

CHILD SOCIAL AND EMOTIONAL FUNCTIONING AS PREDICTORS OF
THERAPEUTIC ALLIANCE IN COGNITIVE-BEHAVIOR THERAPY FOR ANXIETY

By

MONICA RENEE WHITEHEAD

(Under the Direction of Cynthia Suveg, Ph.D.)

ABSTRACT

This study examined baseline child social and emotional functioning as predictors of observer- and therapist-rated therapeutic alliance during a ten-week, cognitive-behavioral therapy for anxiety. It was hypothesized that better baseline functioning in both social and emotional domains would be related to stronger alliance across time. Overall, few variables were related to alliance and mixed support was found for the hypothesis. Emotion regulation was related to higher initial ratings of alliance (i.e., caregiver and teacher-reported emotion regulation for observer-rated alliance and teacher-reported emotion regulation for therapist-rated alliance). For slope of alliance, receiving prosocial behavior from peers was related to a weaker decline in observer-rated alliance whereas teacher-reported emotion regulation was related to a stronger decline in both observer- and therapist-rated alliance over time. Results suggest that only adaptive measures of emotional and social functioning may be important for understanding alliance among children with anxiety disorders and their therapists. To understand the clinical utility in predicting alliance, future research should explore different relations between social and emotional functioning, alliance, and treatment outcome.

INDEX WORDS: Anxiety, therapeutic alliance, social functioning, emotion functioning,
cognitive behavior therapy, youth

CHILD SOCIAL AND EMOTIONAL FUNCTIONING AS PREDICTORS OF
THERAPEUTIC ALLIANCE IN COGNITIVE-BEHAVIOR THERAPY FOR ANXIETY

by

MONICA RENEE WHITEHEAD

B.S., Wittenberg University, 2009

M.S., University of Georgia, 2014

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2016

© 2016

Monica Renee Whitehead

All Rights Reserved

CHILD SOCIAL AND EMOTIONAL FUNCTIONING AS PREDICTORS OF
THERAPEUTIC ALLIANCE IN COGNITIVE-BEHAVIOR THERAPY FOR ANXIETY

by

MONICA RENEE WHITEHEAD

Major Professor: Cynthia Suveg, Ph.D.

Committee: Ronald Blount, Ph.D.
Justin Lavner, Ph.D.

Electronic Version Approved:

Suzanne Barbour
Dean of the Graduate School
The University of Georgia
August 2017

ACKNOWLEDGEMENTS

I want to whole-heartedly thank my research advisor, Cindy, for all of her mentorship, guidance, and supervision. I would not have been able to complete this project that I am proud of without her support. I am also grateful for my committee members, who helped me critically think through methodological and statistical issues. I also want to thank the graduate and undergraduate students in the Development and Psychopathology lab who contributed to the completion of the project.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	vi
CHAPTER	
1 INTRODUCTION	1
Social Functioning as a Predictor of Alliance.....	2
Emotional Functioning as a Predictor of Alliance	5
Summary and the Current Study.....	8
2 METHOD	9
Participants.....	9
Procedures.....	9
Measures	10
Data Preparation.....	16
Statistical Analyses	18
3 RESULTS	20
Preliminary Analyses	20
Primary Results	20
4 DISCUSSION.....	24
REFERENCES	32
TABLES	42

LIST OF TABLES

	Page
Table 1: Descriptive Statistics and Correlations between Observer- and Therapist-Rated Alliance	42
Table 2: Correlation Table for Observer-Rated Alliance and Main Study Variables.....	43
Table 3: Correlation Table for Therapist-Rated Alliance and Main Study Variables	44
Table 4: Significant Differences in Alliance by Demographic Indicators and Severity Variables	45
Table 5: Social Functioning as Predictors of Observer-Rated Therapeutic Alliance using Longitudinal Data Analysis	46
Table 6: Emotion Functioning as Predictors of Observer-Rated Therapeutic Alliance using Longitudinal Data Analysis	47
Table 7: Social Functioning as Predictors of Therapist-Rated Therapeutic Alliance using Longitudinal Data Analysis	48
Table 8: Emotion Functioning as Predictors of Therapist-Rated Therapeutic Alliance using Longitudinal Data Analysis	49

CHAPTER 1

CHILD SOCIAL AND EMOTIONAL FUNCTIONING AS PREDICTORS OF THERAPEUTIC ALLIANCE IN COGNITIVE-BEHAVIOR THERAPY FOR ANXIETY

Given that 40% of anxious children engaging in psychological treatment do not achieve substantial therapeutic gains (Silverman, Pina, & Viswesvaran, 2008), it is necessary to understand predictors of outcome. One predictor, therapeutic alliance, refers to an emotional bond between the client-therapist and agreement/collaboration on tasks and goals (DiGiuseppe, Linscott, & Jilton, 1996; McLeod & Weisz, 2005). Alliance facilitates trust between the client and therapist and increases the likelihood of a client “buying into” treatment, which may be particularly important for children who may not be in treatment by their own volition (Marker, Comer, Abramova, & Kendall, 2013). Alliance has been found to predict therapeutic gains (e.g., Chiu, McLeod, Har, & Wood, 2009, Chu, Skriner, Zandberg, & 2014; Shirk & Karver, 2003), yet little is known about what facilitates alliance. Understanding predictors of alliance may enhance the quality of this process, resulting in increased treatment success. This study examined baseline child social and emotional functioning as predictors of therapeutic alliance during early, mid, and late sessions of a ten-week, cognitive-behavioral therapy for clinically-anxious youth.

When examining predictors of alliance, therapist variables (e.g., comfort with disclosure, competence, directness, warmth) have been examined, including social functioning which was positively related to alliance (Dunkle & Friedlander, 1996). However, given that alliance includes both the therapist and client, it is important to also consider child-related variables. The majority of studies examining child predictors of alliance focus on demographic variables and

symptom severity. For example, females have been found to have higher alliance ratings compared to males (Christensen & Skogstad, 2009; Langer, McLeod, & Weiz, 2011). When age is found to be a significant predictor, younger children report stronger alliance compared to older children (DeVet, Kim, Charlot-Swilley, & Ireys, 2003). When examining race, African American youth did not differ from Caucasian youth in therapist-rated alliance, but did demonstrate less involvement and mastery in session (Gordon-Hollingsworth et al., 2014), which may be related to alliance. Concerning symptomatology, greater pretreatment severity of anxiety has been associated with stronger alliance (Chu et al., 2014; Levin, Henderson, & Ehrenreich-May, 2012). Due to the focus on demographics and severity, little is known about other child-focused baseline predictors of alliance. Therefore, the goal of this paper was to examine previously unexplored child variables including social and emotional functioning in relation to the therapeutic alliance.

Social Functioning as a Predictor of Alliance

The therapeutic alliance is very much a social construct given that a relationship must form between the client and therapist. Alliance, like social relationships with peers, includes establishing trust, providing disclosures, finding common interests, engaging in collaboration, respecting boundaries, and setting expectations. If a child has difficulty establishing friendships, maintaining friendships, or has experienced numerous negative peer interactions, he may have negative beliefs about relationships and not be receptive to a therapist's attempts to establish rapport. Because therapeutic alliance is another, yet distinct, social relationship in a child's life, it is plausible that difficulties with social functioning may hinder therapeutic alliance.

Interpersonal difficulties increase the likelihood of a child engaging in undesirable social exchanges. Drawing upon interpersonal theory, a person's behavior elicits particular reactions in

another. Therefore, if one acts in a prosocial, welcoming manner, the other person likely would reciprocate similarly. In contrast, if a person acts in a hostile manner, the other may respond negatively (Horowitz & Vitkus, 1986; Puschner, Bauer, Horowitz, & Kordy, 2005). Relating to alliance, if a client is not welcoming or responsive to the therapist, alliance might suffer. If the client is socially competent (i.e., is able to relate well to others, can provide support), exchanges between he and a therapist are likely to be smooth, and forming the therapeutic relationship will be an easier task compared to children without these social deficits. Not only is it important to consider how a child responds to others, but also how others respond to the child. Children use their relationships with caregivers to create internal working models for other relationships (Bowlby, 1973). It is expected that not only family, but also peer relationships influence the child's perception and functioning in the therapeutic relationship. If the child's social interactions outside of therapy have been met with hostility, invalidation, and lack of support, he may possess social schemas that shape negative expectations about the therapeutic relationship. Thus, if a child has been victimized or has been unsuccessful at establishing relationships, he might approach the therapeutic relationship with hesitance.

Anxious children are thought to have poorer social functioning compared to non-disordered youth (e.g., Chansky & Kendall, 1997; Verduin & Kendall, 2008). Children diagnosed with anxiety disorders have been found to be less well-liked based on others' and their own reports in comparison to children without anxiety disorders (Chansky & Kendall, 1997; Strauss, Lease, Kazdin, Dulcan, & Last, 1989; Verduin & Kendall, 2008), have poor friendship quality (Greco & Morris, 2005), and are victimized (Cohen & Kendall, 2015; Storch, Brassard, & Masia-Warner, 2003). This population displays behaviors that make them targets for these negative peer interactions, such as visible physical arousal, avoidance of social situations or

anxiety-provoking stimuli, and poor assertiveness (Creed & Funder, 1998; Davila & Beck, 2002). When victimized, children may develop a negative self-evaluation and low self-efficacy, resulting in avoidance of social situations (Storch, Masia-Warner, Crisp, & Klein, 2005), which in turn limits their ability to engage in age-appropriate social interactions (Francis & Radka, 1995). Being victimized may result in a cycle of increased anxiety, withdrawal, and more victimization (Mulder & van Aken, 2014). In addition, victimized children tend to report increased loneliness compared to non-victimized children (Crick & Grotpeter, 1996). Being victimized and lonely may negatively affect a child's self-efficacy in all relationships, including alliance. Social competence (Alfano et al., 2009; Settapani & Kendall, 2013) and loneliness (Alfano et al., 2009) have been found to predict treatment outcome in anxious youth, demonstrating the important link between social functioning and therapeutic processes.

