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The Therapeutic Relationship in Cognitive-Behavioral Therapy and Pharmacotherapy for Anxious Youth

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Abstract

Objective—Examine the therapeutic relationship with cognitive-behavioral therapists and with pharmacotherapists for youth from the Child/Adolescent Anxiety Multimodal Study (CAMS; Walkup et al., 2008). The therapeutic relationship was examined in relation to treatment outcomes.

Method—Participants were 488 youth (ages 7-17; 50% male) randomized to cognitive-behavioral therapy (CBT; *Coping cat*), pharmacotherapy (SRT; sertraline), their combination, or pill placebo. Participants met DSM-IV criteria for generalized anxiety disorder, social phobia, and/or separation anxiety disorder. The therapeutic relationship was assessed by youth-report at weeks 6 and 12 of treatment using the Child's Perception of Therapeutic Relationship scale. Outcome measures (Pediatric Anxiety Rating Scale; Clinical Global Impressions Scales) were completed by Independent Evaluators blind to condition.

Results—For youth who received CBT only, a stronger therapeutic relationship predicted positive treatment outcome. In contrast, the therapeutic relationship did not predict outcome for youth receiving sertraline, combined treatment, or placebo.

Conclusions—A therapeutic relationship may be important for anxious youth who receive CBT alone.

Keywords

anxiety; youth; therapeutic relationship; CBT; pharmacotherapy

Little is known about the therapeutic relationship in efficacious treatments for youth anxiety, including cognitive-behavioral therapy (CBT; e.g., Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006) and pharmacotherapy using selective serotonin-reuptake inhibitors (SSRIs; e.g., Birmaher et al., 2003). Research suggests that a strong therapeutic relationship/alliance facilitates favorable outcomes of CBT for child anxiety (e.g., Liber et al., 2010), but its role in pharmacological treatment and combined CBT and pharmacological treatment has yet to be studied. The therapeutic alliance can be conceptualized as consisting of three elements: the collaborative relationship, the affective bond, and client-therapist agreement on goals and tasks (Bordin, 1979; Martin, Garske, & Davis, 2000). The therapeutic alliance is transactional; child and therapist characteristics and actions play a role (Karver, Handelsman, Fields, & Bickman, 2005). The current study focuses on the affective bond between the youth and therapist, referred to hereafter as the “therapeutic relationship.”

An anxious youth who has a strong therapeutic relationship with a therapist may be more likely to engage in skill-building exercises (Chu & Kendall, 2004) and exposure tasks (Kendall & Ollendick, 2004). During exposure tasks, the therapist helps the child tolerate distress and reinforces facing rather than avoiding fears. Youth can be distressed during exposure tasks, but research indicates that exposure tasks do not negatively affect the therapeutic alliance (Kendall et al., 2009) and are linked to positive outcomes (Kendall et al., 1997).

Studies examining the role of the therapeutic relationship and alliance in CBT for youth anxiety have yielded mixed results, perhaps due to methodological differences (e.g., time of assessment; different informants) and/or varying definitions of therapeutic relationship/alliance. Meta-analyses of the therapeutic relationship in child therapy report an association between the therapeutic relationship and favorable treatment outcome (i.e., Karver, Handelsman, Fields, & Bickman, 2006; Liber et al., 2010; Shirk, Karver, & Brown, 2011), particularly for individual child versus family treatments (McLeod, 2011). Studies that did not identify significant associations (Kendall, 1994; Kendall et al., 1997) may have been restricted by a ceiling effect in child-rated relationship scores, perhaps because the relationship measure was administered at the end of treatment. When rated by a therapist or an observer, the quality of the relationship has been found to predict lower principal anxiety disorder severity at posttreatment and follow-up (Hughes & Kendall, 2007). Also, the therapeutic alliance increases over the course of treatment, and may contribute to outcomes (Chiu, McLeod, Har, & Wood, 2009). A strong therapeutic alliance may encourage treatment adherence among youth receiving individual CBT: a stronger alliance early in treatment was related to better adherence; a similar relationship was found when alliance and adherence were examined late in treatment (Liber et al., 2010).

