternative third-variable explanations that may account for the relation between the constructs were evaluated. Finally, we focused on children (age range 6–13 years) as the alliance may be different in adolescents (see Digiuseppe, Linscott, & Jilton, 1996).

This study used the Therapy Process Observational Coding System – Alliance Scale (TPOCS-A; McLeod & Weisz, 2005) to rate the child-therapist alliance and the Child Involvement Rating Scale (CIRS; Chu & Kendall, 2004) to rate client involvement. The children received CBT as part of a randomized controlled trial (RCT; see REMOVED FOR MASKED REVIEW). Based on previous literature, it was hypothesized that a strong alliance would predict higher levels of involvement later in treatment. Because no prior published report has examined whether involvement predicts the alliance in child psychotherapy, we offer no a priori hypothesis about this relationship. Given limited previous research, the implications and findings from this study will provide much needed information on how alliance and involvement are linked over the course of CBT for child anxiety.

Method

Participants

Child participants—Participants included children and their families from an RCT (N = 40) comparing the efficacy of child-focused CBT (CCBT) versus family-focused CBT (FCBT) for children diagnosed with anxiety disorders referred from schools and an anxiety clinic in an urban area of the western US (see REMOVED FOR MASKED REVIEW). For inclusion, child participants (14 CCBT, 17 FCBT) had to have audible therapy tapes at session two and eight, which excluded nine participants. The 31 child participants (21 males, 10 females) averaged 9.58 years of age (SD = 2.17; range 6–13; 67.70% Caucasian, 6.50% Latino, 3.20% Asian/Pacific Islander, and 22.60% mixed/other [e.g., Latino/Caucasian]). Most parents had a 4-year college degree (70.00%), 13.30% had some college education or a community college degree, and 16.70% were high school graduates. At intake, children received a primary anxiety disorder diagnosis of separation anxiety disorder (SAD; n = 14), social phobia (SP; n = 12), or generalized anxiety disorder (GAD; n = 5) based on a semistructured clinical interview with the parent and child (see below). Annual family income was under \$40,000 for 4.00%, \$40,000 to \$90,000 for 48.00%, and over \$90,000 for 48.00%. Most (87.10%) families had two parents; families had a mean of 1.69 (SD = 0.71) children.

Therapists—Eight clinical psychology doctoral students and one doctoral-level clinical psychologist delivered treatment (3 males, 6 females). Therapists averaged 26.33 years of age (SD = 1.80; range 24–30); 55.60% were Caucasian, 11.10% Latino, and 33.30% Asian/ Pacific Islander. All therapists received CBT training that involved reading the treatment manuals and attending an 8-hour workshop. The therapists attended weekly group supervision meetings in which they were supervised by experts in CBT for child anxiety.

Alliance and involvement coders—The alliance coding team consisted of three undergraduate students, one master's level student, and one doctoral student (1 male, 4 females). The involvement coding team consisted of three undergraduate students (1 male, 2 females). All coders were naive to study hypotheses.

Summary of Findings from the Clinical Trial

In the parent study (see REMOVED FOR MASKED REVIEW), children were randomly assigned to CCBT and FCBT. At post-treatment, 10 of 19 (52.60%) CCBT completers no longer met diagnostic criteria for an anxiety disorder, whereas 15 of 19 (78.90%) FCBT completers no longer met diagnostic criteria for an anxiety disorder. Two children dropped out of treatment.

Treatments

Children in both treatments received 12 to 16 sessions. CCBT therapists followed a treatment manual (REMOVED FOR MASKED REVIEW). Treatment progressed through a skills training phase and graded exposure (at least eight sessions). FCBT therapists followed the Building Confidence treatment manual (REMOVED FOR MASKED REVIEW) and progressed through the CCBT procedures described above, with the addition of parent

training. Because all children received the same CCBT procedures we expected the alliance and involvement variables to perform the same in both conditions. Treatment fidelity checks indicated therapists adhered to the respective treatment manuals (REMOVED FOR MASKED REVIEW). In the present study, the number of sessions significantly differed between CCBT and FCBT (Ms = 14.00 and 15.00, SDs = 1.24 and 1.17, respectively; t(29) = 2.30, p = .029).

Therapy Process Measures

Therapy Process Observational Coding System for Child Psychotherapy— (TPOCS-A; McLeod & Weisz, 2005). The TPOCS-A consists of nine items rated on a 6point scale that assess the affective elements of the client-therapist relationship, and client participation in therapeutic activities. The TPOCS-A has demonstrated adequate reliability and validity in previous studies (Liber et al., 2010; McLeod & Weisz, 2005). For the current study, the interrater reliability, ICC(1,2), was .90 and internal consistency was .93.

