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COMBINED COGNITIVE BEHAVIORAL TREATMENT PLUS
CAREGIVER SESSIONS FOR CHILDHOOD DEPRESSION

by

Dikla Eckshtain

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Department of Psychology
Dr. Scott Gaynor, Advisor

Western Michigan University
Kalamazoo, Michigan
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Dikla Eckshtain

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CHAPTER I

REVIEW OF LITERATURE

Childhood Depression

The prevalence of major depression in children ranges from 0.4% to 2.5% (Cicchetti & Toth, 1998) with similar rates for boys and girls (see Birmaher et al., 1996). Childhood depression is characterized by a range of behavioral, cognitive and physiological symptoms. These symptoms include irritability, diminished interest or pleasure in activities, failure to make expected weight gains, sleeping problems, loss of energy and fatigue, feelings of worthlessness, diminished ability to concentrate, social withdrawal (*DSM-IV-TR*, APA, 2000), somatic complaints (Birmaher et al., 1996), low self-esteem, cognitive distortions (McCauley, Mitchell, Burke, & Moss, 1988), negative thinking (Mash & Wolfe, 2007), negative, unrealistic, and unreasonable self-evaluations (Kendall, Stark, & Adam, 1990; Stark, Swearer, Kurowski, Sommer, & Bowen, 1996), and adjustment problems (Levendosky, Okun, & Parkert, 1995). Depressive episodes experienced by children can be of a long duration and children who overcome their initial depressive episode are at high risk for experiencing later episodes of depression and impairments in other domains of their life (Mash & Wolfe, 2007).

In addition to those meeting *DSM* criteria for major depression there are a substantial number of children with significant, yet sub-threshold symptoms that experience functional impairment and are at risk for worsening symptoms. Moreover,

depressive disorders may be under-recognized in children due to their inability to verbally express feelings, the presence of accompanying psychiatric symptoms which can make recognition of depressive symptoms difficult, and the fact that unless a child is especially irritable, aggressive, or exhibits marked social withdrawal, depressive symptoms might not be noticed by parents or teachers (Sabatino, Webster, & Vance, 2001).

Cognitive Behavioral Treatment (CBT) for Childhood Depression

Cognitive behavioral treatment (CBT) is the best-evaluated psychosocial treatment (Harrington, Whittaker, & Shoebridge, 1998; Weersing & Weisz, 2002; Weisz, Hawley, & Jensen-Doss, 2004) and has been the most frequently investigated for depression in young people (Birmaher et al., 1996; Feehan & Vostanis, 1996; Kaslow & Thompson, 1998; Kazdin & Weisz, 1998; Weisz et al., 2004; Weisz, Jensen Doss, & Hawley, 2005). There are 10 controlled studies of CBT interventions with school age children who presented with elevated depressive symptoms (Asarnow, Scott, & Mintz, 2002; Butler, Mieozitis, Friedman, & Cole, 1980; De Cuyper, Timbremont, Braet, De Backer, & Wullaert, 2004; Eckshtain & Gaynor, 2007a; Kahn, Kehle, Jenson, & Clark, 1990; Liddle and Spence, 1990; Stark, Reynolds, & Kaslow, 1987; Vostanis, Feehan, Grattan, & Bickerton, 1996; Weisz, Thurber, Sweeney, Proffitt, & LeGagnoux, 1997; Wood, Harrington, & Moore, 1996). In general, the studies support the potential efficacy of CBT, making it the psychosocial treatment with the greatest base of evidence to support its use in treating children with depressive symptoms. As Chorpita et al. (2002)

summarized in a recent review of the literature, “Of the available psychosocial treatments reviewed, CBT appeared to be the treatment of choice” (p. 175).