For youth receiving pharmacology, a strong therapeutic relationship with the physician may be helpful to medication adherence (Dilallo & Weiss, 2009) and outcome (see Fields, Wienke Totura, Tarquini, & Karver, 2012; Joshi, 2006). However, few studies have examined these associations among youth. Given superior results linked to combined treatment for anxious youth (Walkup et al., 2008), associations between outcome and relationships with the therapist and pharmacotherapist is in need of study. The present study evaluated the link between the therapeutic relationship and treatment outcome, hypothesizing that a stronger youth-rated therapeutic relationship, with both CBT and pharmacotherapists, would be associated with greater improvement in anxiety symptoms.

Method

Participants

Analyses used CAMS data (Walkup et al., 2008), with 488 youth (50% male) having a principal diagnosis of separation anxiety disorder (SAD), generalized anxiety disorder (GAD), and/or social phobia (SoP). Youth were ages 7 to 17 years ($M = 10.72$, $SD = 2.80$) and treated at one of six university-based clinics. Youth were randomly assigned to: CBT (Coping Cat; $n = 139$), sertraline (SRT, $n = 133$), their combination (COMB; $n = 140$), and pill placebo (PBO; $n = 76$). The sample was 88% non-Hispanic ($n = 429$); 79% White ($n = 385$), 9% African American ($n = 44$), 3% Asian ($n = 12$), 1% American Indian ($n = 6$), <1%

Native Hawaiian/Other Pacific Islander ($n = 2$), and 8% other ($n = 39$). Participants were from predominantly middle-class and upper-middle-class families, with 74.6% ($n = 364$) scoring at or above 4 on the Hollingshead Two-Factor Scale (range 0-5; Hollingshead, 1971). At baseline, 55% of participants were diagnosed with at least one other DSM-IV Axis I disorder. Outside of other targeted anxiety disorders (GAD, SAD, SoP), the most common comorbidities were attention-deficit/hyperactivity disorder (ADHD; 10.04%, $n = 49$), oppositional defiant disorder (9.43%, $n = 46$), and obsessive-compulsive disorder (8.61%, $n = 42$). Youth who met criteria for a pervasive developmental disorder, major depressive disorder, bipolar disorder, schizophrenia, and schizoaffective disorder were excluded. For additional details and sample characteristics, see Kendall et al. (2010).

Measures

The 10-item **Child's Perception of Therapeutic Relationship (CPTR; Kendall et al., 1997)** assesses the child's perception of the quality of the therapeutic relationship (e.g., how much the child likes the therapist, can talk to the therapist, and wants to spend time with the therapist). Three filler items are not scored. Items are rated on a 1-5 scale and responses are summed (range 7-35). For all treatments, the CPTR was administered by an Independent Evaluator (IE; not the child's therapist) immediately after week 6 and 12 sessions. Cronbach's alphas for the CPTR were .86 and .88 for weeks 6 and 12, respectively.

The **Anxiety Disorders Interview Schedule for DSM-IV-Child and Parent Versions (ADIS-IV-C/P; Silverman & Albano, 1996)** is a clinician-administered, semi-structured diagnostic interview that assesses major DSM-IV anxiety disorders and associated psychopathology in school-aged children and adolescents. The ADIS-IV-C/P has excellent psychometrics (Silverman, Saavedra, & Pina, 2001; Wood et al., 2002). CAMS IE reliability (10% of the assessments), using intraclass correlation coefficients, ranged from 0.82 to 0.88.

The **Clinical Global Impressions Scales (CGI; Guy, 1976)** provide global ratings of the severity of psychopathology (CGI-S) and overall improvement in clinical presentation (CGI-I). The CGI-S ranges from 1 (*no illness*) to 7 (*extremely severe*) while the CGI-I ranges from 1 (*very much improved*) to 7 (*very much worse*), and were used in CAMS to rate anxiety specifically. The CGI-S was rated by the IE at pre- and post-treatment; the CGI-I was rated by the IE at posttreatment and by the therapist after each session (for all conditions).

The **Pediatric Anxiety Rating Scale (PARS; RUPP, 2002)**, a clinician-rated measure, consists of a checklist of 50 anxiety symptoms and 7 global items administered to the child and parent(s) together. Severity ratings (6-point scale) are based on the number and frequency of symptoms, severity of distress, and interference with functioning. Reliability and validity of the PARS is acceptable (RUPP, 2002). In CAMS, six global items were summed with a possible range of 0 to 30. Baseline scores ranged from 7 to 29 and inter-rater reliability was >0.97 . The current study used the baseline and posttreatment PARS.