Several studies have examined the client's and therapist's social functioning as predictors of alliance in adults (e.g., Connolly Gibbons et al., 2003; Dunkle & Friedlander, 1996). For instance, interpersonal traits (cooperation/caring and friendly/submissive) positively and autonomy/dominance negatively predicted alliance in numerous studies (Connolly Gibbons et al., 2003; Muran, Segal, Samstag, & Crawford, 1994; Puschner, Bauer, Horowitz, & Kordy, 2005; Renner et al., 2012). However, only one study has examined social functioning in anxious youth in relation to alliance. Levin and colleagues (2012) demonstrated that during a unified protocol for emotional disorders (i.e., anxiety and depression), alliance at session three (out of 24) related to social functioning. Specifically, adolescent-reported relationship quality with their attachment figure accounted for 18% of the variance in adolescent-reported alliance. In addition, adolescent-reported perceived social support from friends and family accounted for 26% of the

variance in observer-ratings of alliance. However, none of the measures of social functioning related to therapists' ratings of alliance.

One study examined the therapist's social functioning in relation to alliance (Dunkle & Friedlander, 1996). Specifically, counselors in a university setting completed measures of hostility, perceived social support, and degree of comfort with closeness in interpersonal relationships, and clients completed a measure examining specific components of alliance—the ability to form bonds and agreement on tasks and goals during sessions three or five. It was found that all three components of social functioning related to the ability to form bonds, and degree of hostility and comfort in closeness correlated to agreement on tasks and goals. Although this study examined therapist social functioning and not the client's, it demonstrates that the social abilities of the persons in the therapy room may affect the therapeutic alliance. Collectively, theory and empirical work suggest that child social functioning is an important variable to consider in relation to alliance.

Emotional Functioning as a Predictor of Alliance

Another consideration in predicting alliance is emotion regulation, which is the ability to modify emotional experiences in order to achieve one's goal (Thompson, 1994). There is an emotional aspect to the therapeutic relationship (Sexton, Littauer, Sexton, & Tommeras, 2005). Children with difficulties in emotional functioning may not understand their own or the therapist's emotions, resulting in a disconnect between the two individuals in session. Further, a child may then distance himself from the therapist, which may affect their ability to collaborate with one another and to agree on tasks or therapeutic goals (Santiago et al., 2002). A lack of agreement on goals may also stem from a child's reluctance to express emotions or opinions regarding the direction of therapy. For instance, a child may not vocalize disagreement or show

dissatisfaction with therapy, causing a divide between the child and therapist. Thus, poor emotional functioning might affect the therapeutic alliance strongly during the beginning of therapy, when larger treatment goals are set, but also across all sessions because they regularly entail addressing tasks and learning new coping strategies.

Children with anxiety disorders use fewer adaptive emotion regulation strategies and present with more emotion dysregulation compared to non-disordered youth (e.g., Hannesdottir & Ollendick, 2007; Suveg & Zeman, 2004). Being emotionally competent is important because if children are very dysregulated, they are more prone to interpret environmental cues inaccurately (Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1985). In session, a child may dismiss or negatively interpret a therapist's efforts to establish a relationship. If a child is overly negative, disruptive, is not able to inhibit emotions, or is crying or tantruming frequently, these behaviors can interfere with engagement in session, the therapeutic alliance, and more specifically, agreement upon goals and tasks. If a child is dysregulated regularly in session, he may not be able to engage in self-reflection and understand what behavioral or cognitive patterns would be helpful to change (Lewandowski, D'iuso, Blake, Fitzpatrick, & Drapeau, 2011), resulting in a potential clash between child and therapist on therapeutic goals. Further, the child may be less aware and appreciative of the therapist's efforts to establish a relationship (Mischel & Shoda, 1995). The child may associate these dysregulated experiences with the therapist, and thus view the therapist as an undesirable person and therapy as an undesirable experience, affecting the bond between the two individuals.

Only one study has examined emotion regulation in relation to alliance in anxious youth. Chu and colleagues (2014) examined how coping style related to trajectories of alliance in a sample of anxious youth ages 7-17 years old. Specifically, they examined engagement coping

(active efforts to change one's reaction to the situation), disengagement coping (avoidance of a situation), and involuntary responding (less purposeful responses to a situation such as rumination, intrusive thinking, or inaction). Of these three styles, the authors found that youth high in engagement coping had increasing alliance ratings across all treatment sessions. However, youth low in engagement coping demonstrated a dual slope model such that alliance ratings increased during the first half but decreased during the second half of treatment. Therefore, emotion regulation skills may affect alliance at various time points, and possibly more so later in therapy, given the difference between these two styles' alliance trajectory during the second half of treatment.

Related to anxiety, one study examined adults with post-traumatic stress disorder (PTSD) engaging in a 16-week treatment which involved two phases, very similar to CBT for anxiety—the development of emotion regulation skills and exposure to trauma-memories (Cloitre, Stovall-McClough, Miranda, & Chemtob, 2004). Client-reported therapeutic alliance and negative mood regulation, defined as the ability to change and tolerate a negative mood state, were examined in the second phase of treatment. The authors demonstrated that the link between therapeutic alliance and treatment outcome was mediated by improvements in negative mood regulation such that better alliance was associated with increased mood regulation, again demonstrating a possible link between alliance and emotion regulation.

Given that poor emotion regulation skills are linked to symptom severity (e.g., Queen & Ehrenreich-May, 2014), and several studies have linked severity to the therapeutic alliance (e.g., Chiu et al., 2009; Chu et al., 2014; Woody & Adessky, 2002), the extant literature on severity might suggest that emotion regulation relates to alliance. Specifically, a child may be more severe at pre-treatment (e.g., several diagnoses, greater impairment), which might include worse

emotion regulation skills, leading to poorer ability to contribute to the therapeutic alliance. In addition, difficulties in emotion regulation may make it challenging for the therapist to engage the client in session. For example, if the child is very dysregulated in session, the therapist may not be able to convey helpful strategies in the moment or the child may not be able to internalize material discussed in treatment, resulting in the child finding therapy unhelpful or thinking therapy is aversive.

Summary and the Current Study

Overall, there is much extant literature on alliance in relation to predictors. However, there are remaining questions about child social and emotional functioning as they relate to alliance. The current study aimed to grow the field's understanding and conceptualization of therapeutic alliance. The goal of this study was to examine observer-rated and therapist-reported therapeutic alliance during early, mid, and late phases of treatment in addition to social and emotional predictors of alliance across these phases. First, while symptom severity has been linked to alliance, this study added to the extant literature by investigating whether social and emotional variables outside of diagnostic indicators were relevant. Second, this study examined predictors of changes in alliance over time rather than at static time points. Finally, informants included child, caregiver, and teacher-reports to understand how multiple perspectives of functioning related to alliance. Given the extant literature, it was hypothesized that better baseline social and emotional functioning was positively related to the therapeutic alliance across treatment.

CHAPTER 2

Method

Participants

Families were recruited by distributing fliers in the community and by sending letters to school principals. Participants consisted of 92 children (42% female) with a primary diagnosis of generalized anxiety disorder (GAD), social anxiety disorder (SAD), or social phobia (SoP) and their caregivers. Children ranged from ages 7-11 years (M age = 8.93 years, SD = 1.64). The sample was primarily Caucasian (n = 80; 87%). The remainder of the sample consisted of 6.5% African American, 3.3% Hispanic, and 3.3% as “other.” The majority of caregivers were currently married (n = 66; 71.7%), earned a college degree or some graduate training (n = 65; 70.6%), and earned a total household income of \$50,000 or more (n = 62; 67.4%).

Procedures

This study was part of a randomized clinical trial comparing two cognitive-behavioral treatments for anxious youth. The study included pre-, post-, and one-year follow-up assessment of diagnoses and social/emotional functioning in addition to ten weeks of cognitive behavioral therapy.

Concerning the assessments, caregivers interested in the study contacted the research lab to complete an initial phone screening, and if criteria were met (i.e., no current suicidal ideation, active psychotic symptoms, no use of psychotropic medications other than that for the treatment of ADHD, or not current enrollment in any type of therapy), to set up an approximately two-hour assessment. During the assessment, caregivers provided informed consent. Assent forms were

read aloud to children, who either gave verbal assent or wrote their names on the form to signify their understanding of the study and agreement to participate. Caregivers and children were administered diagnostic interviews separately. Then, they filled out measures assessing child functioning with research assistant help as necessary. Caregivers were given a packet to give to the teacher containing consents, permissions, instructions, and measures. The teacher-report measures were mailed back to the lab directly from teachers.

Children participated in one hour of therapy each week for ten weeks. After each session, therapists completed measures of improvement, impairment, and global assessment of functioning. In addition, they completed a session summary sheet comprised of various items including contact with child/caregiver, compliance, understanding, and alliance. Following treatment, a post-treatment assessment was scheduled within two weeks of the therapy completion date.

Treatment. Eligible children were randomized into one of two therapy conditions—the Coping Cat (Kendall & Hedtke, 2006) cognitive behavioral therapy (CBT) for anxious youth and emotion-focused cognitive behavioral therapy (ECBT; Suveg, Kendall, Comer, & Robin, 2006). Skills and techniques involved in the Coping Cat include psychoeducation about emotions, emotional awareness, behavioral and cognitive strategies in coping with anxiety, rewards, and exposures. ECBT includes the same aforementioned skills and techniques with the addition of education and practice with a variety of emotions, not just anxiety. Focus on numerous emotions is integrated in all treatment sessions.

Measures

Social Functioning. Children completed the Asher Loneliness Scale (ALS; Asher & Wheeler, 1985) which assesses the child's subjective experience of loneliness, social inadequacy,

and social status (e.g., “I have no one to talk to,” “I feel alone”). The measure includes 16 items that are responded to using a Likert scale, ranging from 1 (“not true at all for me”) to 5 (“very true for me”). The total score, which was used in this study, demonstrated adequate reliability ($\alpha = .90$).

Children also completed the Social Experience Questionnaire (SEQ-SR; Crick & Grotpeter, 1996), which assesses a child’s self-reported perceptions of peer behaviors. The SEQ-SR includes both positive and negative perceptions and is comprised of 15 items that are responded to using a Likert scale, ranging from 1 (“never”) to 5 (“always”). For purposes of this study, the Overt Victimization ($\alpha = .81$), Relational Victimization scales ($\alpha = .81$), and Receipt of Prosocial Behavior ($\alpha = .76$) were used. Overt victimization involves harming another individual using physical aggression (e.g., hitting, kicking, or threatening to beat up another peer) whereas relational victimization involves harming another peer by damaging or preventing relationships (e.g., leaving a child out of an activity on purpose, peers telling lies about a child, peers keeping others from liking a child). Receipt of prosocial behavior measures positive treatment received from peers (e.g., getting help from peers when needed, knowing that peers care about the child).