Six of the 10 studies of CBT have used school-based samples with treatment delivered in a group format (Feehan & Vostanis, 1996). There are advantages to group interventions, such as increasing access to and cost-effectiveness of services. Some potential limitations also warrant consideration, such as ensuring individualized application of skills within the groups and involving caregivers in the treatment. These latter considerations are more easily accomplished when children receive individual treatment. Thus, there appears to be a give-and-take relationship between various treatment format. As for service delivery location, two of the explicitly stated goals emerging from the Report of the Surgeon General’s Conference on Child Mental Health (U.S. Public Health Service, 2000) were to (a) “continue to develop, disseminate, and implement scientifically-proven prevention and treatment services in the field of children's mental health” (USPHS, 2000, p. 5) and to (b) “increase access to and coordination of quality mental healthcare services” (USPHS, 2000, p. 7). To accomplish these goals, the report recommended making services available to youth in places where they congregate, such as schools, and evaluating the utility of services delivered in these real-world settings to determine their effectiveness and increase the connection between research and clinical practice (see also Tolan & Dodge, 2005).

Based on these recommendations, the goal of the present study was to offer free individual CBT, provided at school. This approach allowed children who might not have been able to receive specialized services at a clinical setting due to financial,

transportation, or other familial considerations to access services. In addition, conducting treatment onsite appeared to optimize referrals and access to treatment because school staff (including teachers, school psychologists, counselors, and social workers) are usually among the first to identify problems (Connor-Smith & Weisz, 2003; Reynolds & Stark, 1987), may even be better than parents in identifying internalizing problems in children (Mesman & Koot, 2000), and thus can facilitate and support appropriate referrals to the treatment study (Connor-Smith & Weisz, 2003; Reynolds & Stark, 1987). In addition, providing treatment for depression at school has other benefits, including the fact that some depressive symptoms, like social withdrawal and academic difficulties, can be best observed at school (Burns & Hickie, 2002).

In one of the largest CBT randomized clinical trials with children, Weisz et al. (1997; see also Weisz, Southam-Gerow, Gordis, & Connor-Smith, 2003) compared CBT, using the Primary-Secondary Control Enhancement Training (PASCET) manual (Weisz et al., 1997), with a no-treatment control condition in elementary school students. The 16 children who received PASCET, provided in groups and at school, had significantly greater reductions in depressive symptoms compared to the 32 in the wait-list control condition. The PASCET manual (Weisz, Moore, & Southam-Gerow, 1999) was used in the current study in its revised version adjusted to be administered in 16, 45-minute, sessions. However, Weisz et al. (1997), like many studies, included only children who met the criteria for depressive disorders targeted in the study. This may create a situation that is different from clinical settings, where clinicians often see children with multiple difficulties and disorders (Connor-Smith & Weisz, 2003). Thus, in the current study

significant depressive symptoms were required for inclusion but exclusionary criteria were as unrestrictive as possible to allow for better generalization of findings.

Despite the empirical support CBT has as a treatment for depressed youth, a recent meta-analysis (Weisz, McCarty, & Valeri, 2006) of the effects of psychotherapy for depressed children and adolescents had somewhat pessimistic conclusions about the current state of treatment. They found that treatments produce significant effects, but that the effects are modest in strength, breadth, and durability and that depression treatments do not surpass (but instead may lag significantly behind) treatments for other youth conditions. Following these findings, two of their recommendations were to increase the dose of treatment (with the average dose being 13 hours) and to increase the potency of treatments by adding components to create more multi-component packages and by encouraging the use of new methods. One of the components that can be added to the treatment of depressed youth is greater inclusion of caregivers.

The Family and the Child with Depressive Symptoms: Implications for Treatment

Childhood depression emerges in the context of the family (Hammen, 1995) and is associated with stressful life experiences (Cicchetti & Toth, 1998; Kronenberger & Meyer, 2001) and relationship impairments (Dujovne, Barnard, & Rapoff, 1995) that contribute to the development and maintenance of depressive symptoms (Cicchetti & Toth, 1998; Kronenberger & Meyer, 2001). Recognition of the relationship between family variables and the development of depressive symptoms in children (Racusin & Kaslow, 2004) and the severity and course of symptoms (McCauley & Myers, 1992), has

potential treatment implications. Specifically, a number of authors have called for greater inclusion of caregivers in the treatment of depressed children (Hammen, Rudolph, Weisz, Rao, & Burge, 1999; Stark et al., 1996; Vuchinich, Wood, & Angelelli, 1996).