Procedures

Procedures were approved by the Institutional Review Boards at all six sites. Multiple recruitment methods (e.g., flyers, radio, and internet ads) were used. After eligibility was

determined and informed consent/assent was ascertained, a baseline assessment of anxiety, comorbid problems, and youth and family functioning was conducted before randomization. Assessments were repeated at posttreatment and consisted of parent, youth, and clinician-rated measures administered by IEs blind to treatment condition (details in Compton et al., 2010).

Participants in **CBT** (*Coping Cat* and *C.A.T.* programs; Kendall, Choudhury, Hudson, & Webb, 2002; Kendall & Hedtke, 2006) received 14, 60-minute sessions delivered over 12 weeks. CBT providers were 38 doctoral candidates, social workers, psychologists, and psychiatrists. The majority was Caucasian (92%) and female (84%) with an average of 5.59 years of clinical experience. Fifty-eight percent had a Ph.D. and 37% had a master's degree in psychology; one had a Psy.D. and one was a licensed clinical social worker (see Podell et al., in press). **Pharmacotherapy (SRT)** was eight 30-60-minute sessions (weeks 1-4, 6, 8, 12) involving discussing anxiety symptoms, functioning, treatment response, and adverse events within supportive clinical care. Providers checked with participants by phone during weeks without a session. Sertraline was administered on a fixed-flexible schedule beginning with 25 mg per day and adjusted up to 200 mg per day by week 8. Providers were experienced psychiatrists and psychiatric nurses. **Combination therapy** consisted of the CBT and the pharmacotherapy conditions. Treatment procedures have been further described by Walkup et al. (2008).

Results

Of the 488 randomized participants, 57 withdrew. Eleven of them were assessed at posttreatment. CPTR data (20%) was missing at week 6. Missing data were handled using multiple imputation for all variables in the analyses. Results are reported for the pooled dataset except in instances where multiple imputation procedures did not yield pooled estimates; for those instances, results from analyses with non-imputed data are reported.

Given that child participants were nested within therapists and sites, a three-level model was used to calculate intraclass correlations (ICCs) of CPTR ratings using HLM-6 (Raudenbush, Bryk, & Congdon, 2004), accounting for nesting within therapist, site, and therapist within site. Because all ICCs were nonsignificant using a liberal alpha ($p < 0.25$; CBT: within therapist ICC = .08, within site ICC = .03; therapists within site ICC = .18; PT: within therapist ICC = .01, within site ICC = .00; therapists within site ICC = .01) it was determined that observations were independent (i.e., Grawitch & Munz, 2004; Kenny, Mannetti, Pierro, & Livi, 2002) and subsequent analyses did not control for nesting.

Descriptive statistics for therapeutic relationship ratings, by treatment condition, are in Table 1. Ratings of youth's relationship with their CBT therapist differed by condition: youth in COMB reported higher relationship ratings than youth in CBT at 6 weeks, $t(351) = 2.24$, $p = .03$, and at 12 weeks, $t(302) = 2.33$, $p = .02$. For pharmacotherapists, omnibus analyses of variance (ANOVA) revealed that therapeutic relationship ratings did not differ by condition (COMB, SRT, and PBO) at week 6 or 12 ($p > .05$). When CBT and SRT were compared, CBT therapists received higher CPTR ratings than pharmacotherapists at week 6 ($M_{cbt} = 23.73$; $M_{pt} = 21.63$), $t(985) = -2.83$; $p < .00$, and week 12 ($M_{cbt} = 24.78$; $M_{pt} = 21.98$), t

(782) = -3.68; $p < .00$. For CBT therapists (both COMB and CBT), CPTR ratings increased over time ($M_{6\text{wks}} = 24.57$; $M_{12\text{wks}} = 25.90$), $t(119) = -2.74$, $p = .01$. CPTR ratings also increased for pharmacotherapists (COMB, SRT, and PBO), $M_{6\text{wks}} = 21.77$; $M_{12\text{wks}} = 22.61$, $t(287) = -2.38$, $p = .02$.

Therapeutic Relationship and Outcomes

Linear regressions examined whether week 6 CPTR scores predicted outcomes at posttreatment (week 12). Alpha levels were adjusted using a modified Bonferroni procedure (Holm, 1979) for each family of tests by condition.