Caregivers completed the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001), a 113-item assessment of child emotional and behavioral problems. The CBCL includes numerous subscales that span the range of clinical syndromes (e.g., anxiety, depression, externalizing) and other areas of functioning (e.g., activities, rule-breaking behavior, somatic complaints). Items are answered on a Likert scale, ranging from 0 (“not true”) to 2 (“very true”). This study used the Social Problems ($\alpha = .72$) score that measures difficulties with peers and in social interactions (e.g., “doesn’t get along with other kids,” “complains of loneliness”) and the Social Competence score that measures a child’s participation in organizations and contact with

friends. Teachers completed the Teacher's Report Form (TRF; Achenbach & Rescorla, 2001), a parallel version of the CBCL. The Social Problems score ($\alpha = .72$) was used. The TRF subscales have established strong internal consistency (Achenbach & Rescorla, 2001).

Emotion functioning. Children completed the Children's Emotion Management Scales (CEMS) for Sadness (CSMS; 12 items) and Anger (CAMS; 11 items; Zeman, Shipman, & Penza-Clyve, 2001) and Worry (CWMS; 13 items; Zeman, Cassano, Suveg, & Shipman, 2010). The CEMS is a self-report measure of emotion regulation. Statements are presented in a Likert scale, ranging from 1 (hardly ever) to 3 (often) of how characteristic the statement is of the child. The CEMS has three subscales that are averaged across all three emotions: Coping (e.g., "I keep myself from losing control of my feelings," $\alpha = .77$), Inhibition (e.g., "I get sad inside but don't show it," $\alpha = .78$), and Dysregulation ("I do things like slam doors when I'm mad," $\alpha = .68$). For this study, the Coping and Dysregulation subscales were used as measures of emotion regulation and emotion dysregulation, respectively.

Children also completed the Emotional Expression Scale for Children (EESC; Penza-Clyve & Zeman, 2002) which is a 16-item self-report measure of the child's experience with emotional expression. The EESC includes two subscales, the Expressive Reluctance subscale (8 items; $\alpha = .69$), which measures a child's unwillingness to express emotion (e.g., "I do not like to talk about how I feel"), and the Poor Awareness subscale (8 items; $\alpha = .65$), which assesses a child's lack of emotional awareness and understanding (e.g., "I often don't know how I feel"). For the purposes of this study, the Expressive Reluctance scale was used as a measure of emotional functioning.

Emotion regulation was measured using the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997, 1998), a 24-item measure that is completed by a caregiver and assesses a

child's emotionality and regulation. There are two subscales, the Emotion Regulation subscale (8 items) and the Lability/Negativity subscale (15 items). The first subscale assesses adaptation, understanding, and appropriate displays of emotion (e.g., "Can recover quickly when upset"). The latter subscale measures changes in mood, intensity, and reactivity (e.g., "exhibits wide mood swings"). Items are responded to on a Likert scale ranging from 1 to 4, describing how characteristic a statement is of the child. Both the Emotion Regulation and Lability/Negativity subscale show strong internal consistency ($\alpha = .96$ and $.83$, respectively, Shields & Cicchetti, 1998). For the current study, caregivers and teachers completed the ERC, and alpha coefficients for the Emotion Regulation subscale were $.67$ and $.72$, respectively, and for the Lability/Negativity subscale $.84$ and $.87$, respectively.

Therapeutic Alliance. For the purposes of this study, analyses included ratings from sessions two, five, and nine of the ten-week treatment protocol to represent alliance during early, middle, and late phases of treatment. Consistent with prior work, the first and last sessions are typically not chosen to represent early and late treatment phases (Chiu, McLeod, Har, & Wood, 2009; Chu & Kendall, 2009; Creed & Kendall, 2005; Liber et al., 2010; McLeod et al., 2014), and so sessions two, five, and nine were coded. Session two was chosen as an early session because it occurred during the skill-building phase of treatment. Session nine was chosen as the late alliance time point, which occurred during the exposure phase. Session five was chosen as the mid- point (10 sessions).

For observer ratings, the Therapeutic Alliance Observational Coding System-Alliance scale (TPOCS-A; McLeod, 2005) was used. The coding system involved macro coding an entire session on a Likert scale with nine items from 0 ("not at all") to 5 ("great deal"). The TPOCS-A includes two components of alliance—the bond between a therapist and client (6 items), defined

as the degree of positive affect and mutual trust in the relationship, and the therapeutic tasks component (3 items), defined as the degree of client engagement in interventions. For the purposes of this study, the total score was used.

If sessions were not available due to missing videotapes, observers watched a session similar in content and timing in therapy (i.e., early, mid, and late). See table below for commonalities between the original and alternative sessions. If the alternative session was not available, then no session for that time point (i.e., early, mid, or late) was coded. At times, the client and therapist left the therapy room to complete exposures. A session was coded as long as 50% of the session was visible on the videotape or if at least the pre-planning and post-processing of the exposure was caught on tape. If less than 50% of the session is visible or if the planning or processing of the exposure was not captured, then the alternative session was coded.

Original Session	Alternative Session	Commonality
2	4*	Skills-training
5	6	Initial exposure sessions
9	8	Exposures

*Session three was a caregiver session and thus was not chosen as the alternative for session two.

In addition to observational coding of alliance, analyses included therapist-rated alliance. After each of the ten sessions, therapists rated alliance using the Session Summary Sheet with one item (“rate the quality of the therapeutic relationship”) on a Likert scale ranging from 1 (“very poor”) to 7 (“very good”).

Coder Training and Reliability. Study of the TPOCS-A manual and practice was completed with the reliability coders (graduate students familiar with CBT for anxious youth) prior to actual coding. Specifically, after learning the protocol outlined in the TPOCS-A manual, the primary study author and reliability coders independently coded sessions two, five, and nine for practice and then collaboratively discussed coding results to determine initial reliability.

Practice continued until the coders achieved adequate agreement (i.e., within one point of each other on all individual items and Intraclass Correlation Coefficient $>.60$; Cicchetti, 1994) for all three time points. Then, the primary study author coded all relevant study sessions. Reliability was completed on 15% of the sessions, which were randomly selected, while the primary study author independently coded. The primary study author checked reliability every five weeks to prevent coder drift. If reliability was not adequate, then the coders met to discuss discrepancies. Coders were blind to baseline social and emotional characteristics of clients.

In the current study, the TPOCS-A total score was used as a measure of alliance. Interrater reliability (ICC) was assessed to be .86, indicative of “excellent” reliability (Cicchetti, 1994). Six of the nine individual items also fell within the “excellent” range (ICC = .81 - .98) and one item fell into the “good” range (ICC = .60, “To what extent did the client appear uncomfortable when interacting with the therapist?”). One item fell into the “poor” reliability range (ICC = .32, “To what extent did the therapist and client appear anxious or uncomfortable interacting with one another?”), which was attributed to the low variability in the rating of this item (range = 0-2 on a 0-5 scale) given that ratings between reliability and primary coders were almost always equivalent or within one point of each other. Internal consistency reliability at each time point ranged from .76 to .84, indicating acceptable reliability including the lowest reliable item. Therefore, analyses were conducted using all nine items in the calculation of observer-rated alliance total score.

Demographics. Caregivers completed a form that assessed for a variety of sociodemographic factors (e.g., child’s age, child’s ethnicity, caregiver’s age, caregiver’s ethnicity, income).

Diagnostic Severity. The Anxiety Disorder Interview Schedule (ADIS-IV-C/P; Silverman & Albano, 1996) is a semi-structured clinician-administered interview used to assess primarily anxiety, but other disorders (e.g., mood disorders, externalizing disorders) as well. Trained and supervised graduate students in clinical psychology interviewed caregivers and children separately for the purposes of assessing DSM-IV-TR diagnoses. A composite diagnostic profile was created using the “or” rule – if either the caregiver or child indicated interfering symptoms and the diagnostician assigned a Clinician Severity Rating (CSR) of 4 or greater, a diagnosis was assigned. For the purposes of this study, the primary diagnosis CSR was used as a measure of severity. The ADIS-IV-C/P demonstrates good inter-rater reliability, ranging from $k = .71$ to $.92$ (Silverman, Saavedra, & Pina, 2001). Reliability was conducted on approximately 20% of the interviews ($k = .76$; “very good” Cohen, 1960).

The CBCL Internalizing subscale (Achenbach & Rescorla, 2001) was also used as a measure of diagnostic severity. This subscale measures the degree of internalizing symptoms a child reportedly experiences including anxiety, depression, and somatic complaints. It is comprised of 32 items (e.g., “worries,” “is a perfectionist,” “is withdrawn,” “experiences nightmares,” $\alpha = .83$).

Data Preparation

Diagnostic outcomes were not evident between the CBT and EBT conditions (Suveg et al., Under Review); thus, the conditions were combined for this study to increase sample size and power. Next, raw data were analyzed to understand and correct for, if needed, aberrant portions of missing data, non-normality, and multicollinearity.

Of the 276 sessions that were available for coding, 32 (11.6%) were not available due to participant attrition (early-treatment: 4 sessions, mid-treatment: 12 sessions; late-treatment

sessions: 16 sessions). Eight sessions (2.9%) were attributed to missing data (early-treatment: 1 session, mid-treatment: 3 sessions; late-treatment sessions: 4 sessions), particularly from technological errors (e.g., sessions not being recorded, not having sound on a recorded session, or scratched DVDs). The data were also analyzed for extreme values (three times the interquartile range), and the data yielded one extreme low value for late-treatment sessions (total score = 12/45), which was excluded from analyses. In sum, the aforementioned reasons allowed for 87, 77, and 71 data points to be analyzed for early-, mid-, and late-treatment observer-rated alliance, respectively. For therapist-rated alliance, other than the attrition mentioned above, one session for each early and mid-treatment time points were qualified as missing data (0.7%), a result of incomplete session summary sheets. No extreme values were found for therapist-rated alliance. In sum, these reasons allowed for 87, 79, and 76 data points to be analyzed for early-, mid-, and late-treatment therapist-rated alliance, respectively. See Table 1 for descriptive statistics and correlations among alliance variables.

Both observer- and therapist-rated alliance at all three time points were significantly negatively skewed. In order to correct for non-normality, traditional transformations were attempted (i.e., logarithm, inverse, and square root), yet did not yield closer-to-normal distributions based on visual inspection of histograms, skew, kurtosis, and the Kolmogorov-Smirnov test of normality. Additionally, correlations between main study variables did not change significantly before and after these transformations. Therefore, data were left untransformed for main study analyses.

