

THE IMPACT OF THERAPEUTIC ALLIANCE ON THE RELATIONSHIP BETWEEN
SCHOOL RELUCTANCE STATUS AND TREATMENT OUTCOME FOR CHILD ANXIETY
DISORDERS

by

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(Under the Direction of Cynthia Suveg)

ABSTRACT

Anxious youth who are school reluctant find school to be an aversive environment, yet do not refuse school. These children experience higher levels of loneliness, negative affectivity, and anxiety severity compared to their non-school reluctant counterparts with anxiety disorders. While factors influencing treatment outcome, such as the therapeutic alliance, have been examined extensively in children with anxiety disorders and in school refusing youth, no literature to date has examined these factors in school reluctant youth with anxiety disorders. Included in the present study were 91 youth with an anxiety disorder, of which 41 were school reluctant. This study sought to examine the impact of the therapeutic alliance on the relationship between school reluctance status and various indicators of treatment outcome. While school reluctance status was not an overall significant predictor of treatment outcome, it did significantly predict clinician-reported treatment outcome when examined in the context of middle- and late-treatment alliance. Therapeutic alliance did not significantly moderate the relationship between school reluctance status and treatment outcome as reported by child, parent, teacher, or clinician. A significant decrease was observed in the number of school reluctant

youth at pre- compared to post-treatment. Results of this study suggest that cognitive behavior therapy is effective in treating child anxiety, regardless of school reluctance status.

INDEX WORDS: anxiety, children, school reluctance, alliance, treatment

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CHAPTER 1

The Impact of Therapeutic Alliance on the Relationship Between School Reluctance Status and Treatment Outcome for Child Anxiety Disorders

Anxiety disorders (ADs) occur in 2.4-17% of children (Kendall, 2012) and are associated with impairment in multiple domains, including social functioning (Kingery, Erdley, Marshall, Whitaker, & Reuter, 2010), academic success (Langley, Bergman, McCracken, & Piacentini, 2004), and family relationships (Bodden, Dirksen, & Bogels, 2008). Cognitive behavior therapy (CBT) is recognized as the most successful behavioral intervention in the treatment of child ADs and has wide support in the literature (Barrett, Dadds, & Rapee, 1996; Barrett, Duffy, Dadds, & Rapee, 2001; Kendall, 1994; Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006). Traditional CBT for child ADs may be less effective in the treatment of school refusing children with ADs when compared to children with ADs who are not school refusing (Last, Hansen, & Franco, 1998). However, research suggests that augmented treatment approaches that include parent and teacher behavior management training in addition to the traditional CBT content with the child may be better options for school refusing children with ADs (Heyne, Sauter, Van Widenfelt, Vermeiren, & Westenberg, 2011; King et al., 1998). In contrast to school refusing children with ADs who actively refuse to go to school, school reluctant children attend school but find school to be an aversive environment. No literature has yet to examine treatment outcome in children with school reluctance. It is particularly important to examine treatment outcome for children with ADs who are school reluctant, given that research suggests that school reluctance may be significantly more common than school refusal (Jones & Suveg, 2015; Kearney, 2001).

One factor that has been shown to be related to treatment outcome for child ADs is the therapeutic alliance (Hughes & Kendall, 2007; Shirk & Karver, 2003), which can be operationalized as the “collaborative and emotional bond between the client and therapist” (Hughes & Kendall, 2007). Although the relationship between therapeutic alliance and treatment outcome has been examined extensively in children with ADs, much less is known about the role of the therapeutic alliance in treatment outcome for children who are school refusing or school reluctant. This study seeks to examine the impact of overall therapeutic alliance on the relationship between school reluctance status and treatment outcome in children with ADs.

School Reluctance

Though there is a large body of literature examining school refusal in clinically anxious children (Kearney, 2001; Kenney, & King 1994; Last & Strauss, 1990; Naylor, Staskowski, Epstein & Sheldon, 2002), there is only one study that has examined school reluctance in children with ADs (Jones & Suveg, 2015). Though school refusal is the actual refusal of school (Kearney & Silverman, 1996), school reluctance can be operationalized as “a child-motivated resistance to attend school or stay in class once at school” (Jones & Suveg, 2015). In a recent study examining school reluctance in children ages 7-12 years with ADs, the authors found that approximately 45% of the sample ($n = 50$) was school reluctant, suggesting that a large portion of children with ADs may also be school reluctant, particularly compared to estimates of children with ADs who are school refusing (28%; Kearney, 2001).

Children with school reluctance experience a host of difficulties, the extent of which is often unknown by parents and teachers (Jones & Suveg, 2015). For example, school reluctant (SR) children with ADs experience greater loneliness and higher levels of negative affect than their non-school reluctant (NSR) peers (Jones & Suveg, 2015). While SR youth did not endorse

greater levels of peer victimization relative to their NSR counterparts, SR youth also did not endorse greater receipt of pro-social behavior from peers compared to NSR children. As such, it may be that SR children are viewed as “loners” and have little social peer interactions during the school day. If SR children’s social interactions with peers are limited, this may help to explain the high levels of loneliness reported by SR children in comparison to NSR children.

Additionally, high levels of negative affect have been shown to be related to poorer peer relationships among anxious youth (Jacob, Suveg, & Whitehead, 2014). Given that SR children experience greater negative affect than NSR children, it may be that peers do not want to engage socially with SR youth. Of note, loneliness and negative affectivity were only significant for child-report and parents and teachers denied greater difficulties for SR children in all aspects of social and emotional functioning compared to NSR children. This finding suggests that parents and teachers are largely unaware of the difficulties SR youth experience in social interactions with their peers compared to NSR youth.

Further, SR children endorsed greater anxiety severity compared to NSR children; however, this difference was not present for parent-report (Jones & Suveg, 2015). One important aspect of treatment for child anxiety disorders is gradual exposure to anxiety-provoking situations. Given that SR children still attend school even though they find the environment to be aversive and do not appear to habituate to the school setting, it may be that SR children do not actively engage with the experiences in school that are most aversive to them (e.g., answering questions in class, participating in athletics, etc.). The potential avoidance of these anxiety-provoking situations in school likely reinforces the child’s anxiety, resulting in a continued aversion to the school setting (Ohman, 2010).

Collectively, parents and teachers appear largely unaware of the social and emotional difficulties SR children experience above those experienced by NSR children. The lack of awareness by parents and teachers suggests that SR youth may have less support from others when compared to NSR youth, given that others are unaware of the extent of the difficulties they are experiencing. Despite the greater anxiety severity SR youth are experiencing compared to NSR youth, no literature has examined differences in treatment response for SR youth compared to NSR youth.

Treatment Outcome

The literature strongly supports the use of cognitive behavioral therapy (CBT) for the treatment of children with ADs (Kendall, 1994; Kendall et al., 2008, Walkup et al., 2008). The use of CBT has also been examined in children with ADs and school refusal; however, there is less support for traditional CBT for children with ADs and school refusal than for children with ADs without school refusal. For example, Last and colleagues (1998) examined the efficacy of CBT in the treatment of school refusal in 56 children ages 6-17 years with ADs and school refusal. The authors operationalized school refusal as missing at least 10% of school days for one month prior to study enrollment. The majority of participants had a primary diagnosis of either simple (now specific) or social phobia (58%) or separation anxiety disorder (32%). Participants were randomized to one of two conditions: CBT or educational-supportive therapy (EST). The authors found no difference between supportive therapy and CBT in the treatment of children with ADs and school refusal in regards to school attendance, with both groups showing improvement in attendance over time.