The psychopathology literature reveals a number of variables which could be targeted for greater inclusion of caregivers. For instance, a meta-analytic review by Lovejoy, Grczyk, O'Hare, and Neuman (2000) found that parents of depressed children are less engaged with the child, engage in fewer positive behaviors towards the child, and express more hostility and negativity. These results support suggestions that families of depressed children are often not involved in many fun activities with the child (Lovejoy et al., 2000; Stark, Ballatore, Hamff, Valdez, & Selvig, 2001; Stark, Sander, Yancy, Bronik, & Hoke, 2000; Stark et al., 1996). These conclusions indicate that increasing quality time spent in enjoyable activities between the caregivers and the child may have positive influences on the child's depressive symptoms and family relations.

Families of depressed children have also been described as providing low levels of both verbal and nonverbal rewards and reinforcement for adaptive behavior, and instead may inadvertently reinforce depressive behavior (Sheeber, Hops, & Davis, 2001). For instance, caregivers may react to their children in ways that promote negative and depressive behaviors, such as often leaving the child alone, and not encouraging and reinforcing social engagements and positive behaviors from the child (Messer & Gross, 1995). Depressive behavior may also be passed from parents to children through modeling of depressive behaviors (Kovacs, 1997). Translating this to the treatment milieu suggests working with caregivers on ways of detecting and reinforcing positive, adaptive,

non-depressive behaviors may improve the child's emotional state and may also increase the occurrence of more positive behaviors. Also, increasing the occurrence of positive behaviors can provide caregivers with more opportunities to reinforce the child, may improve the caregiver-child interaction, and may make the home environment more positive and pleasant, thereby decreasing depressive symptoms.

Childhood depression is also related to dysfunctional and ineffective communication styles. As such, it is not surprising that families of depressed children are characterized by the presence of high levels of conflict (Crethar, Snow, & Carlson, 2004; Garber & Horowitz, 2002; Stark et al., 2005; Stark, Rouse, & Kurowski, 1994; Stark & Smith, 1995; Stark et al., 1996), criticism, and argumentativeness (Kazdin & Marciano, 1998). Relatedly, it appears that parents of depressed children have difficulty listening to and expressing emotional support for their children (Stark et al., 2000; Stark & Smith, 1995; Stark et al., 1996), responding sensitively to their children's emotional needs (Messer & Gross, 1995), and failing to communicate clearly and consistently and resolve disputes effectively. As such, including the family for communication skills training may be beneficial (Sanders, Dadds, Johnston, & Cash, 1992). Working on dysfunctional family interaction characteristics and improving communication may alleviate family tension and may assist in decreasing the child's depressive symptoms.

In addition to coming from families with decreased positivity, heightened negativity, and problematic communication styles, depressed children perceive family and personal decisions as being less democratic (Stark, Humphrey, Crook, & Lewis, 1990). In families of anxious-depressed children there are more conflicts and less-developed

problem solving strategies (Nilzon & Palmerus, 1997). Thus, including caregivers for problem solving training may be beneficial (Sanders et al., 1992). Changes in their approach to solving problems may help reduce conflict and could strengthen the child's self-efficacy and facilitate the child's use of coping skills in everyday life. Also, more productive ways of solving problems may further reduce the negative interaction patterns between the caregivers and child.

In addition to the importance of including the family in the treatment of depressed children due to the link between parental characteristics and childhood depression, there are other potential advantages for including caregivers in the treatment. Fully understanding each child's depressive symptoms and providing most effective intervention likely requires an understanding of the home environment and the relation between the symptoms and the context in which they occur. Parents can provide valuable information about treatment progress (Verduyn, 2000) and additional information about the symptoms the child presents with. The information they provide can allow for better adjustment of the treatment to the child's home environment and individual needs (Dujovne et al., 1995; Vuchinich et al., 1996). Caregivers are important for assisting the child in implementing the skills acquired during the individual therapy in the natural, everyday environment (Stark et al., 2000), supporting the child in making changes in daily activities (Verduyn, 2000), promoting learning and practice of new skills (Harrington et al., 1998), and potentially changing aspects of the surroundings that might be related to the symptoms (Stark et al., 1996). Finally, family involvement for psychoeducation regarding depression and the treatment may promote better

understanding of the child and may encourage greater adaptive contact between the caregivers and the child, helping to decrease depressive symptoms and enhance relationships and functioning (Sexson, Glanville, & Kaslow, 2001). Recent pilot data support the approach of including caregivers, suggesting that psychoeducation can improve relationships within the families of children with mood disorder symptoms (Fristad, Gavazzi, & Soldano, 1998).