Child Involvement Rating Scale—(CIRS; Chu & Kendall, 2004). The CIRS consists of six items rated on a 6-point scale that assesses positive (e.g., initiation of discussion) and negative (e.g., inhibited in participation) involvement. The CIRS has demonstrated promising reliability and internal consistency (Chu & Kendall, 2004). For the current study, the interrater reliability, ICC(1,2), was .91 and internal consistency was .88.

Other Measures

Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-C/P; Silverman & Albano, 1996) was administered to children and parents by trained clinical psychology graduate students. Child diagnoses were obtained through combined parent- and child-report. Child symptomatology was assessed via the *Child Behavior Checklist* (CBCL; Achenbach, 1991).

Assessment Procedure

Children and their parents completed pre-, mid- (after session seven), and post-treatment assessments and sessions were audiotaped. Parents and children each received an honorarium for participating. Parents provided written informed consent and children provided written assent. Participants were recruited from 2000 to 2002; post-treatment assessments were completed by 2003.

Scoring and Session Sampling Procedures

Two independent teams coded the CIRS and the TPOCS-A. Coders were trained over a three-month period. Session two (during the skills building phase) and session eight (during the exposure phase) were selected for coding. Sessions (N = 62) were randomly assigned to coders who were naïve to study hypotheses. Each session was double coded. During coding, regular meetings were held to prevent coder drift. For the present analyses, the mean score was used to reduce measurement error.

Results

Analyses progressed through seven steps. Table 1 displays descriptive data for the process measures; all variables were within acceptable bounds of normality with no multivariate outliers. Two univariate outliers were identified. Analyses run both with and without outliers were identical. Results with outliers are presented to conserve space. First, we compared mean TPOCS-A and CIRS scores and the pattern of relations across conditions. No significant differences emerged for early or late scores and the relations within each condition were in the expected direction and similar in magnitude. Since these analyses indicated the process variables performed the same across both conditions we combined scores from the two conditions in subsequent analyses. Second, we checked for mean-level differences among therapists in alliance and involvement using four analyses of variance (early alliance, late alliance, early involvement, late involvement). Therapist was entered as a fixed factor independent variable and the therapy process variable was entered as the dependent variable. No therapist effects were found. Third, as children were nested within therapists we examined the effects of nesting. We estimated the ICCs and following Guo (2005) determined that total variance at the therapist level was < 0.1%. Thus, it was appropriate to proceed without including therapist as a random effect. Fourth, we examined the relation between the alliance and involvement. Early alliance was significantly correlated with early involvement, r = .85, p < .001, and late involvement, r = .66, p < .001. Early involvement was not significantly correlated with late alliance, r = .27, p = .149. Because the early scores were highly correlated we checked for collinearity between early alliance and early involvement. Early alliance and early involvement were entered into an OLS regression predicting late alliance. Collinearity statistics were within acceptable limits (tolerance > .10; VIF < 10) suggesting that the two predictors were not redundant.

Next, we examined the relationship between alliance and involvement in a series of OLS regressions. For each analysis, the early involvement score was entered as a covariate (to control for initial levels of involvement). Our first regression evaluated whether early alliance predicted late involvement. No significant effect was found ($\beta = .194$, p = .443). Our next analysis evaluated whether change in alliance predicted late involvement. For this analysis, a residualized change score was created by fitting an OLS regression line through the observed alliance timepoints and an unstandardized regression coefficient was generated for each case. We used residualized change scores, as opposed to simple change scores, because residualized change scores are uncorrelated with initial status (Hauser-Cram & Krauss, 1991). We found a significant effect ($\beta = .474$, p < .001), indicating that a positive change in the alliance was associated with higher involvement at session eight, controlling for early involvement (see Table 2).

To test the possibility that the alliance and involvement displayed a reciprocal relationship, we evaluated whether early involvement predicted later alliance. For these analyses, the early alliance score was entered as a covariate (to control for initial levels of alliance). We first examined whether early involvement predicted late alliance. Early involvement did not predict late alliance scores ($\beta = .093$, p = .789). We next evaluated whether change in involvement predicted late alliance. Using a residualized change score to model change, we found a significant effect ($\beta = .651$, p < .001). This

Lastly, we attempted to rule out potential alternative explanations of the observed relations by examining whether a series of client or case characteristics hypothesized to relate to alliance and/or client involvement acted as third variables. The characteristics were: (a) *child age*; (b) *gender*; (c) social competence (CBCL Social Competence scale) and (c) *symptom severity* (CBCL Total scale). We first assessed whether the variables were associated with TPOCS-A or CIRS scores. We found that age was significantly associated with early CIRS scores, r = .38, p = .036, such that being older was related to higher early involvement scores. When we reexamined the significant associations with age entered as a covariate in separate analyses, all associations remained significant. These findings suggest that the significant relationships reported above are not likely to be explained by confounding factors.