Heyne and colleagues (2011) examined an augmented CBT approach in 19 adolescents (ages 10-18 years) with school refusal and an AD. In this study adolescents were identified as

school refusing if they were absent for more than 20% of school days during the two weeks preceding study enrollment (Berg, 2002) with the exception of those absences deemed as legitimate; however, no examples were provided of what would differentiate an absence as legitimate versus non-legitimate. In addition to the presence of school refusal, each adolescent was also diagnosed with either a primary or secondary AD (Heyne et al., 2011). Eighty-five percent of adolescents had a primary diagnosis of social anxiety disorder (40%), generalized anxiety disorder (20%), anxiety disorder not otherwise specified (now unspecified anxiety disorder; 20%), or panic disorder with agoraphobia (5%).

The treatment provided was an augmented CBT approach designed to be more developmentally sensitive to adolescents, include parents in components of treatment, and to include optional involvement for school staff (Heyne et al., 2011). There was a significant increase in the number of school days attended between pre- and post-treatment; however, no differences were present between posttreatment and two-month follow-up (Heyne et al., 2011). Additionally, fifty percent of adolescents in the study did not meet criteria for any AD at follow-up (Heyne et al., 2011). Although the treatment was successful for approximately fifty percent of the sample, there was no control condition in this study and, consequently, conclusions about the augmented CBT protocol in comparison to a traditional CBT protocol cannot be drawn.

Augmented CBT for school refusal and ADs appears to have strong maintenance effects over time for school attendance for treatment responders; however, little is known about long term gains for initial reductions in anxiety. For example, King and colleagues (1998) examined the efficacy of CBT in a sample of 34 school refusing children aged 5-15 years. Children were included if they met Berg and colleague's (1969) criteria for school refusal, which includes ongoing difficulties with school attendance, emotional difficulties related to attending school

(e.g., fearfulness, temper tantrums, somatic complaints, etc.), parental knowledge of the child's absence from school, and the absence of significant antisocial traits (e.g., lying, stealing, etc.). Out of the 34 children included in the study, approximately one-fifth ($n = 7$) of the sample, although anxious and resistant, attended school. This sub-set of the sample is consistent with the operational definition of school reluctance described earlier.

Though not all children included in the sample had a diagnosable AD, the majority of children met criteria for an anxiety or related disorder ($n = 27$; King et al., 1998). Approximately half of children had a primary diagnosis of separation anxiety disorder ($n = 8$) or adjustment disorder ($n = 7$); however, the original study manuscript did not clarify the nature of the adjustment disorder diagnosis (e.g., with anxiety, with depression, etc.). Children in this study were randomized to a waitlist condition or to CBT. The CBT condition included additional parent and teacher training in behavior management skills (King et al., 1998). The authors found that CBT in conjunction with parent and teacher behavior management training compared to a waitlist control resulted in significant decreases in anxiety (i.e., Child Behavior Checklist internalizing subscale, Teacher Report Form internalizing subscale, Fear Survey Schedule for Children-II, Revised Children's Manifest Anxiety Scale, and fear thermometer), increases in school attendance (percentage of days present), and increases in global functioning (Global Assessment of Functioning) at posttreatment and three-month follow-up. Further, gains in school attendance were largely maintained at three to five years following the conclusion of treatment for individuals in the CBT condition (King et al., 2001). Although this study (King et al., 2001) showed longitudinal benefits in school attendance rates following a CBT treatment incorporating parent and teacher behavior management training, no data was reported on whether gains in anxiety reduction at posttreatment remained present at three to five-year follow-up.

Intensive treatment approaches (i.e., daily sessions over a couple of weeks) have also been shown to be efficacious in the treatment of smaller samples of adolescents with school refusal and ADs; however, replication with much larger samples is needed. One such study conducted by Tolin and colleagues (2009) examined an intensive 15 session treatment over three weeks for four school refusing adolescents. All adolescents had a principal diagnosis of either social phobia or specific phobia and had missed between three and seven months of school prior to study enrollment. Treatment generally followed a CBT framework and consisted largely of exposure exercises (Tolin et al., 2009). Additionally, cognitive restructuring, relaxation training, and motivational interviewing were utilized if deemed necessary and appropriate for each case. A functional analysis was conducted for each child and treatment was tailored to address specific concerns revealed by the functional analysis. Regardless, all parents received training in contingency management. The intensive treatment approach resulted in treatment gains in school attendance for three out of the four adolescents at posttreatment; however, these gains were typically not longstanding. Three of the four adolescents did not have a stable school attendance history at three-year follow-up for the period between posttreatment and follow-up.

Though some studies reporting both school attendance and anxiety outcomes have found a general pattern of improvement in both domains at posttreatment (Heyne et al., 2011; King et al., 1998), other studies have found that improvement in one domain did not necessarily translate into improvement in the other domain. For example, Bernstein and colleagues (2000) examined the efficacy of the addition of imipramine to CBT for the treatment of school refusal in 47 adolescents (ages 12-18 years) with comorbid anxiety and depression. In order to be classified as school refusing, children in the study must have been present for less than 80% of school days in the month prior to study enrollment. The specific diagnostic breakdown was not provided in

the original study manuscript. Participants were randomized to either imipramine + CBT or to placebo + CBT. The CBT protocol was an eight session program adapted from the treatment used by Last and colleagues (1998). Results from this study suggest that individuals in both groups showed significant reductions in anxiety symptoms on the Anxiety Rating for Children-Revised (Bernstein et al., 1996) and the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1985); however, only those receiving imipramine + CBT showed significant improvements in school attendance. However, the initial power analysis listed in the study manuscript suggested that a total of 72 treatment completers would be needed to detect significant differences between groups in improvement of anxiety symptoms and school attendance. Given that the final sample of treatment completers was 47, the results should be interpreted with caution.

Treatment outcome has been extensively studied for children and adolescents with ADs and those with ADs and school refusal; however, the literature to date has yet to examine treatment outcome for children with ADs who are school reluctant. Given that children with school refusal have better outcomes with an augmented CBT approach in comparison to a traditional CBT approach, it is hypothesized that the same would be true for children with ADs who are school reluctant. Thus, it is unlikely that a traditional CBT program would be as effective for SR youth when compared to NSR youth. It is also important to consider factors that may predict better treatment response in SR youth. One such factor that has been shown to be related to treatment outcome in children with ADs is the therapeutic alliance.

Therapeutic Alliance

Shirk and Russell (1996) suggested that the therapeutic relationship may be particularly important when working with children because children are less likely to self-present for

treatment and treatment is more likely to be initiated by the child's caregiver. Additionally, the therapeutic alliance is likely to lead to more engagement during skill-building sessions, as well as when conducting exposure exercises (Chu & Kendall, 2004; Kendall & Ollendick, 2005). In turn, more engagement in the treatment process is likely to lead to better consolidation of skills learned in treatment and better treatment outcomes.