All regression analyses controlled for baseline scores on outcome measures (PARS, CGI-S) with the exception of CGI-I (not rated at baseline). Additionally, as improvement may influence CPTR scores, week 6 CGI-I ratings provided by CBT therapists and pharmacotherapists were controlled. Analyses were conducted for all CBT therapists (COMB and CBT) and all pharmacotherapists (SRT, COMB, PBO). For all CBT therapists, the week 6 CPTR predicted posttreatment PARS, $\beta = -0.16$, 95% CI [-0.28, -0.04], R^2 change = 0.02, $p = .010$, CGI-I ($\beta = -0.03$, 95% CI [-0.05, -0.01], R^2 change = 0.23, $p < .001$), and CGI-S ($\beta = -0.04$, 95% CI [-0.06, -0.10], R^2 change = 0.02, $p = .009$). For pharmacotherapists, 6-week CPTR did not predict PARS, CGI-S, or CGI-I.

Analyses were conducted for CBT therapists in CBT and COMB separately. For CBT, week 6 CPTR for CBT therapists predicted posttreatment PARS, CGI-I, and CGI-S (see Table 2). For COMB, CPTR for CBT therapists did not predict posttreatment outcomes. CPTR for pharmacotherapists at week 6 did not predict any posttreatment ratings when analyses were conducted for COMB, PBO, and SRT separately. Table 2 presents results for CBT and COMB.

Discussion

The present results indicate that the therapeutic relationship with CBT therapists may be associated with treatment outcomes (Hughes & Kendall, 2007; Liber et al., 2010). However, the relationship with pharmacotherapists did not predict treatment outcomes for youth, a finding in conflict with data on adults (Fields et al., 2012). It may be that the pharmacist-patient relationship is linked to outcome through medication adherence. Given that parents usually oversee their child's medication regimen, the parent-therapist relationship may be more important in predicting pharmacotherapy outcomes.

When treatment conditions were analyzed separately, the youth's relationship with the CBT therapist predicted outcome within CBT but not COMB. Perhaps CBT alone requires a positive relationship to achieve engagement in exposure tasks and skill-building exercises. However, when CBT is combined with medication, the medication may provide a more immediate effect, lessening the role for a favorable therapeutic relationship to engage youth. Or, given that COMB includes two providers, the relative importance of the child's relationship to each individual provider is lessened. It is also possible that greater variability in response to CBT (59.7% improved) compared with COMB (80.7%; Walkup et al., 2008)

contributed. Finally, COMB is not necessarily an additive treatment, and may contain youth who only respond to sertraline or CBT, which we were not able to separate in our analyses.

Youth in COMB assigned higher ratings to the relationship with CBT therapists, both at week 6 and at week 12, than youth in CBT. Youth in COMB showed greater improvement than youth in CBT (Walkup et al., 2008), which may have had a positive effect on the relationship with their therapists. Youth-rated relationships with pharmacotherapists did not differ by condition. Also, the therapeutic relationship between youth and both types of providers increased from week 6 to week 12. Considering the nature of CBT and that the exposure tasks take place during the second half of treatment, the present findings are consistent with previous work (Kendall et al., 2009) and bolster the conclusion that exposure tasks do not have an unwanted effect on the youth's perception of the therapeutic relationship. Although the extent to which youths' reports of the therapeutic relationship were impacted by the improvement in anxiety symptoms by week 12 is not clear, Marker, Comer, Abramova, and Kendall (2013) found a reciprocal relationship between therapeutic alliance and response to CBT for child anxiety.

Potential limitations merit consideration. First, the therapeutic relationship was measured at session 6. The interplay between treatment response and the therapeutic relationship can be interactive (Marker et al., 2013), so we controlled for therapist CGI-I ratings at week 6 (the available measure of improvement at this timepoint). A child-rated measure of improvement would be helpful. Therefore, we cannot totally rule out the extent to which associations with outcome were linked to changes in anxiety symptoms. Also, given data suggesting that the early alliance is important (Langer, McLeod, & Weisz, 2011), relationships in the current study may have been different if relationship was measured earlier. Second, the CPTR resembles the bond dimension of the working alliance (Bordin, 1979): Agreement on other dimensions of the alliance (the goals and tasks of therapy; Creed & Kendall, 2005; Tee & Kazantzis, 2011) was not assessed. Third, the therapeutic relationship was rated by youth; therapist or observer ratings merit further study. However, youth's ratings of the therapeutic relationship were normally distributed, ruling out ceiling effects (Bickman et al., 2012). Fourth, the manual-based CBT was delivered by trained/supervised therapists and was found to be efficacious. Although some have noted differences between services delivered in varying settings (Weisz, Dononenberg, Weiss & Hann, 1995), there is evidence that relevant therapist variables (e.g., clinical experience, treatment adherence, and collaborative style) varied among CAMS therapists (Podell et al., in press). Last, CAMS consisted of mostly white therapists and youth from middle class families; findings cannot be generalized to other groups.