Discussion

Some have suggested that alliance and client involvement play a key role in CBT for child anxiety, though few studies have examined this issue. We therefore examined the link between alliance and client involvement during CBT for child anxiety to better understand how these therapy processes relate to one another over the course of treatment. Our study is unique in that we used psychometrically robust measures to assess each therapy process, measured each therapy process at two timepoints during treatment, and used independent teams to code each therapy process. As hypothesized, positive changes in the alliance predicted higher involvement later in treatment. However, we also found that positive shifts in involvement predicted a stronger alliance later in treatment. Together, these findings suggest the relationship between alliance and client involvement in CBT for child anxiety may be more complex than previously hypothesized.

To our knowledge, this represents the first study to investigate the relation between alliance and involvement over the course of CBT for child anxiety. Early alliance did not predict level of involvement; however, a positive change in the alliance predicted level of involvement. This finding is consistent with previous conceptual work (e.g., Chu et al., 2010; Shirk & Karver, 2006) and a previous study that established a positive relation between the alliance and involvement in CBT for children with depressive symptoms (Karver et al., 2008). Taken together, there is some evidence supporting the assertion that a strong alliance sets the stage for subsequent involvement in CBT.

However, we also found that a positive change in client involvement predicted a stronger alliance. Little conceptual or empirical work has focused on involvement predicting the alliance in child psychotherapy. This finding therefore raises questions about the nature of the relationship between these processes in CBT for child anxiety. Some evidence suggests

¹Because alliance and involvement were highly correlated early in treatment we took steps to assess whether our findings held when the three task items were removed from the TPOCS-A. We created a six item TPOCS-A Bond scale (internal consistency = .83) and reran the main analyses. Using the TPOCS-A Bond scale, the pattern of findings did not change and all findings originally reported remained significant.

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that the relationship between alliance and symptom reduction in CBT for child anxiety may be reciprocal (Marker, Comer, Abramova, & Kendall, 2013). Our findings suggest that there may also be a reciprocal relationship between alliance and client involvement. In another study (Chu & Kendall, 2009), some evidence was found that therapists may be more responsive and flexible when clients demonstrate a high degree of involvement early in therapy compared to low levels of engagement. This was contrary to expectations where the investigators hypothesized therapists would demonstrate the most flexibility when clients presented as dis-engaged. The authors speculated that therapists may be susceptible to client presentation such that therapists respond to client engagement with further creativity. The findings of the current study may be identifying a similar process. When clients present as behaviorally engaged (a client trait) the alliance (an interactive therapist-client construct) may improve.

It is important to consider the implications of these findings. Our findings suggest that the theoretical models focused on how child psychotherapy works may require greater specificity. Researchers have posited that the alliance predicts client involvement, yet current models do not specify the temporal characteristics of the proposed relation (e.g., whether this relation should be observed within a therapy session or across multiple therapy sessions), or the possibility that the relationship may be reciprocal. In the adult literature, Hill (2005) offers a theory with greater specificity that posits the alliance-involvement relationship is reciprocal and evolves as treatment progresses through distinct stages. Our findings suggest that the child field may benefit from a theory with a similar level of precision.

An important direction for future research may be to further examine the relationship between client involvement and alliance early in treatment. A high proportion of cases drop out of treatment by the fourth session (Nock & Ferriter, 2005), which may be due, in part, to the inability to get children involved in treatment. Children present to treatment with varying levels of motivation. A negative impression of the therapist and/or the treatment in the first few sessions could translate into less involvement and a weaker alliance. In contrast, therapists who offer a credible treatment, bolster motivation, and deliver supportive therapeutic strategies may promote involvement and form a strong alliance that continues to build in a reciprocal manner throughout treatment (Diamond, Liddle, Hogue, & Dakof, 1999; Hill, 2005).

Greater theoretical precision needs to be accompanied by studies designed to address issues of causality. We assessed both therapy processes at two timepoints during treatment. While this represents an advance for the child therapy field, it may not be sufficient. If the relation between the alliance and involvement is more complex than the unidirectional model originally proposed, then future studies will need to utilize session-by-session measures of both therapy processes so the sequencing order of these constructs can be more meaningfully tested.