Multiple studies have examined the role of therapeutic alliance as it relates to treatment outcome for children with ADs. Hughes and Kendall (2007) examined whether non-specific clinical factors (i.e., therapeutic alliance) and specific task completion (i.e., homework compliance) predict favorable treatment outcome in a sample of 138 children aged 9-13 with ADs. The majority of children had a principal diagnosis of overanxious disorder (now generalized anxiety disorder; 59%). Therapeutic alliance was reported by the therapist following each session by rating the following question on a 7-point Likert scale, "How would you describe the quality of the therapeutic relationship during the session?" Overall therapeutic alliance was calculated by averaging across sessions. Homework compliance was rated similarly by therapists after each session; the average was calculated for each participant and used for analyses. The results of this study suggest that therapeutic alliance, but not homework compliance, predicted positive treatment outcomes as measured by the primary diagnosis clinician severity rating on the ADIS at both posttreatment and one year following treatment. Thus, it appears that therapeutic alliance is not time-limited and is a potential predictor of outcome for children with ADs.

Another study with a smaller sample of youth ($N = 34$) aged 6-13 with ADs examined the relationship between the therapeutic alliance at various points in treatment and treatment outcome (Chiu, McLeod, Har, & Wood, 2009). The majority of children presented with a

primary diagnosis of separation anxiety disorder ($n = 15$) or social phobia ($n = 14$). Participants were randomized either to a child CBT condition ($n = 16$) or a family CBT condition ($n = 18$). There were no significant differences in outcome variables by condition. Of note, only children with no missing data who had completed treatment were included in this study. As such, it is unclear if there were significant differences between those children with missing data ($n = 2$) and those who did not complete treatment ($n = 2$) in comparison to the rest of the sample.

Therapeutic alliance was measured by the Therapy Process Observational Coding System for Child Psychotherapy—Alliance Scale (McLeod, 2005) and anxiety symptoms were measured by the parent version of the Multidimensional Anxiety Scale for Children (March, Parker, Sullivan, Stallings, & Conners, 1997) and the internalizing subscale of the Child Behavior Checklist (Achenbach, 1991). Results suggest that a strong therapeutic alliance at the beginning of treatment predicted greater symptom reduction at mid-treatment; however, this finding did not remain significant at posttreatment (Chiu et al., 2009). Though strong early therapeutic alliance was not a significant predictor of outcome at posttreatment, the improvement in the therapeutic alliance over the course of treatment was associated with better posttreatment outcomes. The results from this study suggest that the growth of the therapeutic alliance rather than the initial bond may be more important in predicting treatment outcome. This is consistent with other work that has also found that positive shifts in involvement over the course of treatment are more predictive of positive treatment outcome than measures of early involvement in treatment (Chu & Kendall, 2004).

Further support for the benefits of a strong therapeutic relationship for positive treatment outcome more broadly (i.e., treatments for both internalizing and externalizing problems) comes from a meta-analysis examining relationship variables and treatment outcome in children and

adolescents (Shirk & Karver, 2003). This meta-analysis examined 23 studies that included analyses examining the therapeutic relationship in child therapy. Of note, type of problem was found to be a significant moderator, such that the therapeutic relationship was more strongly related to outcome for those children presenting with externalizing problems compared to internalizing problems.

Liber et al. (2010) examined the relationship between therapeutic alliance, treatment adherence, and treatment outcome in a sample of 52 children aged 8-12 years with ADs. Participants were randomized to one of two treatment approaches: individual CBT or group CBT. Inclusion criteria consisted of having, pre-, mid-, and post-treatment outcome data. Given that individuals who did not complete treatment were excluded from the current study, it is unclear whether therapeutic alliance was related to attrition. All participants had a principal AD diagnosis of generalized anxiety disorder ($n = 15$), separation anxiety disorder ($n = 20$), social phobia ($n = 10$), or specific phobia ($n = 7$).

Liber and colleagues (2010) analyzed the data in multiple different ways when examining the relationship between therapeutic alliance and treatment outcome. Therapeutic alliance was computed using the mean score on the Therapy Process Observational Coding System for Child Psychotherapy—Alliance Scale (McLeod, 2005) for all analyses. The study authors did not find therapeutic alliance to be a significant predictor of outcome when using the Multidimensional Anxiety Scale for Children (MASC; March et al., 1997) total score and Child Behavior Checklist (CBCL; Achenbach, 1991) internalizing score at posttreatment as the outcome variables, the clinically significant change index calculated using the pre- and post-treatment scores on the MASC total score and CBCL internalizing score, or treatment recovery calculated based on the presence or absence of any posttreatment AD as captured by the ADIS-C/P.

The relationship between therapeutic alliance and treatment outcome was also examined using the reliable change scores for the MASC total score and the CBCL internalizing score. Results suggested that therapeutic alliance was a significant predictor of reliable change on the MASC total score, such that better alliance was related to greater symptom change. However, results were not significant when examining therapeutic alliance as a predictor of reliable change on the CBCL internalizing scale. Finally, the authors examined whether shifts in alliance predicted treatment outcome via MASC total score, CBCL internalizing score, treatment recovery, or reliable change; no significant effects were found.

The study authors found that therapeutic alliance was not a significant predictor of traditional measures of treatment outcome (i.e., changes in MASC and CBCL internalizing scores over the course of treatment, free of primary diagnosis at posttreatment, or free of any diagnosis at posttreatment). However, when examining therapeutic alliance as a predictor of treatment outcome using a more stringent statistical approach that minimizes measurement error (i.e., reliable change index), therapeutic alliance was a significant predictor of treatment outcome based on reliable change MASC scores, but not based on reliable change CBCL internalizing scores. The results of this study suggest that a more specific and rigorous statistical technique may be better-suited for examining the relationship between therapeutic alliance and treatment outcome. Of note, the power analysis reported in this study suggested sufficient power for regression analyses with two predictors with a sample size of 55; however, it is unclear how the authors statistically controlled for the number of analyses conducted.

Although therapeutic alliance has been shown to be an important predictor of treatment outcome in children with ADs, no research has yet examined the role of therapeutic alliance in children with ADs and school reluctance or children with ADs and school refusal. Given that

alliance is an important predictor of treatment outcome for children with ADs, it is likely that therapeutic alliance will also be significant for children with ADs and school reluctance; however, this remains to be examined empirically. Further, given the degree of loneliness experienced by SR youth and the lack of awareness of the extent of difficulties by parents and teachers, it may be that the therapeutic alliance is even more important for this group than for NSR youth. For instance, a strong therapeutic alliance may help the child to feel more comfortable expressing themselves in treatment if they feel more supported by the therapist. Additionally, the therapist may serve a supportive role within the context of strong therapeutic alliance during treatment and may facilitate the movement of that role from the therapist to caregivers and school personnel later in treatment.

Study Aims and Hypotheses

There is substantial literature that has examined treatment outcome for youth with ADs and youth with ADs and school refusal; however, the literature has yet to examine treatment outcome for SR youth. Given the level of anxiety severity and associated impairments experienced by SR youth, it is important to empirically examine the efficacy of CBT for this group and possible variables that may influence treatment outcome. For example, therapeutic alliance has been shown to be a strong predictor of favorable treatment outcome for children with ADs; however, it has yet to be examined in youth with ADs and school refusal or SR youth. Given that SR youth experience high levels of loneliness compared to NSR youth and have less support from teachers and caregivers, it may be that the therapeutic alliance is particularly important for this sub-set of children with ADs.