Despite the compelling case for formally including caregivers into the treatment of depressed children, few empirical studies have done so. Eckshtain and Gaynor (2007b) conducted a literature review to assess how caregivers have been included in intervention studies for depressed youth. They identified 64 studies with school-age or adolescent samples, both prevention and outpatient treatment studies, and found that caregivers were under-incorporated in intervention studies for depressed youth. In 47% of the studies caregivers received psycho-education about childhood depression and/or the therapy provided and in only 36% of the studies were caregivers explicitly included in the intervention via family sessions, parent training, or parent-child sessions designed to address family climate and caregiver-child relations. With regard to assessment and evaluation, they found that in only 56% of the studies did caregivers complete measures of their child's functioning, in only 14% of the studies did caregivers complete a measure of intervention satisfaction, and in only 33% of the studies did caregivers or the child complete measures of family functioning or caregiver-child relations.

To address the lack of caregiver inclusion, Eckshtain and Gaynor (2007a) conducted an intervention that combines individual CBT with caregiver/caregiver-child

sessions. They developed four caregiver sessions focusing on positive parenting and positive caregiver-child interactions. These sessions were added to the PASCET manual, and include three parent sessions focusing on psychoeducation regarding depression and the treatment, gathering information from the caregivers regarding the child and the home environment, and promoting better understanding of the child's condition and the treatment progress. The six children treated by Eckshtain and Gaynor (2007a) showed significant reductions in depressive symptoms. Moreover, both caregivers and children appreciated the additional caregivers' sessions, with most caregivers reporting some level of improvement in family relationships and greater use of positive parenting practices. The largest change occurred in the amount of dedicated "special time" caregivers spent with the child.

The results from this study coalesce with other approaches and suggestions to increase caregiver involvement in treatment (Asarnow et al., 2002; Fristad et al., 1998; Fristad, Goldberg-Arnold, & Gavazzi, 2003). Even when the focus of the treatment is mainly on the child, the family can still potentially benefit from supportive, educational, and targeted interventions.

McLeod and Weisz (2005) provide another interesting reason for further including caregivers. Specifically, they found that a strong parent-therapist alliance was related to improvement in child anxiety and depressive symptoms while a strong child-therapist alliance was related only to improvement in the child anxiety symptoms. Thus, to the extent that multiple interactions between the therapist and the caregiver contribute to the alliance, this could have positive influences on the child's depressive symptoms.

Statement of Purpose

In the present study, CBT, based on the PASCET manual (Weisz et al., 1999), was provided in an individual format to 15 children with depressive symptoms. Individual treatment in a school setting allowed for a specific focus on each child's behavioral patterns and cognitive habits. It also allowed for increased direct involvement of primary caregivers (Hammen et al., 1999; Weisz et al., 1997) in a setting that allowed children to participate who, due to financial, transportation, or other familial considerations, would not have been able to access services.

In addition, the current study added caregiver sessions. The goal was to target the above outlined familial deficits to promote better familial relationships and to decrease the child's depressive symptoms as well to enlist the help of the caregivers in promoting use and generalization of individual treatment skills outside the session. Changes in depressive symptoms were analyzed at the group level and with reference to established cutoff scores on the measures used. In addition, the results were benchmarked against comparable existing randomized clinical trials. Additional analyses explored changes in the psychosocial functioning, cognitive style, activity level, coping skills, caregiver-child relations, and parenting stress. Finally, the role of pre-treatment variables as moderators and change in the first phase of treatment as predictive of later depression change were also assessed.

CHAPTER II

METHOD

Participants

Fifteen youth, 10 females and 5 males, between the ages of 8 and 13 ($M = 10.27$, $SD = 2.02$) participated (see Table 1). All participants, along with a custodial caregiver, were from three elementary schools and one middle school belonging to the Vicksburg Community Schools. Referrals to the study were made by school counselors. As can be seen in Table 2, for 26.7% ($n = 4$) of the participants two caregivers participated, while the remaining 73.3% ($n = 11$) had one caregiver that participated.