Given that CAMS therapists who used a collaborative and developmentally appropriate approach had favorable outcomes (Podell et al., in press), it is possible that these therapist behaviors influenced outcomes through a positive therapeutic relationship. Therapist behaviors that foster a positive relationship with youth (e.g., Creed & Kendall, 2005; Podell et al., in press) warrant further study. Other areas for future study include examining (1) changes in the therapeutic relationship over the course of treatment, including ruptures and repairs; (2) medication adherence and beliefs regarding medication; and (3) the changing role of the therapeutic relationship, as treatments are increasingly delivered through a variety

of modalities (e.g., computer-assisted and internet-delivered; Khanna, Aschenbrand, & Kendall, 2007) and settings (e.g., primary care clinics; Corso et al., 2012).

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Table 1
Means, Standard Deviations, and Range for Child's Perception of Therapeutic Relationship Scores by Treatment Condition

Variable	<u>Cognitive Behavior Therapy</u>				<u>Sertraline</u>			
	<u>6 weeks</u>		<u>12 weeks</u>		<u>6 weeks</u>		<u>12 weeks</u>	
	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range
CPTR-CBT	23.73 (5.95)	7 – 35	24.85 (5.81)	7 – 35	---	---	---	---
CPTR-PT	---	---	---	---	21.70 (5.53)	8 – 35	22.05 (5.46)	8 – 35
Variable	<u>Combination Treatment</u>				<u>Placebo</u>			
	<u>6 weeks</u>		<u>12 weeks</u>		<u>6 weeks</u>		<u>12 weeks</u>	
	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range
CPTR-CBT	25.48 (6.02)	9 – 35	27.37 (6.05)	11 – 35	---	---	---	---
CPTR-PT	21.98 (6.58)	8 – 35	23.45 (7.14)	8 – 35	21.56 (5.39)	8 – 35	22.12 (5.60)	10 – 33

Note. CPTR-CBT = Child's Perception of Therapeutic Relationship total score, Cognitive-behavioral Therapist; CPTR - PT = Child's Perception of Therapeutic Relationship – Pharmacotherapist.

Table 2
Summary of Linear Regression Analyses for Therapeutic Relationship Predicting Clinician-Rated and Child-and Parent-Reported Symptoms for the Cognitive-Behavioral Therapy Condition and the Combined Condition

Cognitive-Behavioral Therapy Condition						
PARS		CGI-I		CGI-S		
Variable	β	95% CI	β	95% CI	β	95% CI
Constant	-2.45	-9.94, 5.03	1.92*	0.84, 3.00	-0.49	-2.54, 1.57
Pre-TX Score	0.60*	0.39, 0.81	N/A	N/A	0.58*	0.31, 0.86
CGI-I-6 weeks	2.00*	0.61, 3.40	0.43*	0.19, 0.66	0.53*	0.23, 0.84
CPTR-6 weeks	-1.53*	-2.73, -0.32	-0.30*	-0.48, -0.12	-0.31*	-0.57, -0.04
R^2 change	0.07		0.26		0.05	

Combined Condition						
PARS		CGI-I		CGI-S		
Variable	β	95% CI	β	95% CI	β	95% CI
Constant	-1.03	-8.11, 6.04	.98	-0.01, 1.98	0.35	-1.77, 2.47
Pre-TX Score	0.25	0.03, 0.47	N/A	N/A	0.22	-0.08, 0.51
CGI-I-6 weeks	1.19	-0.12, 2.51	.30*	0.08, 0.51	0.37	0.06, 0.69
CPTR-6 weeks	-0.02	-1.07, 1.02	-.03	-0.21, 0.14	-0.05	-0.32, 0.23
R^2 change	0.00		0.09		0.00	

Note. PARS = Pediatric Anxiety Rating Scale; CGI-I = Clinical Global Impressions Scale – Improvement; CGI-S = Clinical Global Impressions Scale – Severity; CI = Confidence Interval.

* p significant following modified Bonferroni correction.