This study aimed to empirically examine whether school reluctance status was a significant predictor of treatment outcome. Given the extant literature on treatment outcome and

the nature of the current treatment (non-augmented CBT), it was hypothesized that school reluctance status would be a significant predictor of treatment outcome and that SR children would evidence poorer treatment outcomes when compared to NSR children. Second, this study sought to examine the impact of overall therapeutic alliance on the relationship between school reluctance status and treatment outcome. It was hypothesized that therapeutic alliance would moderate the relationship between school reluctance status and treatment outcome, such that SR youth with a stronger therapeutic alliance would experience greater treatment gains than SR youth with a weaker therapeutic alliance.

CHAPTER 2

Method

Participants

The sample included 91 youth aged 6 to 13 years ($M = 8.91$, $SD = 1.64$). All participants had a primary anxiety diagnosis of either generalized anxiety disorder, social phobia, and/or separation anxiety disorder based on clinical impression of severity garnered from child or parent report on the ADIS-IV-C/P. This is commonly referred to as the “or” rule and takes into account diagnoses levied as impairing by either the parent or the child with agreement from the clinician. Exclusionary criteria were as follows: enrollment in concurrent psychotherapy, currently taking a psychotropic medication other than stimulants for ADHD, active suicidal ideation and/or intent, currently experiencing psychotic symptoms, or a primary diagnosis other than the above-listed anxiety disorders.

Approximately half of the sample was classified as school reluctant ($n = 41$). Of note, there were no participants in the current study who met criteria for school refusal. While there has not been a consensus on school refusal status designation in the literature, the most conservative criteria were used in the current study. Bernstein et al. (2000) defined school refusal as missing greater than 20% of days of school in a given school year. Based on the question, “How many days of school did your child miss last year because of anxiety concerns?” children missed an average of 1.99 days in the past year (range 0 to 30). One child was excluded from analyses, as this child missed greater than 20% of days in the given school year due to hospitalization for a diagnosed medical illness.

Overall, 86.8% of the sample was Caucasian ($n = 79$), with the remainder of the sample as follows: 6.6% African-American ($n = 6$), 3.3% identifying as other ($n = 3$), and 3.3% Hispanic ($n = 3$). The sample consisted of 57.1% males ($n = 52$) and 42.9% females ($n = 39$). The majority of the sample consisted of parents who were married (71.4%), college graduates (34.1%) or had completed graduate school training (29.7%), and had an income over \$80,000 (45.1%). Demographic details are described in more detail in Table 1.

Procedure

A university-based Institutional Review Board approved all study procedures. Parents provided written consent and permission and children provided written assent prior to study participation and enrollment. Participants were recruited from flyers posted throughout the community, as well as through local schools. This study was part of a randomized clinical trial comparing a traditional cognitive-behavioral treatment with an emotion-focused cognitive behavioral treatment for anxious youth. The study included pre- and post-assessments of study variables. Both assessments lasted approximately two hours, where trained diagnosticians independently interviewed the parent and child participants, and both the child and parent completed self-report measures. Reading assistance was available for younger children who required it. In addition to the aforementioned interviews and self-report measures, forms to be completed by the child's teacher were sent home with the family with instructions for the teacher to mail the measures directly back to the study investigators. Following each assessment, the child was given a small token of appreciation (e.g., a small toy) for participation.

Treatment

Children were randomized into one of two therapy conditions—cognitive behavioral therapy (CBT) for anxious youth as described by Kendall (1994) or emotion-focused cognitive

behavioral therapy (ECBT; Suveg, Kendall, Comer, & Robin, 2006). The CBT protocol included psychoeducation about anxiety, identification of physiological cues related to anxiety, identification of distorted cognitions, cognitive restructuring, relaxation training, and hierarchical exposure to anxiety-provoking situations. The ECBT protocol included very similar skills and techniques as those used in the CBT protocol; however, the ECBT protocol incorporated broader emotion identification, emotion understanding, and emotion regulation. For example, ECBT included practice at the beginning of each session identifying a current emotion and description of the situation related to and physiological cues associated with the experience of that emotion. Additionally, children learned that they may experience multiple emotions in a given situation. Further, during the hierarchical exposure phase of treatment, children engaged in exposure exercises for any emotion they had difficulty regulating. For example, children in the ECBT condition may have engaged in traditional exposures to anxiety provoking situations, but may have also engaged in exposures related to situations that generate anger or sadness that is difficult to adaptively regulate.

Measures

Demographics. A demographic form was completed by parents and assessed multiple domains including age, ethnicity, income, education, and marital status, among other socio-demographic variables. This study will use demographics as a means of reporting sample characteristics.

Anxiety Disorders Interview Schedule: Child and Parent Versions (ADIS-IV-C/P; Silverman & Albano, 1996). The ADIS-IV-C/P are semi-structured diagnostic interviews administered separately to parents and children as a diagnostic measure of presence and severity of anxiety, mood, and externalizing disorder symptoms. Trained diagnosticians supervised by a

licensed clinical child psychologist conducted the ADIS-IV-C/P interviews. Diagnoses were made if either the child or parent endorsed significant symptoms as well as interference, and if the diagnostician rated the severity of the diagnosis as a four or greater on the clinician severity rating (CSR). Children were categorized as school reluctant (SR) if they answered yes to the following question on the school refusal module of the ADIS-IV-C/P: “Do you get very nervous or scared about having to go to school?” or their parent answered yes to “Does your child get very nervous or scared about having to go to school?” This study will use the ADIS-IV-C/P summary primary diagnosis to confirm the presence of an anxiety disorder. Additionally, the absence of the ADIS-IV-C/P primary diagnosis at posttreatment was viewed as an indicator of positive treatment outcome. The ADIS-IV-C/P has exhibited good to excellent test-retest reliability, as well as good concurrent validity between the multidimensional anxiety scale for children and the corresponding ADIS-IV-C/P anxiety diagnoses with the exception of generalized anxiety disorder (Silverman, Saavedra, & Pina, 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002). Reliability was calculated for approximately 10% of randomly selected interviews ($k = .76$; “very good”; Cohen, 1960).

Clinical Global Impression of Severity and Improvement (CGI-S; CGI-I; Guy, 1976).

Rated on a seven-point Likert scale, the CGI-S assesses anxiety severity at pre- and post-treatment and the CGI-I assesses improvement in anxiety symptoms following treatment from the view of the clinician. Higher scores indicate greater anxiety severity and worse improvement on the CGI-S and CGI-I, respectively. The interviewing clinician completed the CGI-S and CGI-I based on information garnered from the child- and parent-interviews of the ADIS-IV-C/P that were administered individually. Change in CGI-S from pre- to post-treatment was calculated and was used as a measure of change in anxiety symptom severity over time. The

CGI-I was used in this study to measure improvement in anxiety symptoms at posttreatment. A score of 1 (very much improved) or 2 (much improved) was used as an indicator of positive treatment outcome. Good convergent validity with self- and clinician-report measures has been demonstrated for the CGI-S and CGI-I (Zaider, Heimberg, Fresco, Schneier, & Liebowitz, 2003).

Teacher Report Form (TRF; Achenbach & Edelbrock, 1986). The TRF is a measure completed by the child's teacher that assesses child behavioral and emotional problems. This study used change from pre- to post-assessment on the Anxiety Problems subscale to evaluate change in anxiety over time. Reliability in the present study for the Anxiety Problems subscale was acceptable at pretreatment with Cronbach's alpha equal to .77 and good at posttreatment with Cronbach's alpha equal to .81. Concerning clinical levels ($T\text{-score} \geq 70$), 36.4% of SR children ($n = 15$) achieved clinically significant scores on the Anxiety Problems subscale at pretreatment, compared to 19.5% of SR children ($n = 8$) at posttreatment. Within the NSR group, 22.0% of children ($n = 11$) had clinically significant scores on the Anxiety Problems subscale at pretreatment, compared to 16.0% of children ($n = 8$) at posttreatment.