Pairwise correlations among all main study variables did not yield correlations stronger than $r = .80$ (see Table 2 for correlations with observer-rated alliance and Table 3 for correlations with therapist-rated alliance) and tolerance values were greater than .40, together suggesting that

multicollinearity was not problematic for this sample. However, predictors (i.e., social and emotional) variables were still grand mean-centered for longitudinal data analyses in order to have a meaningful zero-value.

Statistical Analyses

First, independent samples t-tests were conducted to find any mean differences in alliance by treatment condition, demographics (i.e., age, sex, and race), and measures of severity (Primary Diagnosis CSR and CBCL Internalizing subscale). If alliance significantly differed by demographic variables, these variables were included in the primary analyses to determine if social and emotional variables predicted alliance above and beyond known demographic predictors. Similarly, if alliance differed by baseline diagnostic severity, these variables were included in the primary analyses to determine if social and emotional variables predicted alliance above and beyond pre-treatment severity.

For main study analyses, observer-rated alliance was predicted at three time points (sessions 2, 5, 9) by the social/emotional variables using longitudinal data analyses within the HLM 7.0 program (Raudenbush, Bryk, & Congdon, 2010). Social and emotional variables were used as predictors of initial status and slope in alliance over time. The same analyses were completed for therapist-rated alliance. Time was entered as a level one variable and social and emotional variables were entered as level two predictors because time is nested within individuals (i.e., repeated within individuals). Time referred to particular sessions in treatment (i.e., 0 = early treatment session, 1 = mid-treatment session, and 2 = late-treatment session) and was uncentered so that the intercept term could be interpreted as the initial value (early-treatment session, referring to session two or four if the alternate session was used). All predictor variables without a meaningful zero value were grand mean centered. Equations were divided into child-

report measures of social functioning (i.e., ALS total score and SEQ subscales), other-report measures of social functioning (i.e., Social Problems and Competence subscales for caregiver and teacher), child-report measures of emotion functioning (i.e., CEMS subscales and EESC subscale), and then other-report measures of emotion functioning (i.e., ERC subscales for caregiver and teacher). Effect sizes were reported as Cohen's r such that small effects were greater than .10, medium effects as greater than .30 and large effect sizes as greater than .50 (Cohen, 1988). In general, the following equations were used to test whether alliance differed by social and emotional predictors:

$$\text{Level 1: } Y_{ti}(\text{Alliance}) = \pi_{0i} + \pi_{1i}(\text{Time}) + e_{ti}$$

$$\text{Level 2: } \pi_{0i}(\text{Intercept}) = \beta_{00} + \beta_{01}(X_1) + \beta_{02}(X_2) + \dots + \beta_{0n}(X_n) + \mu_{0i}$$

$$\pi_{1i}(\text{Time}) = \beta_{10} + \beta_{11}(X_1) + \beta_{12}(X_2) + \dots + \beta_{1n}(X_n) + \mu_{1i}$$

CHAPTER 3

Results

Preliminary Analyses

Prior to conducting longitudinal analyses, mean differences in treatment condition, demographic variables (i.e., age, sex, and race), and severity ratings (i.e., primary CSR and CBCL Internalizing subscale) were conducted across the three time points via independent samples t-tests (see Table 4). For observer-rated alliance, treatment differences existed during the early phase of treatment $t(85) = 2.26, p = .03$, such that observers rated stronger alliance in the ECBT compared to the CBT condition. In addition, females were rated as having stronger alliance compared to males during the early and mid-treatment time points, $t(85) = 3.24, p = .002$ and $t(75) = 2.54, p = .01$, respectively. There were no differences by race, and age and measures of severity did not correlate with alliance at any of the time points.

For therapist-rated alliance, females were rated as having stronger alliance at all three time points compared to males [$t(85) = 2.89, p = .005$, $t(77) = 2.89, p = .005$, $t(74) = 2.75, p = .008$, respectively for early-, mid-, and late-treatment]. No differences existed by treatment condition or race, and age and measures of severity did not correlate with alliance at any of the time points.

Primary Results

Observer-Rated Alliance. Longitudinal data analyses were completed for the observer-rated alliance. Sex was included as a covariate given that females were rated as having stronger alliance at two time points compared to males. Although alliance differed by treatment condition

during the early phase of treatment, treatment condition was not included in the analyses because analyses were conducted with and without this predictor and no differences in the results emerged. Therefore, in order to remain parsimonious, treatment condition was not included in the reported results.

First, a model with no predictors was generated to understand the trajectory of observer-rated alliance. The intercept for observer-rated alliance was estimated to have significant variance, $\chi^2(77) = 178.82, p < .001$, indicating that the initial level of observer-rated alliance significantly differed among anxious children. The significant negative mean slope, $t(85) = -5.48, p < .001$, suggested that the overall trend for alliance was decreasing over time. Additionally, the significant variance in slope, $\chi^2(77) = 142.47, p < .001$, suggested that there was individual variation in changes in alliance over the course of treatment.

Next, social functioning variables were added in as level-two predictors of initial status and change in alliance over time (see Table 5). Of note, for all models involving observer-rated alliance, females were rated as having significantly stronger initial alliance ($p = .001 - .05$) compared to males. In the first model, child-reported social variables (i.e., ALS—Loneliness, SEQ-SR Overt Victimization, Relational Victimization, and Receipt of Prosocial Behavior) were entered as predictors. In relation to predictors of initial levels of alliance, none of the child-reported social variables were significant. However, receipt of prosocial behavior significantly predicted slope ($p = .02$) such that children with more receipts of prosocial behavior had a weaker decline in alliance over time compared to children who received fewer instances of prosocial behavior. Next, caregiver- (i.e., CBCL Social Problems and Social Competence) and teacher- (i.e., TRF Social Problems) reports of social functioning were used to predict initial status and slope of alliance over time, and neither report was related to initial status or slope.

Next, emotion functioning variables were tested as level-two predictors of initial status and change in alliance over time (see Table 6). In the first model, predictors included child-reported emotion functioning (i.e., CEMS Coping and Dysregulation, EESC Expressive Reluctance), but these variables were related to neither initial status nor slope of alliance. In the second model, predictors included caregiver- and teacher-reports of emotion functioning (i.e., ERC Emotion Regulation and Lability/Negativity for both reporters). In relation to initial level of alliance, both caregiver- ($p = .05$) and teacher-reports ($p = .02$) of Emotion Regulation were significant such that children rated as having better emotion regulation had stronger initial alliance in treatment compared to children rated as having worse emotion regulation. For slope in alliance over time, teacher-reported Emotion Regulation was significant ($p = .05$) such that children rated as having better emotion regulation had a greater decline in alliance over time compared to children with worse emotion regulation¹.

Therapist-Rated Alliance. Longitudinal data analyses were then completed for the therapist-rated alliance. Sex was included as a covariate given that females were rated as having stronger alliance at all three time points compared to males. A model with no predictors for therapist-rated alliance was generated to understand the trajectory of therapist-rated alliance. The intercept for alliance was estimated to have a significant variance component, $\chi^2(78) = 279.23, p < .001$, indicating that the initial level of therapist-rated alliance significantly differed among anxious children. The nonsignificant mean slope, $t(85) = 0.06, p = .33$, suggested that the overall trend for alliance was unchanging over time. However, the significant variance in slope, $\chi^2(78)$

¹ Social and Emotional Variables were also examined individually in relation to observer-reported alliance. Generally, significant predictors remained the same when grouping variables together by reporter with the exception of Relational Victimization ($p = .01$) being associated with weaker initial alliance, and Relational Victimization ($p = .05$), Emotion Dysregulation ($p = .05$), and Caregiver-Reported Emotion Regulation ($p = .04$) being related to a greater decline in alliance over time, and Emotion Coping ($p = .05$) being related to a weaker decline in alliance over time.

= 123.30, $p = .001$, suggested that there was individual variation in changes in alliance over the course of treatment.

Next, social functioning variables were added in as level-two predictors of initial status and change in alliance over time (see Table 7). Of note, for all models involving therapist-rated alliance, females were rated as having significantly stronger initial alliance ($p = .004 - .02$) relative to males. In the first model, child-reported social variables (i.e., ALS—Loneliness, SEQ-SR Overt Victimization, Relational Victimization, and Receipt of Prosocial Behavior) were entered as predictors, but none of these variables were related to initial levels of alliance or slope. Next, caregiver- (i.e., CBCL Social Problems and Social Competence) and teacher- (i.e., TRF Social Problems) reports of social functioning were used to predict initial status and slope of alliance over time, and neither report was related to initial status or slope.

Next, emotion functioning variables were tested as level-two predictors of initial status and change in alliance over time (see Table 8). In the first model, predictors included child-reported emotion functioning (i.e., CEMS Coping and Dysregulation, EESC Expressive Reluctance), but these variables were related to neither initial status nor slope of alliance. In the second model, predictors included caregiver- and teacher-reports of emotion functioning (i.e., ERC Emotion Regulation and Lability/Negativity for both reporters). For initial levels of alliance, teacher-reported Emotion Regulation was significant ($p = .006$) such that children rated as having better emotion regulation had stronger initial alliance in treatment compared to children rated as having worse emotion regulation. For slope, teacher-reported Emotion Regulation was negatively associated with change in alliance over time ($p = .04$)².

² Social and Emotional Variables were also examined individually in relation to therapist-rated alliance. Generally, significant predictors remained the same when grouping variables together by reporter with the exception of Receipt of Prosocial Behavior ($p = .04$) being related to higher initial alliance and caregiver-reported Emotion Regulation ($p = .04$) being related to greater declines in alliance over time.

CHAPTER 4

Discussion

This study addresses the need for additional research on predictors of therapeutic alliance, given that alliance has been linked to treatment outcome research for anxiety (e.g., Chiu et al., 2009; Liber et al., 2010). While much of the extant literature focuses on predictors of alliance including demographic identifiers (age: DeVet et al., 2003; sex: Christensen & Skogstad, 2009; Langer et al., 2011; and race: Gordon-Hollingsworth et al., 2014) and severity of presenting problem (Chu et al., 2014; Levin et al., 2012), little to no research is available on other pre-treatment characteristics such as social and emotional functioning, especially for anxious youth. In fact, only one study examined social functioning in relation to alliance included anxious youth (Levin et al., 2012), and only one study examined emotion functioning in relation to alliance included anxious youth (Chu et al., 2014). The goal of this study was to examine social and emotional predictors of observer-rated and therapist-reported therapeutic alliance over time. Overall, few variables predicted initial status or change in alliance over time for either rater of alliance. However, when predictors were significant, results partially supported the hypothesis that better social and emotion functioning is associated with greater alliance ratings. Specifically, the hypothesis was confirmed for initial alliance such that caregiver and teacher-reported emotion regulation were related to higher initial alliance. However, support for the hypothesis was mixed for slope of alliance such that receiving prosocial behaviors was related to a weaker decline across treatment whereas teacher-reported emotion regulation was related to a stronger decline in alliance over time.