We also found that a child characteristic was systematically related to alliance and client involvement. Though this finding should be considered preliminary, it contributes to research that suggests certain factors influence the quality of therapy processes (McLeod &

Weisz, 2005). Given the role that both processes play in treatment attendance and outcome,

studies designed to identify factors that influence alliance formation and client involvement may benefit the field. Of course, it would seem most useful to focus on indicators that are amenable to change and present early in treatment (e.g., treatment credibility, client motivation).

While our findings help clarify the relation between the alliance and client involvement, a few limitations warrant attention. First, both therapy processes were only measured at two timepoints, which prevented examination of the trajectory of the processes over treatment. Second, though early alliance did not predict involvement (or vice versa) it may be premature to conclude that these relations do not exist as the small sample size may have reduced power to detect these relations. Third, the study focused on children receiving CBT for anxiety disorders, so the findings may not generalize to other treatment or problem types. Fourth, though we attempted to rule out third variable explanations, variables not included in our analyses may explain the observed relations. Fifth, though we took steps to rule out the possibility that the alliance and involvement measures were redundant, these steps do not completely rule out this possibility. Sixth, the children mostly came from well-educated, relatively affluent, two-parent families so the findings may not generalize to assess whether these findings generalize to larger, more demographically and clinically diverse samples.

Taken together, our findings indicate that the alliance and client involvement may be related to each other over the course of CBT for child anxiety. Moreover, change may be more important than the quality of the therapy process measured at a single timepoint early in treatment. Some emerging evidence therefore suggests that it may be beneficial for these therapy processes to have a positive trajectory in CBT for child anxiety (Chu & Kendall, 2004; Kendall et al., 2009). Consequently, children who do not demonstrate a positive trajectory may be at risk for poorer outcomes. Tracking these therapy processes via feedback systems may allow clinicians to identify and proactively address problems with alliance and involvement. In this way, understanding more about the relationship between alliance and involvement over the course of treatment may help optimize the delivery and outcome of CBT for child anxiety.

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Table 1

Descriptive Data on the Process Measures

| | CCBT | (<i>n</i> = 14) | FCBT | CCBT $(n = 14)$ FCBT $(n = 17)$ | Comparisons | arisons |
|--------------------|------|------------------|------|---------------------------------|-----------------|---------|
| Process Measures M | М | SD | Μ | SD | F value P value | P value |
| TPOCS-A | | | | | | |
| Early | 3.58 | 0.81 | 3.34 | 1.01 | 0.522 | .476 |
| Late | 3.50 | 1.01 | 3.18 | 1.29 | 0.578 | .453 |
| CIRS | | | | | | |
| Early | 3.51 | 0.83 | 3.08 | 1.21 | 1.231 | .276 |
| Late | 3.11 | 1.08 | 2.64 | 1.18 | 1.324 | .259 |

Note. CCBT = Child-focused cognitive-behavioral therapy; FCBT = Family-focused cognitive-behavioral therapy; CIRS = Client Involvement Rating Scale; TPOCS-A = Therapy Process Observational Coding System for Child Psychotherapy – Alliance Scale.

Table 2

Regression Analyses Predicting Late Client Involvement from either Early Alliance or Change in Alliance.

| Process Variable | β | > d | R^2 | R^2 | > d |
|--------------------------------|------|------|---------|-------|------|
| Late Client Involvement (CIRS) | | | | | |
| Step 1 | | | | | |
| Early Client Involvement | .547 | .04 | .51 | | .001 |
| Step 2 | | | | | |
| Early Alliance | .194 | us | .52 | .01 | us |
| Late Client Involvement (CIRS) | | | | | |
| Step 1 | | | | | |
| Early Client Involvement | 669. | .001 | .51 | | .001 |
| Step 2 | | | | | |
| Alliance Change | .474 | .001 | .73 .22 | .22 | .001 |

Note. CIRS = Client Involvement Rating Scale; TPOCS-A = Therapy Process Observational Coding System for Child Psychotherapy – Alliance Scale.

Table 3

Regression Analyses Predicting Late Alliance from either Early Client Involvement or Change in Client Involvement.

| Process Variable | β | > d | R^2 | β $p < R^2 R^2 p < \beta$ | > d | |
|--|------|------|-------|---------------------------------|------|--|
| Late Alliance (TPOCS-A) | | | | | | |
| Step 1 | | | | | | |
| Early Alliance | .202 | su | .08 | | su | |
| Step 2 | | | | | | |
| Early Client Involvement | .093 | su | .08 | 00. | su | |
| Late Alliance (TPOCS-A) | | | | | | |
| Step 1 | | | | | | |
| Early Alliance | .232 | .095 | .08 | 8 | us | |
| Step 2 | | | | | | |
| Client Involvement Change .651 .001 .50 .42 .001 | .651 | .001 | .50 | .42 | .001 | |