Therapeutic Alliance Observational Coding System-Alliance scale (TPOCS-A; McLeod, 2005). Coding is completed at the macro level for each individual therapy session. The coding system includes nine items that are rated on a six-point Likert scale from "not at all" to "a great deal." The TPOCS-A is made up of two subscales examining different aspects of alliance: the bond between the therapist and client (6 items) and the therapeutic tasks completed (3 items). The child-therapist bond is measured by items assessing the child's comfortability in sharing experiences with the therapist (e.g., bringing up new experiences that are relevant), the child viewing the therapist as supportive and understanding, degree of child and therapist discomfort in session, child hostility (i.e., physical or verbal aggression), and child positive

affect. The completion of therapeutic tasks is measured by items assessing whether homework was completed between sessions, the degree to which the child complied with tasks in session, and the degree to which the therapist needed to assist the child in task completion.

The TPOCS-A was completed for sessions two, five, and nine of the ten-week intervention as a means of assessing therapeutic alliance early in treatment, halfway through treatment, and prior to termination. Consistent with the literature, sessions two and nine rather than one and ten were chosen to represent the early (skills building) and late (exposure) stages of treatment (Chiu, McLeod, Har, & Wood, 2009; Chu & Kendall, 2009; Creed & Kendall, 2005; Liber et al., 2010; McLeod et al., 2014). Given that some sessions were unavailable due to technical difficulties or missing videotapes, a session similar in treatment content and stage of treatment was selected (i.e., session 4 if session 2 was unavailable, session 6 if session 5 was unavailable, and session 8 if session 9 was unavailable). Given that the child and therapist departed from the therapy room during some exposure sessions to conduct in vivo exposures, the session was only coded if at least 50% of the session was available for viewing. For the current study, the total therapeutic alliance, incorporating both the bond and task completion subscales, was used.

Coder Training and Reliability

Both reliability coders met with the study's primary coder (Monica Whitehead, MS) to review the TPOCS-A manual and discuss the coding scheme (e.g., specific examples that may be seen in a session for a given item). Additionally, all coders completed practice coding sessions at each stage of treatment together and independently and discussed ratings for the practice session. Once all coders felt comfortable with the coding procedures and achieved adequate agreement for all three time points (i.e., within one point of each other on all individual items

and ICC > .70; Cicchetti, 1994), actual coding commenced. Reliability was calculated for 15% of randomly selected sessions (ICC = .86). Reliability was checked every two weeks to prevent coder drift.

Analytic Plan

A power analysis was conducted using G*Power version 3.1. In order to detect a medium effect ($f^2 = 0.15$) with alpha of $p = .05$ and power of 0.80 with three predictors, the necessary total sample size was 55. Eight separate moderation analyses were conducted. Analyses were conducted using SPSS version 21.0. Little's missing completely at random test was conducted in order to determine the nature of missing data (Little, 1988). Boxplots were created to detect outliers in the dataset. In addition, the Shapiro-Wilk test and Q-Q plots were utilized to determine normality of the data. Homogeneity of variance was checked as well when conducting tests of assumptions. Independent-sample t -tests and chi-square tests of independence were utilized to assess potential differences on demographic variables between youth with and without school reluctance. Multivariate analysis of variance (MANOVAs) were used to determine if there were significant differences in alliance ratings for early, middle, and late stages of treatment. Paired-sample t -tests were utilized to assess potential differences in CGI-I ratings based on child- and parent-report. The same process was used to determine if there were significant differences between child- and parent-report of anxiety severity at posttreatment on the CGI-S. Independent-sample t -tests were conducted to determine if there were significant differences in treatment outcome by school reluctance status. All primary outcome analyses were conducted as intent-to-treat analyses, thus including all individuals who attrited carrying forward their last data point.

The publicly available PROCESS macro (<http://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html>; Hayes, 2012) was used to conduct all moderation analyses. The first moderation examined the impact of overall therapeutic alliance on the relationship between school reluctance status and treatment outcome with school reluctance status as the independent variable, therapeutic alliance as the moderator, and CGI-I rating as the dependent variable. The second moderation examined the impact of overall therapeutic alliance on the relationship between school reluctance status and treatment outcome with school reluctance status as the independent variable, therapeutic alliance as the moderator, and change in TRF Anxiety rating as the dependent variable. The third moderation examined the impact of overall therapeutic alliance on the relationship between school reluctance status and anxiety severity at posttreatment with school reluctance status as the independent variable, therapeutic alliance as the moderator, and CGI-S rating as the dependent variable.

CHAPTER 3

Results

Missing Data

Regarding missing data, early alliance ratings were missing for five families. Four of these participants attrited prior to session two and one participant was unable to be coded due to technical difficulties with the recorded sessions. Further, twenty-one participants were not able to be coded for middle and late alliance. Fifteen participants were not able to be coded because they attrited prior to the sessions of interest and six participants were not able to be coded due to technical difficulties with the recorded sessions. The coded middle and late alliance data for one participant was not used because it was an extreme outlier (three times the interquartile range).

The CGI-S based on parent report was missing for one participant at posttreatment and, as such, the change score from pre- to post-treatment for the CGI-S based on parent report was calculated for 90 participants. Teacher packets were not returned for 18 participants at pre assessment and 31 participants at post assessments. Fourteen of those participants were missing teacher-report data for both time points. Consequently, teacher-reported anxiety change scores were computed for 56 participants. Given that the CGI-I is only administered at the post assessment these data were not present for the 17 participants that attrited. Additionally, six participants did not have CGI-I ratings based on child-report at posttreatment because they did not have a diagnosis based on child-report at pretreatment. Lastly, the CGI-I based on child-report was missing for one participant; thus, mean CGI-I data was computed for 67 participants.

Assumptions

Assumptions

Box plots identified one extreme outlier in late alliance that was removed prior to conducting analyses. Normality for the variables of interest was examined using the Shapiro-Wilk test and Q-Q plots. Given that the sample was a clinical population and multiple indices of treatment outcome were included, non-normality was expected. Previous research has identified the *F*-test as robust to non-normality particularly when non-normal distributions are the result of skewness rather than outliers (Tiku, 1971). After examination of the histograms, it was determined that non-normality was the result of skewness.

Preliminary Analyses: Differences between groups on demographic and primary outcome variables

Chi-square tests of independence revealed non-significant differences between the number of school reluctant and non-school reluctant children in each treatment condition, $\chi^2(1) = 0.21, p = .65$. No significant differences were found for attrition status based on school reluctance status, $\chi^2(1) = 0.03, p = .85$. Further, the school-reluctant group did not differ from the non-school-reluctant group on demographic variables [i.e., race: $\chi^2(3) = 5.17, p = .16$, sex: $\chi^2(1) = 1.20, p = .27$, income: $\chi^2(8) = 4.79, p = .78$, marital status of parents: $\chi^2(4) = 2.53, p = .64$, or age: $t(89) = 0.52, p = .96$]. Differences in comorbidity were examined by school reluctance status through chi-square tests of independence. Significant differences in comorbid ADHD diagnosis were found for school reluctance status, $\chi^2(1) = 4.01, p < .05$; children with a comorbid ADHD diagnosis were more likely to be school reluctant than non-school reluctant. Consequently, comorbid ADHD diagnosis was added as a covariate in all subsequent analyses. No significant differences were found for any other comorbid diagnosis examined based on school reluctance status [i.e. anxiety: $\chi^2(1) = 0.83, p = .36$, OCD: $\chi^2(1) = 0.45, p = .51$, depression: $\chi^2(1) = 0.09, p = .77$, PTSD: $\chi^2(1) = 0.17, p = .68$, and ODD: $\chi^2(1) = 0.77, p = .38$].