Analyses first examined the overall trend of alliance; observer-rated alliance tended to decrease over the course of treatment whereas therapist-rated alliance did not change over time. The extant literature is mixed on the trajectory of alliance throughout treatment. Previous studies have found evidence for a quadratic course in client-rated alliance (Ngai, Tully, & Anderson, 2014), a dual linear slope model for parent-, child-, and therapist-rated alliance (Chu et al., 2014; Kendall et al., 2009), a gradual linear decrease for observer-rated alliance (Hudson et al., 2014) and no change according to child-, therapist-, and observer-rated alliance (Christensen & Skogstad, 2009). Despite evidence for varying patterns, observer-rated alliance typically decreases over time in the extant literature (e.g., Hudson et al., 2014; Liber et al., 2010; McLeod et al., 2016). In contrast, the trajectory of therapist-reported alliance tends to vary more between studies relative to observer-rated alliance. It is unclear why there were differences in trajectories between observer- and therapist- rated alliance in the current study. One possibility is that the difference was due to using two different measures between reporters (i.e., TPOCS-A versus Session Summary Sheet), meaning that raters could have considered different factors when rating alliance was in session. The TPOCS-A included nine items that tap into the emotional bond between client and therapist and agreement on tasks and goals whereas therapists were instructed to simply “rate the quality of the therapeutic relationship,” leaving the definition of therapeutic alliance open to interpretation. Other studies have also cited the use of different alliance measures between raters as reason for trajectory differences (McLeod et al., 2016). This study reinforces the importance of multiple informants, given the difference in trajectories based on observer and therapist ratings.

Regarding social functioning, no social variables were related to initial levels of alliance. However, receiving prosocial behavior from peers (e.g. getting help from peers when needed,

knowing that peers care about the child) was related to a weaker decline in observer-rated alliance over time. This finding provides partial support for the hypothesis that better social functioning is associated with stronger alliance. It may be that children who have positive social interactions outside of the therapeutic setting possess positive schemas about relationships in general. These positive schemas then facilitate the child's ability to trust the therapist, be compliant with session tasks, and use skills outside of session, indicators of a good working alliance. Additionally, perhaps children with more positive peer interactions, despite factors that may disrupt alliance (e.g., being challenged by the therapist, asked for continued effort, being redirected towards necessary tasks), are better able to understand the utility of what the therapist is asking him/her to do, which then results in a lesser decline in alliance. Child-reported loneliness and victimization were not related to alliance, suggesting that only positive social experiences are related to alliance compared to negative experiences.

Despite receipt of prosocial behavior being related to a weaker decline in observer-rated alliance, no other social variables were related to observed alliance, and no social variables at all were related to therapist-rated alliance for initial level or slope of alliance, contrary to hypotheses. One possibility is that adaptive peer experiences (e.g., how others react to an anxious child) may be relevant, but deficits in social skills (e.g., not sharing, being aggressive, not relating to other peers, not reaching out to friends), as were assessed in this study may not influence alliance. It could be that children with positive peer experiences have more opportunities to trust others and to experience positive affect in social settings, resulting in them being more open to the therapeutic relationship. The idea of social experiences being more meaningful than skills for alliance is partially supported in the extant literature. For instance, in the one study that included anxious (and depressed) youth, relationship quality with a caregiver

and perceived social support was related to stronger therapeutic alliance. However, adolescents' perceptions of their own social competence in peer and familial relationships were not related to alliance (Levin et al., 2012). Social experiences relating to alliance may be unique to anxious youth. As for adults, alliance was related to interpersonal traits (degrees of friendliness, hostility, submissiveness, or dominance), which may be better conceptualized as social skills more so than experiences (Connolly Gibbons et al., 2003; Muran et al., 1994; Renner et al., 2012).

Another possible explanation for the lack of significant social predictors of alliance may be that social functioning between children is less relevant for the therapeutic relationship, particularly if a child has supportive adults in his/her life. While a child may have unsatisfactory relationships with peers, he/she may use schemas based on relationships with adults (e.g., parents, teachers, coaches) to help conceptualize the relationship with the therapist. In a similar vein, if the therapist is supportive and can connect with the child, perhaps this support is more impactful to alliance than the child's peer interactions or skills. One previous study examined the relationship quality with a primary attachment figure to alliance and found a significant, positive association (Levin et al., 2012). Therefore, there is some evidence for the idea that supportive adults may be more important to the therapeutic relationship than social functioning with peers.

In regards to emotion functioning, caregiver (for observer-rated alliance) and teacher (for observer and therapist-rated alliance) reported emotion regulation were related to higher initial alliance ratings, supporting the hypothesis that stronger emotion functioning is related to better alliance. One potential explanation for these findings is that therapists may be more comfortable with and respond more positively to children who are more cheerful, more empathetic, transition well, or recover quickly when upset (i.e., have better emotion regulation). As such, when both

the therapist and child experience consistent positive interactions in session, alliance is likely to be stronger. Likewise, Chu and colleagues (2014) found that some aspects of emotion regulation were related to initial status. They found that involuntary responding, which can be conceptualized as poor emotion regulation (e.g., rumination, not taking action, intrusive thinking) was related to lower initial status. However, engagement coping, which can be conceptualized as adaptive emotion regulation (i.e., active efforts to change one's reaction to the situation) was not related to initial status. It is apparent that emotion regulation may be related to initial alliance, but more research is needed to determine what aspects of emotion regulation are relevant.

Relating emotion functioning to the slope of alliance, higher teacher-reported emotion regulation was related to greater declines in alliance over time relative to children with lower teacher-reported emotion regulation for both observer- and therapist-rated alliance. These findings are in contrast to the hypothesis that better emotion regulation is linked to better alliance over time. However, given that teacher-reported emotion regulation was related to higher initial alliance, the greater decline in alliance may be best explained by a regression to the mean. Although children with better emotion regulation may experience a greater decline compared to children with worse emotion regulation, their scores during late treatment were comparable to children with average and worse ratings of emotion regulation based upon inspection of the means. Specifically, for children with better emotion regulation, their alliance score declined to 0.26 points below the mean from early to late treatment for observer-rated alliance (out of a possible total score of 45) and to 0.04 points above the mean for therapist-rated alliance (out of a possible total score of 7). Furthermore, while their scores were declining at a greater rate, the rate of decline is similar to rates in the extant literature (e.g., Chiu et al., 2009; Hudson et al.,

2014). The comparable rates of decline between this study and the extant literature (i.e., less than .50 SD between time points) suggest that the decline is normative for anxious youth.

Despite the findings regarding caregiver and teacher-reported emotion regulation, no measures of child-reported emotion regulation or dysregulation were associated with either observer or therapist rated alliance. Additionally, lability/negativity (i.e., other-reported emotion dysregulation) was also not related to initial status or slope of alliance. The lack of associations is in contrast to the hypothesis that better emotion functioning would be related to stronger alliance. Similar to social difficulties, children with anxiety disorders are known to experience difficulties in emotion regulation (e.g., Hannesdottir & Ollendick, 2007; Suveg & Zeman, 2004). However, if the therapist is supportive and empathizes with the child, perhaps this support is more important to alliance than emotion regulation difficulties. Secondly, although no informant is without biases, child reports of emotion dysregulation are thought to be less reliable compared to informant reports (Morris, Robinson, & Eisenberg, 2006). As such, child reports of emotion dysregulation may not be the most accurate, suggesting that the lack of associations to alliance may be inaccurate from reporter bias.

When considering the significant findings collectively across both social and emotional variables, only adaptive measures of functioning (i.e., receipt of prosocial behavior and emotion regulation) were related to initial status or change in alliance. It may be that adaptive functioning contributes to alliance whereas maladaptive functioning in these domains may not be relevant. The findings are bolstered by the fact that adaptive functioning was related to alliance across all reporters. Anxious children are known to have difficulties across domains and settings—emotional, social, and academic (e.g., Chanky & Kendall, 1997; Greco & Morris, 2005; Southam-Gerow & Kendall, 2000). Because having skills deficits is normative for

anxious children presenting to treatment, therapists may be more apt to notice, praise, and thus bond better with anxious children with exceptionally effective social and emotional functioning. For example, if a child is engaging and responds positively to the therapist's interactions, then the therapist is more likely to respond in a similar fashion, creating a positive working relationship.

Together, this study demonstrated that social and emotional variables may be meaningful in predicting initial status and change in alliance over time, patterns that were few, but relatively consistent across informants. One question this study generated regards whose report matters most for social and emotional functioning and for alliance. It appears as though the different reporters on functioning brought unique aspects to this study—child on social functioning and other-reporters on emotion functioning, indicating a utility of multiple informants. Likewise, this study included observer and therapist rated alliance, and both had unique relations to the predictor variables, suggesting that both reports of alliance are important to consider. Despite significant findings across informants, several limitations existed. One major limitation was the use of a one-item measure of therapist-rated alliance. Although several studies have used individual items from the session summary sheet (Gordon-Hollingsworth et al., 2014; Podell & Kendall, 2010) to measure various constructs (e.g., alliance, degree of client involvement, mastery of session content), it is unclear how psychometrically sound or valid this one item was. A second limitation was not having child's report of alliance. Also, there was a restricted range of alliance based on both observer- and therapist-ratings, which may have limited the ability to detect significant predictors. Nonetheless, the strong ratings of alliance in this study were consistent with those reported in the extant literature and are considered an accurate reflection of this construct. Despite these limitations, this study has several strengths, including a sufficiently

large sample size and the use of multiple reports across constructs. Additionally, this study included observer-rated alliance, and reporters of baseline characteristics did not overlap with alliance reporters, reducing the likelihood of reporter bias.