A repeated measures analysis of covariance (RM-ANCOVA) was conducted to examine whether there were differences in alliance ratings at different points in treatment (i.e., early, middle, and late). The between-subjects factor was school reluctance status, the within-subjects factor was alliance at three time points (i.e., early, middle, late), and the covariate was ADHD diagnosis. Results revealed a significant main effect for alliance, $F(2, 65) = 6.22, p < .01, \eta_p^2 = .161$. Follow-up pairwise comparisons were conducted to examine mean differences in alliance at different time points; Bonferroni adjusted alpha levels of .017 per test were utilized to correct for the multiple comparisons. Results indicated significant differences between early alliance ($M = 38.57, SD = 3.62$) and middle alliance ($M = 36.71, SD = 4.39$) ratings ($p < .001$) and between early alliance and late alliance ($M = 35.20, SD = 5.46$) ratings ($p < .001$); there were no differences between middle and late alliance ratings ($p = .028$). To reduce the number of analyses that were conducted, middle and late alliance ratings were collapsed for all moderation analyses. There was not a significant effect for group, $F(1, 66) = 0.83, p = .37$ or a significant interaction effect for alliance by school reluctance status, $F(2, 65) = 0.07, p = .93$.

Paired-sample t -tests revealed non-significant differences in CGI-I ratings from interviews based on child- ($M = 1.79, SD = 0.84$) and parent- ($M = 1.99, SD = 0.83$) report, $t(67) = -1.58, p = .12$. Consequently, CGI-I ratings based on child- and parent-report were collapsed for all moderation analyses. Significant differences were found between CGI-S ratings based on child- and parent-report, $t(89) = 5.27, p < .01$ and thus, these ratings were kept separate in analyses. Change scores were calculated using standardized residuals given that these values adjust for random measurement error, whereas raw scores do not.

Primary Analyses: Tests of hypotheses

Three separate RM-ANCOVAs were conducted to test the first hypothesis that SR children would evidence poorer treatment outcomes compared to NSR children, as well as to examine changes in anxiety from pre- to post-treatment using clinician ratings of severity based on child report, clinician ratings of severity based on parent report, and teacher reported anxiety. The between-subjects factor for all three RM-ANCOVAs was school reluctance status and the covariate for all three RM-ANCOVAs was ADHD diagnosis. For the first RM-ANCOVA the within-subjects factor was clinician ratings of severity based on child-report (i.e., child CGI-S at pretreatment and child CGI-S at posttreatment). There was a significant effect for time, $F(1, 88) = 66.27, p < .01, \eta_p^2 = .430$, with decreases in anxiety symptoms from pre- to post-treatment. Additionally, there was a significant main effect of school reluctance status, $F(1, 88) = 5.06, p < .05, \eta_p^2 = .054$, with clinicians rating school reluctant children as having greater anxiety severity compared to their non-school reluctant counterparts based on child-report at both pre- and post-treatment. There was no significant time by group interaction, $F(1, 88) = 0.08, p = .77$. The within-subjects factor for the second RM-ANCOVA was clinician rating of severity based on parent report (i.e., parent CGI-S). There was a significant effect for time, $F(1, 87) = 72.46, p < .01, \eta_p^2 = .454$, with decreases in anxiety symptoms from pre- to post-treatment; however there were no significant differences by school reluctance status, $F(1, 87) = 0.22, p = .64$ nor was there a significant time by group interaction, $F(1, 87) = 0.20, p = .66$. For the third RM-ANCOVA the within-subjects factor was teacher-reported anxiety (i.e., TRF anxiety at pretreatment and TRF anxiety at posttreatment). No significant changes were found in anxiety symptoms over time, $F(1, 53) = 0.67, p = .42$ or by school reluctance status, $F(1, 53) = 1.11, p = .30$, nor was there a significant time by group interaction, $F(1, 53) = 1.77, p = .19$. See Table 2 for descriptive statistics of primary study variables.

The CGI-I was used as a measure of outcome in two ways. In the first analysis, an independent samples *t*-test examined mean improvement ratings at posttreatment and found no significant differences in treatment outcome by school reluctance status, $t(65) = 1.45, p = .15$. In the second analysis, a chi-square test examined the number of youth in each group who were considered a “responder” based on a CGI-I rating of 1 “very much improved” or 2 “much improved. Results of this analysis showed no significant differences in responder status by school reluctance status, $\chi^2(1) = 0.00, p = .99$. The presence/absence of the primary anxiety disorder diagnosis at posttreatment was also used to determine responder status, with those not meeting diagnostic criteria for their primary anxiety disorder diagnosis at posttreatment categorized as “responders.” A chi-square test revealed non-significant differences in responder status by school reluctance status, $\chi^2(1) = 0.51, p = .48$. Thus, hypothesis one was not supported.

Additional analyses were conducted to determine if school reluctance status changed over the course of treatment. Chi-square tests of independence did reveal significant differences in school reluctance status at pre- and post-treatment, $\chi^2(1) = 22.75, p < .01$, suggesting that a significant number of children who were school-reluctant at pretreatment were no longer school reluctant at posttreatment (n at pre = 41; n at post = 21).

The second hypothesis that therapeutic alliance would moderate the relationship between school reluctance status and treatment outcome, such that SR youth with a stronger therapeutic alliance would experience greater treatment gains than SR youth with a weaker therapeutic alliance was not supported. Moderation analyses were conducted using the SPSS PROCESS macro separately for early alliance and middle/late alliance. The independent variable for all moderation analyses was school reluctance status. The dependent variables were standardized residual change in CGI-S based on parent-report, standardized residual change in CGI-S based

on child-report, standardized residual change in teacher-report anxiety, and mean CGI-I rating. Early alliance did not significantly moderate the relationship between school reluctance status and any indicator of treatment outcome [i.e., standardized residual change in CGI-S based on child-report: $F(4, 81) = 1.48, p = .22$, standardized residual change in CGI-S based on parent-report: $F(4, 80) = 0.88, p = .48$, standardized residual change in teacher-reported anxiety: $F(4, 48) = 0.41, p = .80$, and CGI-I rating: $F(4, 61) = 1.03, p = .40$]. Further, no significant moderations were found when middle/late alliance was entered as the moderator of the relationship between school reluctance status and treatment outcome [i.e., standardized residual change in CGI-S based on child-report: $F(4, 64) = 1.21, p = .31$, standardized residual change in CGI-S based on parent-report: $F(4, 63) = 0.50, p = .74$, standardized residual change in teacher-reported anxiety: $F(4, 38) = 0.46, p = .76$, and CGI-I rating: $F(4, 57) = 1.82, p = .14$]. See Tables 3 and 4 for full moderation statistics.