This study was the first to examine novel predictors (i.e., social and emotional functioning) of alliance in anxious youth, a construct thought to be imperative for treatment gains, and thus may have clinical applications. Specifically, because maladaptive measures of social and emotional functioning did not relate to initial status or change in alliance, it is comforting to know that for the children with significant impairments in these domains, alliance does not suffer. Additionally, because only adaptive measures of functioning in these domains were related to alliance, it appears as though baseline social and emotional characteristics can only help, rather than harm, alliance for anxious youth. However, when considering treatment research a major question that arises is how various constructs relate to outcome. While alliance generally relates to outcome in the extant literature, it is unclear if there is a potential mediational relationship between baseline social and emotional functioning to outcome via alliance. In contrast, it may be that alliance is more impactful to outcome for particular groups of people, such as children with worse social or emotional functioning. Therefore, future researchers should explore different relations between social and emotional functioning, alliance, and outcome, such as mediational and moderational relations. Understanding these differential relations between alliance and baseline characteristics may help to further gains in treatment and thus, strengthening outcome results of CBT for anxious youth.

References

- Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for ASEBA School-Aged Forms and Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.
- Alfano, C. A., Pina, A. A., Villalta, I. K., Beidel, D. C., Ammerman, R. T., & Crosby, L. E. (2009). Mediators and moderators of outcome in the behavioral treatment of childhood social phobia. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*(9), 945-953. doi: 10.1097/CHI.0b013e3181af8216
- Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: a comparison of rejected and neglected peer status. *Journal of Consulting and Clinical Psychology, 53*(4), 500-505. doi: 10.1037/0022-006X.53.4.500
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. New York: Basic Books.
- Chansky, T. E., & Kendall, P. C. (1997). Social expectancies and self-perceptions in anxiety-disordered children. *Journal of Anxiety Disorders, 11*(4), 347-363. doi: 10.1016/S0887-6185(97)00015-7
- Chiu, A. W., McLeod, B. D., Har, K., & Wood, J. J. (2009). Child–therapist alliance and clinical outcomes in cognitive behavioral therapy for child anxiety disorders. *Journal of Child Psychology and Psychiatry, 50*(6), 751-758. doi: 10.1111/j.1469-7610.2008.01996.x
- Christensen, M., & Skogstad, R. S. (2009). What predicts quality of the therapeutic alliance in a cognitive behavioural treatment for children with anxiety disorders? Therapeutic alliance

- measured from the patient, therapist and observer perspective (Unpublished doctoral dissertation).
- Chu, B. C., Skriner, L. C., & Zandberg, L. J. (2014). Trajectory and predictors of alliance in cognitive behavioral therapy for youth anxiety. *Journal of Clinical Child and Adolescent Psychology, 43*(5), 721-734. doi: 10.1080/15374416.2013.785358
- Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*, 284–290. doi: 10.1037/1040-3590.6.4.284
- Cloitre, M., Chase Stovall-McClough, K., Miranda, R., & Chemtob, C. M. (2004). Therapeutic alliance, negative mood regulation, and treatment outcome in child abuse-related posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 72*(3), 411-416. doi: 10.1037/0022-006X.72.3.411
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*(1), 37-46. doi: 10.1177/001316446002000104
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. San Diego: Academic Press.
- Cohen, J. S., & Kendall, P. C. (2015). Peer Victimization among Children and Adolescents with Anxiety Disorders. *Child Psychiatry & Human Development, 46*(3), 393-405. doi: 10.1007/s10578-014-0479-x
- Connolly Gibbons, M. B., Crits-Christoph, P., de la Cruz, C., Barber, J. P., Siqueland, L., & Gladis, M. (2003). Pretreatment expectations, interpersonal functioning, and symptoms in the prediction of the therapeutic alliance across supportive-expressive psychotherapy and

- cognitive therapy. *Psychotherapy Research: Journal of The Society For Psychotherapy Research*, 13(1), 59-76. doi:10.1093/ptr/kpg007
- Creed, A. T., & Funder, D. C. (1998). Social anxiety: From the inside and outside. *Personality and Individual Differences*, 25(1), 19-33. doi: 10.1016/S0191-8869(98)00037-3
- Creed, T. A., & Kendall, P. C. (2005). Therapist alliance-building behavior within a cognitive-behavioral treatment for anxiety in youth. *Journal of Consulting and Clinical Psychology*, 73(3), 498-505. doi: 10.1037/0022-006X.73.3.498
- Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology*, 8(02), 367-380. doi: 10.1017/S0954579400007148
- Davila, J., & Beck, J. G. (2002). Is social anxiety associated with impairment in close relationships? A preliminary investigation. *Behavior Therapy*, 33(3), 427-446. doi: 10.1016/S0005-7894(02)80037-5
- DeVet, K. A., Kim, Y. J., Charlot-Swilley, D., & Ireys, H. T. (2003). The therapeutic relationship in child therapy: Perspectives of children and mothers. *Journal of Clinical Child and Adolescent Psychology*, 32(2), 277-283. doi: 10.1207/S15374424JCCP3202_13
- DiGiuseppe, R., Linscott, J., & Jilton, R. (1996). Developing the therapeutic alliance in child—adolescent psychotherapy. *Applied and Preventive Psychology*, 5(2), 85-100. doi: 10.1016/S0962-1849(96)80002-3
- Dunkle, J. H., & Friedlander, M. L. (1996). Contribution of therapist experience and personal characteristics to the working alliance. *Journal of Counseling Psychology*, 43(4), 456-460. doi:10.1037/0022-0167.43.4.456

- Francis, G., & Radka, D. F. (1995). Social anxiety in children and adolescents. In M.B. Stein (Ed.), *Social Phobia: Clinical and Research Perspectives* (pp. 119-143). New York: Guilford Press.
- Gordon-Hollingsworth, A. T., Becker, E. M., Ginsburg, G. S., Keeton, C., Compton, S. N., Birmaher, B. B., ... & March, J. S. (2015). Anxiety disorders in Caucasian and African American children: A comparison of clinical characteristics, treatment process variables, and treatment outcomes. *Child Psychiatry & Human Development*, *46*(5), 643-655. doi: 10.1007/s10578-014-0507-x
- Greco, L. A., & Morris, T. L. (2005). Factors influencing the link between social anxiety and peer acceptance: Contributions of social skills and close friendships during middle childhood. *Behavior Therapy*, *36*(2), 197-205. doi: 10.1016/S0005-7894(05)80068-1
- Hannesdottir, D. K., & Ollendick, T. H. (2007). The role of emotion regulation in the treatment of child anxiety disorders. *Clinical Child and Family Psychology Review*, *10*(3), 275-293. doi: 10.1007/s10567-007-0024-6
- Horowitz, L. M., & Vitkus, J. (1986). The interpersonal basis of psychiatric symptoms. *Clinical Psychology Review*, *6*(5), 443-469. doi: 10.1016/0272-7358(86)90031-0
- Kendall, P. C., & Hedtke, K. A. (2006). *Cognitive-behavioral therapy for anxious children: Therapist manual*. Workbook Pub.
- Langer, D. A., McLeod, B. D., & Weisz, J. R. (2011). Do treatment manuals undermine youth-therapist alliance in community clinical practice?. *Journal of Consulting and Clinical Psychology*, *79*(4), 427-432. doi: 10.1037/a0023821

- Levin, L., Henderson, H. A., & Ehrenreich-May, J. (2012). Interpersonal predictors of early therapeutic alliance in a transdiagnostic cognitive-behavioral treatment for adolescents with anxiety and depression. *Psychotherapy, 49*(2), 218-230. doi: 10.1037/a0028265
- Lewandowski, M., D'iuso, D., Blake, E., Fitzpatrick, M., & Drapeau, M. (2011). The relationship between therapeutic engagement, cognitive errors, and coping action patterns: An exploratory study. *Counselling and Psychotherapy Research, 11*(4), 284-290. doi: 10.1080/14733145.2010.531280
- Liber, J. M., McLeod, B. D., Van Widenfelt, B. M., Goedhart, A. W., van der Leeden, A. J., Utens, E. M., & Treffers, P. D. (2010). Examining the relation between the therapeutic alliance, treatment adherence, and outcome of cognitive behavioral therapy for children with anxiety disorders. *Behavior Therapy, 41*(2), 172-186. doi: 10.1016/j.beth.2009.02.003
- Marker, C. D., Comer, J. S., Abramova, V., & Kendall, P. C. (2013). The reciprocal relationship between alliance and symptom improvement across the treatment of childhood anxiety. *Journal of Clinical Child and Adolescent Psychology, 42*(1), 22-33. doi: 10.1080/15374416.2012.723261
- McLeod, B.D. (2005). *The Therapy Process Observational Coding System for Child Psychotherapy Alliance Scale*. Richmond, Virginia. Virginia Commonwealth University.
- McLeod, B. D., Islam, N. Y., Chiu, A. W., Smith, M. M., Chu, B. C., & Wood, J. J. (2014). The relationship between alliance and client involvement in CBT for child anxiety disorders. *Journal of Clinical Child & Adolescent Psychology, 43*(5), 735-741. doi: 10.1080/15374416.2013.850699

- McLeod, B. D., Jensen-Doss, A., Tully, C. B., Southam-Gerow, M. A., Weisz, J. R., & Kendall, P. C. (2016). The role of setting versus treatment type in alliance within youth therapy. *Journal of Consulting and Clinical Psychology* (online first publication). doi: 10.1037/ccp0000081
- McLeod, B. D., & Weisz, J. R. (2005). The therapy process observational coding system-alliance scale: measure characteristics and prediction of outcome in usual clinical practice. *Journal of Consulting and Clinical Psychology, 73*(2), 323-333. doi: 10.1037/0022-006X.73.2.323
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological review, 102*(2), 246-268. doi: 10.1037/0033-295X.102.2.246
- Morris, A. S., Robinson, L. R., & Eisenberg, N. (2006). Applying a multimethod perspective to the study of developmental psychology. In M. Eid & E. Diener (Eds.) *Handbook of Multimethod Measurement in Psychology* (pp. 371–384). Washington, DC: American Psychological Association
- Mulder, S. F., & van Aken, M. A. G. (2014). Socially Anxious Children at Risk for Victimization: The Role of Personality. *Social Development, 23*(4), 719-733. doi: 10.1111/sode.12068
- Muran, J. C., Segal, Z. V., Samstag, L. W., & Crawford, C. E. (1994). Patient pretreatment interpersonal problems and therapeutic alliance in short-term cognitive therapy. *Journal of Consulting and Clinical Psychology, 6* (1), 185-190. doi: 10.1037/0022-006X.62.1.185

Penza-Clyve, S., & Zeman, J. (2002). Initial validation of the Emotion Expression Scale for Children (EESC). *Journal of Clinical Child and Adolescent Psychology, 31*(4), 540-547.

doi: 10.1207/S15374424JCCP3104_12

Podell, J. L., & Kendall, P. C. (2011). Mothers and fathers in family cognitive-behavioral therapy for anxious youth. *Journal of Child and Family Studies, 20*(2), 182-195. doi:

10.1007/s10826-010-9420-5

Puschner, B., Bauer, S., Horowitz, L. M., & Kordy, H. (2005). The relationship between interpersonal problems and the helping alliance. *Journal of Clinical Psychology, 61*(4),

415-429. doi: 10.1002/jclp.20050

Queen, A. H., & Ehrenreich-May, J. (2014). Anxiety-disordered adolescents with and without a comorbid depressive disorder variations in clinical presentation and emotion

regulation. *Journal of Emotional and Behavioral Disorders, 22*(3), 160-170. doi:

10.1177/1063426613478175

Renner, F., Jarrett, R. B., Vittengl, J. R., Barrett, M. S., Clark, L. A., & Thase, M. E. (2012).