CHAPTER 4

Discussion

School reluctant youth find school to be an aversive environment and often experience greater anxiety severity than their non-school reluctant counterparts. School reluctance in youth is an important area of study, given that children spend approximately fifty percent of their waking hours in school. While no research has yet examined the treatment of anxiety in school reluctant youth, there is strong support for CBT as a framework for the treatment of childhood anxiety disorders more broadly (Barrett, Duffy, Dadds, & Rapee, 2001; Kendall, 1994; Kendall, Hudson, Gosch, Flannery-Schroeder, & Suveg, 2008; Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006). Additionally, research has begun to examine the treatment of anxiety in school refusing youth with promising initial results (Heyne et al., 2011; King et al., 1998; Last et al., 1998). For school refusing anxious youth, preliminary research suggests that an augmented CBT approach in which parents, teachers, and school personnel are more directly involved may be beneficial (Heyne et al., 2011; King et al., 1998); however, this has not yet been directly compared to a traditional CBT approach in the literature. Given the lack of research examining treatment specifically for school reluctant youth, one aim of this study was to examine whether school reluctance status was a significant predictor of treatment outcome and to examine potential moderators of treatment response.

As there is no previous research on treatment outcome in school reluctant youth, hypotheses were informed by the literature on treatment outcome in school refusing anxious youth, as well as initial research on the clinical characteristics of school reluctant youth.

Research suggests a positive treatment response for school refusing anxious youth when a CBT approach is utilized, particularly when parents and teachers have significant involvement in the treatment process. As school reluctant youth exhibit higher anxiety severity than their non-school reluctant counterparts, it was hypothesized that school reluctance status would be a significant predictor of treatment outcome, such that school reluctant children would have poorer treatment outcomes in comparison to non-school reluctant youth. Various indicators of treatment outcome were explored, including standardized residual changes in clinician-rated anxiety severity based on parent- and child-report (CGI-S), standardized residual changes in anxiety based on teacher-report (TRF), and clinician-rated improvement in anxiety symptoms based on parent- and child-report (CGI-I). Additionally, this study examined treatment outcome from a treatment responder framework by categorizing participants as treatment responders if they were rated as “much improved” or “very much improved” by clinicians, or if their primary anxiety diagnosis was absent at post-treatment. Though treatment outcome was examined myriad ways and informed by teacher-report, as well as clinician-report based on information garnered from parents and children, results of this study did not support the initial hypothesis and suggest that school reluctance status is not a significant predictor of treatment outcome.

Prior work showed meaningful differences in presentation between school reluctant and non-school reluctant anxious youth (Jones & Suveg, 2015). In particular, school reluctant youth are more likely to experience higher levels of loneliness, higher levels of negative affectivity, and greater anxiety severity than their non-school reluctant counterparts. Thus, it was expected that such youth would have poorer treatment response; however, current results did not support this hypothesis. As anxiety severity has been identified as a significant predictor of treatment outcome for childhood anxiety disorders (Compton et al., 2014), anxiety severity may have been

a more potent predictor of treatment outcome compared to school reluctance status. With that said, school reluctant youth show significantly higher levels of anxiety severity than their non-school reluctant counterparts; however, this is just one way in which the two groups differ. It could be that other differences between the two groups (i.e., negative affectivity and loneliness) have less predictive power in terms of treatment outcome, which may, in part, explain why school reluctance status did not significantly predict treatment outcome.

Given the documented support for the therapeutic alliance as a meaningful variable in treatment outcome for anxious youth more broadly (Chu & Kendall, 2004; Hughes & Kendall, 2007), this study also sought to examine whether the therapeutic alliance at different points in treatment moderated the relationship between school reluctance status and treatment outcome. Previous research has highlighted that school reluctant youth experience higher levels of loneliness, anxiety severity, and negative affectivity than their non-school reluctant counterparts (Jones & Suveg, 2015). Additionally, prior research suggests that the extent of the aforementioned difficulties experienced by school reluctant children are not readily observed by teachers and parents (Jones & Suveg, 2015). As such, it was hypothesized that the therapeutic alliance would moderate the relationship between school reluctance status and treatment outcome, such that school reluctant youth with a stronger therapeutic alliance would experience greater treatment gains than school reluctant youth with a weaker therapeutic alliance.

Since significant differences between alliance early in treatment and alliance during the middle and late portions of treatment were present, analyses were conducted separately to examine the impact of alliance early in treatment and the impact of alliance during middle/late portions of treatment on the relationship between school reluctance status and treatment outcome. This hypothesis was not supported as neither therapeutic alliance early nor during

middle and late portions of treatment significantly moderated the relationship between school reluctance status and various indicators of treatment outcome based on teacher-report, as well as, clinician ratings informed by child- and parent-report. Thus, it appears that school reluctant youth with a stronger therapeutic alliance do not experience greater treatment gains when compared to school reluctant youth with a weaker therapeutic alliance. One reason for the lack of findings may be the very small variability in therapeutic alliance in the current study, with the majority of children having a positive therapeutic alliance and relatively few having a poor therapeutic alliance. Across studies, therapeutic alliance tends to be high (Chiu et al., 2009; Liber et al., 2010) and this may be a core ingredient of effective child therapy for all youth.

Though therapeutic alliance did not moderate outcomes, it is noteworthy that both groups experienced significant reductions in anxiety at posttreatment based on clinician impressions garnered from both child- and parent-interviews. However, there were no significant differences found between pre- and post-treatment anxiety symptoms for either group based on teacher-report. Research would support that change in anxiety symptoms from pre- to post-treatment is often recognized and reported by teachers (Kendall et al., 1997; Kendall et al., 2008). Thus, it was surprising that results of this study did not show significant improvement in anxiety symptoms based on teacher-report. One explanation for this could be the relatively small number of teacher-reported measures completed during the current study ($n = 56$), relative to the total sample size ($N = 91$). Effects may have been detected had the sample of teachers participating in the current study been commensurate with the total sample size. Of note, when examining the raw data there appears to be a trend towards a decrease in teacher-reported anxiety symptoms from pre- to post-treatment for the school reluctant group (pre $M = 3.96$; post $M =$

3.22); however, that trend is not seen for the non-school reluctant group (pre $M = 2.83$; post $M = 2.90$).

As there is strong support for CBT for the treatment of childhood anxiety disorders, it is not surprising that there was a favorable treatment response for both groups. As school reluctant children attend school, despite finding it to be an aversive environment, it is possible that the core elements of CBT for anxiety are the same across groups (e.g., exposures and cognitive restructuring). Despite school reluctant children being meaningfully different from their non-school reluctant counterparts in some ways (e.g., loneliness, anxiety severity, negative affectivity; Jones & Suveg, 2015), both school reluctant and non-school reluctant children attend school. Treatment for school refusing youth often requires treatment modifications because these children are actively refusing to attend school, which presents a substantial challenge. In contrast, both school reluctant and non-school reluctant children are consistently attending school and, as such, modifications may not be necessary to treatment protocols for school reluctant youth. Further, results showed that there was a significant decrease in the number of children who were school reluctant at pretreatment and those that were school reluctant at posttreatment. The skills learned in CBT interventions for child anxiety may be readily applied to the issue of school reluctance by teaching children appropriate coping skills and helping them to develop self-efficacy and confidence in their ability to tolerate aspects of school that they find less pleasant. For instance, the use of cognitive restructuring may be particularly beneficial in re-framing a child's thoughts about an aversive aspect of the school setting. If the child's original thought is "I will mess up and say something dumb if I have to talk in class," the therapist may work with the child to generate alternative thoughts that may be more helpful in the given situation, such as "It is okay to mess up. No one is perfect" or "I haven't said

something dumb before when talking in class, so there's a good chance I won't say something dumb this time either." Likewise, exposures, such as repeatedly answering questions in class or talking to adults, may be conducted to decrease avoidance and anxiety by helping children to actively cope with anxiety-provoking situations. Further, the therapist can discuss when relaxation strategies such as progressive muscle relaxation (e.g., tightening and then loosening fists under the desk) or diaphragmatic breathing may be beneficial for the child to utilize during the school day to cope with anxiety. Collectively, the results are promising and suggest that school reluctant youth respond favorably to CBT interventions for childhood anxiety.