Interpersonal problems as predictors of therapeutic alliance and symptom improvement in cognitive therapy for depression. *Journal of Affective Disorders, 138*, 458-467. doi:

10.1016/j.jad.2011.12.044

Raudenbush, S.W., Bryk, A.S., & Congdon, R.T. (2010). HLM7: Hierarchical linear and nonlinear modeling. Lincolnwood, IL: Scientific Software International.

Santiago, N. J., Klein, D. N., Vivian, D., Vocisano, C., Dowling, F., Arnow, B. A., ... & Keller, M. B. (2002). Pretreatment correlates of the therapeutic alliance in the chronically

depressed. *Journal of Contemporary Psychotherapy, 32*(4), 281-290. doi: 0022-

0116/02/1200-0281/0

- Settipani, C. A., & Kendall, P. C. (2013). Social functioning in youth with anxiety disorders: Association with anxiety severity and outcomes from cognitive-behavioral therapy. *Child Psychiatry & Human Development, 44*(1), 1-18. doi: 10.1007/s10578-012-0307-0
- Sexton, H., Littauer, H., Sexton, A., & Tømmerås, E. (2005). Building an alliance: Early therapy process and the client–therapist connection. *Psychotherapy Research, 15*(1-2), 103-116. Doi: 10.1080/10503300512331327083
- Shields, A. M., & Cicchetti, D. (1997). Emotion regulation among school-age children: The development of a new criterion Q-sort scale. *Developmental Psychology, 33*(6), 906 – 916. doi: 10.1037/0012-1649.33.6.906
- Shields, A. M. & Cicchetti, D. (1998) Reactive aggression among maltreated children: The contributions of attention and emotion dysregulation. *Journal of Clinical Child Psychology, 27*(4), 381-295. doi: 10.1207/s15374424jccp2704_2
- Shirk, S. R., & Karver, M. (2003). Prediction of treatment outcome from relationship variables in child and adolescent therapy: a meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*(3), 452-464. doi: 10.1037/0022-006X.71.3.452
- Silverman, W. K., & Albano, A. M. (1996). *Anxiety Disorders Interview Schedule for DSM-IV (Child and Parent versions)*. San Antonio, Texas: Psychological Corporation.
- Silverman, W. K., Pina, A. A., & Viswesvaran, C. (2008). Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child & Adolescent Psychology, 37*(1), 105-130. doi: 10.1080/15374410701817907

- Southam-Gerow, M. A., & Kendall, P. C. (2000). A preliminary study of the emotion understanding of youths referred for treatments of anxiety disorders. *Journal of Clinical Child Psychology, 29*(3), 319-327. doi: 10.1207/S15374424JCCP2903_3
- Sroufe, L. A., Schork, E., Motti, F., Lawroski, N., & LaFreniere, P. (1985). The role of affect in social competence. In Carroll E. Izard, Jerome Kagan, and Robert B. Zajonc (Eds) *Emotions, Cognitions, and Behavior* (pp. 289-319). New York: Cambridge University Press.
- Strauss, C. C., Lease, C. A., Kazdin, A. E., Dulcan, M. K., & Last, C. G. (1989). Multimethod assessment of the social competence of children with anxiety disorders. *Journal of Clinical Child Psychology, 18*(2), 184-189. doi: 10.1207/s15374424jccp1802_10
- Storch, E. A., Brassard, M. R., & Masia-Warner, C. L. (2003). The relationship of peer victimization to social anxiety and loneliness in adolescence. *Child Study Journal, 33*(1), 1-18.
- Storch, E. A., Masia-Warner, C., Crisp, H., & Klein, R. G. (2005). Peer victimization and social anxiety in adolescence: A prospective study. *Aggressive behavior, 31*(5), 437-452. doi: 10.1002/ab.20093
- Suveg, C., Kendall, P. C., Comer, J. S., & Robin, J. (2006). Emotion-focused cognitive-behavioral therapy for anxious youth: A multiple-baseline evaluation. *Journal of Contemporary Psychotherapy, 36*(2), 77-85. doi: 10.1007/s10879-006-9010-4
- Suveg, C., Jacob, M. L., Thomassin, K., Jones, A., Whitehead, M., & Morelen, D. Emotion-focused cognitive-behavioral therapy for anxious youth: A randomized clinical trial. (Under Review). *Journal of Clinical Child and Adolescent Psychology*.

- Suveg, C., & Zeman, J. (2004). Emotion regulation in children with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33*(4), 750-759. doi: 10.1207/s15374424jccp3304_10
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development, 59*(2-3), 25-52. doi: 10.1111/j.1540-5834.1994.tb01276.x
- Verduin, T. L., & Kendall, P. C. (2008). Peer perceptions and liking of children with anxiety disorders. *Journal of Abnormal Child Psychology, 36*(4), 459-469. doi: 10.1007/s10802-007-9192-6
- Woody, S. R., & Adessky, R. S. (2003). Therapeutic alliance, group cohesion, and homework compliance during cognitive-behavioral group treatment of social phobia. *Behavior Therapy, 33*(1), 5-27. doi: 10.1016/S0005-7894(02)80003-X
- Zeman, J., Cassano, M., Suveg, C., & Shipman, K. (2010). Initial validation of the Worry Management Scale for Children. *Journal of Child and Family Studies, 19*, 381-392. doi: 10.1007/s10826-009-9308-4
- Zeman, J., Shipman, K., & Penza-Clyve, S. (2001). Development and initial validation of the Children's Sadness Management Scale. *Journal of Nonverbal Behavior, 25*, 187-205. doi: 10.1023/A:1010623226626

Table 1

Descriptive Statistics and Correlations between Observer- and Therapist-Rated Alliance

	Time	M (SD)	Range ^{1,2}	<u>Observer-Rated Alliance</u>			<u>Therapist-Rated Alliance</u>		
				Early	Mid	Late	Early	Mid	Late
Observer-Rated Alliance	Early	38.37 (3.87)	28-44	1					
	Mid	36.40 (4.84)	22-43	.69**	1				
	Late	35.13 (5.40)	12-43	.26*	.44**	1			
Therapist-Rated Alliance	Early	5.82 (1.16)	2-7	.66**	.50**	.19	1		
	Mid	5.87 (1.19)	3-7	.43**	.53**	.31**	.63**	1	
	Late	5.95 (1.30)	2-7	.29*	.32**	.43**	.54**	.67**	1

Note. ** $p < .01$; * $p < .05$. ¹ = Possible range for observer-rated alliance is 0-45. ² = Possible range for therapist-rated alliance is 1-7.

Table 2

Correlation Table for Observer-Rated Alliance and Main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Early Treatment	1																
2. Mid Treatment	.69**	1															
3. Late Treatment	.26*	.44**	1														
4. Loneliness	.01	-.04	-.20	1													
5. Overt Victimization	.12	.03	-.20	.36*	1												
6. Relational Victimization	.19	.03	-.19	.31**	.73**	1											
7. Receipt of Prosocial	.18	.22*	.29*	-.46**	.09	.03	1										
8. Social Problems ¹	-.05	-.15	-.11	.15	.27**	.29**	.01	1									
9. Social Competence	.12	.05	.00	-.10	-.20	-.11	.14	-.23*	1								
10. Social Problems ²	-.11	-.14	.07	.34**	.15	.07	-.09	.37**	-.23	1							
11. Emotion Coping	.03	.10	.12	-.34**	.06	-.10	.36**	-.07	.08	-.19	1						
12. Emotion Dysregulation	.04	.07	-.07	.26*	.33**	.29**	.03	.13	-.20	.15	-.23*	1					
13. Expressive Reluctance	.03	-.05	-.07	.37**	.28**	.14	-.14	.21*	-.15	.20	-.06	.15	1				
14. Emotion Regulation ¹	.27*	.23*	-.08	.12	.06	.09	.05	-.37**	.28**	-.08	-.08	.17	.07	1			
15. Lability/Negativity ¹	.02	-.15	-.04	.01	.18	.25*	-.01	.52**	-.21	.22	-.02	.05	.13	-.41**	1		
16. Emotion Regulation ²	.36**	.19	-.08	-.25*	.02	.17	.14	-.18	.31*	-.59**	.18	.02	-.06	.19	-.10	1	
17. Lability/Negativity ²	-.10	-.14	.07	.09	.04	-.06	.11	.21	-.18	.63**	-.02	.08	.10	.02	.31**	-.44**	1

Note. ¹ = caregiver report; ² = teacher report; ** $p < .01$; * $p < .05$

Table 3

Correlation Table for Therapist-Rated Alliance and Main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
1. Early Treatment	1																
2. Mid Treatment	.63**	1															
3. Late Treatment	.54**	.67**	1														
4. Loneliness	-.10	-.22*	-.14	1													
5. Overt Victimization	.09	-.07	.05	.36*	1												
6. Relational Victimization	.18	.06	.16	.31**	.73**	1											
7. Receipt of Prosocial	.25*	.28*	.22	-.46**	.09	.03	1										
8. Social Problems ¹	.05	-.10	-.02	.15	.27**	.29**	.01	1									
9. Social Competence	.14	.02	.05	-.10	-.20	-.11	.14	-.23*	1								
10. Social Problems ²	-.15	-.08	-.14	.34**	.15	.07	-.09	.37**	-.23	1							
11. Emotion Coping	.16	.18	.17	-.34**	.06	-.10	.36**	-.07	.08	-.19	1						
12. Emotion Dysregulation	.03	-.05	-.03	.26*	.33**	.29**	.03	.13	-.20	.15	-.23*	1					
13. Expressive Reluctance	-.01	-.08	-.03	.37**	.28**	.14	-.14	.21*	-.15	.20	-.06	.15	1				
14. Emotion Regulation ¹	.20	.11	-.07	.12	.06	.09	.05	-.37**	.28**	-.08	-.08	.17	.07	1			
15. Lability/Negativity ¹	.11	-.02	.10	.01	.18	.25*	-.01	.52**	-.21	.22	-.02	.05	.13	-.41**	1		
16. Emotion Regulation ²	.33**	.21	.10	-.25*	.02	.17	.14	-.18	.31*	-.59**	.18	.02	-.06	.19	-.10	1	
17. Lability/Negativity ²	-.06	-.11	-.19	.09	.04	-.06	.11	.21	-.18	.63**	-.02	.08	.10	.02	.31**	-.44**	1

Note. ¹ = caregiver report; ² = teacher report; ** $p < .01$; * $p < .05$

Table 4

Significant Differences in Alliance by Demographic Indicators and Severity Variables

Possible Values Variables	Observer-Rated <u>Alliance</u> 0-45			Therapist-Rated <u>Alliance</u> 1-7		
	Early	Mid	Late	Early	Mid	Late
Treatment Condition—M (SD)						
ECBT	39.21 (3.30) ¹	37.17 (4.69)	36.05 (4.96)	5.96 (1.01)	5.95 (1.01)	5.80 (1.25)
CBT	37.38 (4.28)	35.53 (4.94)	34.06 (5.76)	5.66 (1.30)	5.78 (1.38)	6.11 (1.35)
Age— <i>r</i>	-.07	.02	-.02	-.05	-.05	.01
Sex—M (SD)						
Male	37.24 (4.03) ²	35.21 (5.03) ²	34.71 (5.69)	5.52 (1.25) ²	5.55 (1.30) ²	5.61 (1.40) ²
Female	39.82 (3.16)	37.91 (4.18)	35.70 (5.03)	6.22 (0.89)	6.29 (0.89)	6.41 (0.98)
Race—M (SD)						
Caucasian	38.35 (4.05)	36.22 (5.09)	35.02 (5.50)	5.87 (1.18)	5.94 (1.17)	5.95 (1.34)
Black	37.33 (2.26)	35.83 (3.19)	34.80 (5.89)	5.17 (0.75)	5.17 (0.98)	5.20 (0.84)
Hispanic	40.00 (3.00)	39.33 (3.21)	38.50 (4.95)	6.33 (1.15)	6.33 (1.15)	6.67 (0.58)
Other	39.33 (3.06)	38.67 (1.53)	36.00 (2.83)	5.33 (1.15)	5.33 (2.08)	6.50 (0.71)
Primary CSR— <i>r</i>	-.04	-.19	-.11	-.01	-.06	-.09
CBCL Internalizing Subscale— <i>r</i>	.01	-.04	.10	.04	-.05	.03

Note. ¹ = significant difference in treatment condition ($p < .05$). ² = significant difference in sex ($p < .05$). CSR = Clinician's Severity Rating. CBCL = Child Behavior Checklist.

Table 5

Social Functioning as Predictors of Observer-Rated Therapeutic Alliance using Longitudinal Data Analysis

Variable	Initial Status			Linear Slope		
	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>
Child-Reported Social Functioning						
Intercept	37.18 (0.60)	-	-	-1.31 (0.43)	-3.02**	0.32
Sex	2.51 (0.81)	3.09**	0.33	-0.82 (0.63)	-1.31	0.15
Loneliness	0.02 (0.04)	0.44	0.05	-0.01 (0.02)	-0.22	0.02
Overt Victimization	0.02 (0.18)	0.13	0.01	-0.08 (0.11)	-0.70	0.08
Relational Victimization	0.13 (0.13)	1.00	0.11	-0.13 (0.09)	-1.36	0.15
Prosocial Behavior	0.11 (0.12)	0.92	0.10	0.19 (0.08)	2.38*	0.26
Other-Reported Social Functioning						
Intercept	37.59 (0.58)	-	-	-1.60 (0.51)	-3.12*	0.36
Sex	2.33 (0.76)	3.03*	0.35	-0.32 (0.72)	-0.45	0.06
Social Problems ¹	0.01 (0.13)	0.06	0.01	-0.12 (0.10)	-1.21	0.15
Social Competence	0.18 (0.22)	0.80	0.10	-0.14 (0.14)	-0.97	0.12
Social Problems ²	-0.14 (0.23)	-0.62	0.08	0.23 (0.16)	1.39	0.17

Note. All initial status intercepts were significant $p < .001$ because the lowest possible score of alliance was greater than zero. Sex was coded as 0 = male, 1 = female. Effect size $r = \sqrt{t^2 / (t^2 + df)}$.

1 = caregiver report; 2 = teacher report

** $p < .001$; * $p < .05$

Table 6

Emotion Functioning as Predictors of Observer-Rated Therapeutic Alliance using Longitudinal Data Analysis

Variable	Initial Status			Linear Slope		
	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>
Child-Reported Emotion Functioning						
Intercept	37.08 (0.58)	-	-	-1.50 (0.46)	-3.23*	0.36
Sex	2.79 (0.76)	3.68**	0.38	-0.48 (0.61)	-0.78	0.09
Emotion Coping	0.24 (1.24)	0.19	0.02	1.09 (0.82)	1.33	0.15
Emotion Dysregulation	0.68 (0.91)	0.75	0.08	-1.01 (0.81)	-1.25	0.14
Expressive Reluctance	0.05 (0.06)	0.81	0.09	-0.06 (0.05)	-1.18	0.13
Other-Reported Emotion Functioning						
Intercept	38.02 (0.56)	-	-	-1.54 (0.48)	-3.20*	0.39
Sex	1.48 (0.72)	2.05*	0.26	-0.20 (0.67)	-0.30	0.04
Emotion Regulation ¹	0.28 (0.14)	2.01*	0.26	-0.21 (0.13)	-1.65	0.21
Lability/Negativity ¹	-0.02 (0.07)	-0.25	0.03	-0.02 (0.07)	-0.24	0.03
Emotion Regulation ²	0.29 (0.12)	2.42*	0.30	-0.18 (0.09)	-2.01*	0.26
Lability/Negativity ²	0.04 (0.06)	0.62	0.08	-0.02 (0.06)	-0.35	0.05

Note. All initial status intercepts were significant $p < .001$ because the lowest possible score of alliance was greater than zero. Sex was coded as 0 = male, 1 = female. Effect size $r = \sqrt{t^2 / (t^2 + df)}$.

1 = caregiver report; 2 = teacher report

** $p < .001$; * $p < .05$

Table 7

Social Functioning as Predictors of Therapist-Rated Therapeutic Alliance using Longitudinal Data Analysis

Variable	Initial Status			Linear Slope		
	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>
Child-Reported Social Functioning						
Intercept	5.56 (0.16)	-	-	0.04 (0.09)	0.47	0.05
Sex	0.55 (0.22)	2.53*	0.27	0.05 (0.14)	0.40	0.04
Loneliness	-0.01 (0.01)	-0.65	0.07	-0.00 (0.01)	-0.39	0.04
Overt Victimization	-0.02 (0.04)	-0.63	0.07	-0.00 (0.03)	-0.04	0.00
Relational Victimization	0.05 (0.03)	1.68	0.18	-0.00 (0.02)	-0.10	0.01
Prosocial Behavior	0.05 (0.03)	1.69	0.19	-0.00 (0.02)	-0.14	0.02
Other-Reported Social Functioning						
Intercept	5.57 (0.17)	-	-	0.09 (0.11)	0.85	0.11
Sex	0.64 (0.23)	2.86*	0.34	-0.02 (0.15)	-0.16	0.02
Social Problems ¹	0.02 (0.03)	0.49	0.06	-0.01 (0.02)	-0.57	0.07
Social Competence	0.03 (0.05)	0.63	0.08	-0.04 (0.03)	-1.45	0.18
Social Problems ²	-0.05 (0.06)	-0.75	0.09	-0.01 (0.04)	-0.20	0.02

Note. All initial status intercepts were significant $p < .001$ because the lowest possible score of alliance was greater than zero. Sex was coded as 0 = male, 1 = female. Effect size $r = \text{sqrt} [t^2 / (t^2 + \text{df})]$.

1 = caregiver report; 2 = teacher report

** $p < .001$; * $p < .05$

Table 8

Emotion Functioning as Predictors of Therapist-Rated Therapeutic Alliance using Longitudinal Data Analysis

Variable	Initial Status			Linear Slope		
	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>	Estimate (SE)	<i>t</i> ratio	Effect Size <i>r</i>
Child-Reported Emotion Functioning						
Intercept	5.52 (0.16)	-	-	0.04 (0.09)	0.46	0.05
Sex	0.69 (0.22)	3.21*	0.33	0.06 (0.13)	0.46	0.05
Emotion Coping	0.48 (0.27)	1.80	0.19	0.05 (0.20)	0.22	0.02
Emotion Dysregulation	0.17 (0.26)	0.66	0.07	-0.16 (0.18)	-0.88	0.10
Expressive Reluctance	0.01 (0.02)	0.33	0.04	0.00 (0.01)	0.14	0.02
Other-Reported Emotion Functioning						
Intercept	5.61 (0.16)	-	-	0.08 (0.10)	0.84	0.11
Sex	0.54 (0.20)	2.65*	0.33	0.01 (0.13)	0.07	0.01
Emotion Regulation ¹	0.05 (0.04)	1.32	0.17	-0.05 (0.03)	-1.79	0.23
Lability/Negativity ¹	0.02 (0.02)	0.81	0.11	0.01 (0.01)	0.44	0.06
Emotion Regulation ²	0.09 (0.03)	2.87*	0.35	-0.04 (0.02)	-2.07*	0.26
Lability/Negativity ²	0.03 (0.02)	1.24	0.16	-0.03 (0.02)	-1.90	0.24

Note. All initial status intercepts were significant $p < .001$ because the lowest possible score of alliance was greater than zero. Sex was coded as 0 = male, 1 = female. Effect size $r = \text{sqrt} [t^2 / (t^2 + df)]$.

1 = caregiver report; 2 = teacher report

** $p < .001$; * $p < .05$