This study had limitations, including the relative homogeneity of the sample in regards to race and socio-economic status. Consequently, these results may not generalize to children and families from differing backgrounds. Future research should aim to include a more heterogeneous sample to improve the generalizability of the findings. Further, no gold standard measure of school reluctance yet exists and future research would benefit from a uniform measure that assesses school reluctance to provide a means for comparison across studies. There were no school refusing children in the current study and, thus, comparisons could not be made between school refusing and school reluctant children. Future studies should incorporate both school refusing and school reluctant children in order to assess whether there are distinct differences in treatment outcome and the role of the therapeutic alliance between these two groups. While both school reluctant and non-school reluctant youth showed a favorable response to CBT, it is difficult to draw specific conclusions from this finding given that a control condition was not present in the current study. As such, it may be that school reluctance tends to resolve with the passage of time, regardless of whether or not cognitive behavioral therapy is implemented. Additionally, there may be other treatments that are equally as effective in

reducing school reluctance. Despite the limitations of the current study, it examines a relatively novel construct in school reluctance and provides initial support for a decrease in anxiety symptoms as reported by parents and children following completion of cognitive behavior therapy, regardless of school reluctance status.

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Table 1.

Demographics

	<i>N</i>	%	<i>M (SD)</i>	Range
Child age			8.91 (1.64)	6-13
Child sex				
Female	39	42.9		
Male	52	57.1		
Child race				
Caucasian	79	86.8		
Black	6	6.6		
Hispanic	3	3.3		
Other	3	3.3		
Parent Marital Status				
Never married	11	12.1		
Married	65	71.4		
Separated	2	2.2		
Divorced	10	11.0		
Widowed	3	3.3		
Household Income				
\$0-\$9,999	1	1.1		
\$10,000-\$29,999	13	14.3		
\$30,000-\$49,999	15	16.5		
\$50,000-\$69,999	16	17.6		
\$70,000-\$79,999	5	5.5		
\$80,000 +	41	45.1		
Mother Education				
Partial high school	1	1.1		
High school graduate	7	7.7		
Partial college	18	19.8		
College graduate	37	40.7		
Graduate school	28	30.8		
Father Education				
Other	1	1.1		
Partial high school	2	2.2		
High school graduate	14	15.4		
Partial college	20	22.0		
College graduate	25	27.5		
Graduate school	26	28.6		

Table 2.

Descriptive Statistics of Main Study Variables

	School Reluctant (SR)			Non-School Reluctant (NSR)		
	n	M	SD	n	M	SD
Early Alliance	37	38.43	3.98	49	38.25	3.84
Mid/Late Alliance	29	36.19	4.35	40	35.79	4.12
Mean CGI-I	32	1.77	0.68	35	2.00	0.64
CGI-S Pretreatment (Child Report)	41	4.27	1.23	50	3.64	1.10
CGI-S Posttreatment (Child Report)	41	2.80	1.42	50	2.22	1.39
CGI-S Pretreatment (Parent Report)	41	4.80	0.79	50	4.78	0.71
CGI-S Posttreatment (Parent Report)	40	3.23	1.44	50	3.36	1.19
TRF Anxiety Pretreatment	33	3.96	2.89	40	2.83	2.87
TRF Anxiety Posttreatment	28	3.22	2.69	32	2.90	2.73

Note. CGI-I = Clinical Global Impression-Improvement; CGI-S = Clinical Global Impression-Severity; TRF = Teacher Report Form

Table 3.

Alliance Early in Treatment as a Moderator of the Relation between School Reluctance Status and Treatment Outcome

Outcome Variable	<i>b</i> (SE)	<i>t</i>	95% CI	<i>R</i> ²	<i>F</i> (4, 81)
Δ Child CGI-S				.08	1.48
Early Alliance	.04 (.03)	1.19	-.03, .11		
SR Status	.10 (.24)	0.43	-.37, .58		
Early Alliance X SR Status	.00 (.06)	0.05	-.13, .13		
					<i>F</i> (4, 80)
Δ Parent CGI-S				.03	0.88
Early Alliance	-.03 (.02)	-1.32	-.08, .02		
SR Status	-.17 (.22)	-0.79	-.61, .26		
Early Alliance X SR Status	.02 (.05)	0.36	-.08, .12		
					<i>F</i> (4, 48)
Δ TRF Anxiety				.02	0.41
Early Alliance	-.03 (.05)	-0.51	-.13, .08		
SR Status	-.16 (.32)	-0.49	-.81, .49		
Early Alliance X SR Status	.00 (.11)	0.03	-.22, .22		
					<i>F</i> (4, 61)
CGI-I				.08	1.03
Early Alliance	-.01 (.03)	-0.24	-.06, .04		
SR Status	-.31 (.19)	-1.59	-.69, .08		
Early Alliance X SR Status	-.01 (.05)	-0.18	-.12, .10		

Note. CGI-S = Clinical Global Impression-Severity; TRF = Teacher Report Form; CGI-I = Clinical Global Impression-Improvement

Table 4.

Alliance Middle/Late in Treatment as a Moderator of the Relation between School Reluctance Status and Treatment Outcome

Outcome Variable	<i>b</i> (SE)	<i>t</i>	95% CI	<i>R</i> ²	<i>F</i> (4, 64)
Δ Child CGI-S				0.07	1.21
Mid/Late Alliance	.02 (.03)	0.46	-.05, .08		
SR Status	.11 (.27)	0.40	-.43, .64		
Mid/Late Alliance X SR Status	.01 (.06)	0.17	-.12, .14		
					<i>F</i> (4, 63)
Δ Parent CGI-S				0.03	0.5
Mid/Late Alliance	-.01 (.03)	-0.37	-.06, .04		
SR Status	-.26 (.23)	-1.12	-.72, .20		
Mid/Late Alliance X SR Status	-.02 (.05)	-0.47	-.13, .08		
					<i>F</i> (4, 38)
Δ TRF Anxiety				0.05	0.46
Mid/Late Alliance	.01 (.04)	0.24	-.08, .10		
SR Status	-.20 (.37)	-0.52	-.95, .56		
Mid/Late Alliance X SR Status	-.10 (.09)	-1.16	-.28, .08		
					<i>F</i> (4, 57)
CGI-I				0.13	1.82
Mid/Late Alliance	-.00 (.02)	-0.10	-.05, .05		
SR Status	-.43 (.19)	-2.27*	-.81, -.05		
Mid/Late Alliance X SR Status	.01 (.05)	0.27	-.09, .12		

Note. CGI-S = Clinical Global Impression-Severity; TRF = Teacher Report Form;
CGI-I = Clinical Global Impression-Improvement

* $p < .05$