Referrals were initiated by the schools. When one of the school counselors was interested in referring a child to the study, she administered the Children's Depression Inventory (CDI; Kovacs, 1992) to the potential participant. The CDI is a measure that prior to the proposal of this study has been used in routine practice by Vicksburg Community Schools to assess depression severity. Consistent with cutoffs recommended in the literature, potential participants were required to endorse at least mild to moderate symptoms of depression, as assessed via a score ≥ 12 on the CDI in order to be referred to the treatment (Szigethy et al., 2004; Weisz et al., 1997). This cutoff criterion resulted in an average screening CDI score of 20.2 ($SD = 8.48$) for the included children, with scores ranging from 12 to 47. If a child did not score 12 or above on the CDI, the child was still eligible for services from the school counselors, but was not be eligible for consideration

Table 1

Demographic Characteristics of Participants

Variable	%	<i>n</i>
Age		
8	26.7%	(4)
9	13.3%	(2)
10	26.7%	(4)
11	0%	(0)
12	6.7%	(1)
13	26.7%	(4)
Grade		
3 rd	26.7%	(4)
4 th	26.7%	(4)
5 th	13.3%	(2)
6 th	0%	(0)
7 th	13.3%	(2)
8 th	20%	(3)
Gender		
Male	33.3%	(5)
Female	66.7%	(10)
Race/ethnicity		
Caucasian	86.7%	(13)
Multi Racial	13.3%	(2)
Previous Psychotherapy Services		
Yes	80%	(12)
No	20%	(3)
Current use of psychiatric medications		
Yes	26.7%	(4)
No	73.3%	(11)
Past use of psychiatric medications		
Yes	46.7%	(7)
No	53.3%	(8)
History of sexual abuse		
Yes	13.3%	(2)
No	86.7%	(13)
Past involve. of child protective services		
Yes	20%	(3)
No	80%	(12)
# of participants involved in SIB (cutting)		
Yes	13.3%	(2)
No	86.7%	(13)

for participation in the study protocol. As will be specified in detail in the procedure section, if the child scored 12 or above on the CDI, the counselor contacted the child's caregivers via phone to invite them to be assessed for participation in the study.

To be included in the study, the referred potential participants were required to score higher than 11 on the CDI when administered by the therapist investigator. This requirement is consistent with Kovacs's (1992) report that CDI cutoff scores of 11.8 were associated with Major Depressive Disorder (Kovacs, 1992). The cutoff criterion resulted in an average group baseline CDI of 17.73 ($SD = 7.09$). Across the participants the average baseline scores ranged from 11 to 36. Participants also had an average of 47.4 ($SD = 8.04$) on the Children's Depression Rating Scale – Revised (CDRS-R; Posnanski & Mokros, 1996). The mean CDRS-R total score translates to a normed T -score of 67.3 ($SD = 5.38$), indicating that depressive disorder is likely.

All the 15 participants who met inclusion criteria completed treatment. None of the participants expressed an interest to discontinue participation during the course of the treatment. One participant completed the treatment but, due to caregiver hospitalization in a rehabilitation program, did not complete the caregiver termination session and the one-month follow up assessment.

Exclusion Criteria and Excluded Participants

Exclusion criteria were current primary symptoms of a non-depressive disorder that suggested a more immediate need for alternative services, such as severe conduct disorder (extreme antisocial and aggressive behavior), schizophrenia-spectrum disorder,

autism-spectrum disorders, severe/profound mental retardation, intense anxiety, and family discord. Another exclusion criterion was report of acute suicidality, meaning suicidal ideation with a plan, means, and level of intent that made the child a high risk case, based on the suicidality interview and/or unwillingness to sign a no suicide contract (see Appendix A). Children who were taking medications were eligible if they had been on the same medication and dose for 2 months prior to enrollment, continued to meet entry criteria, and consented to the therapist investigator contacting the prescribing physician to discuss medication management during the study period (see Appendix B).

One child, a 10-year-old female, scored 6 on the baseline CDI following a score of 46 on the screening CDI. Therefore she failed to meet inclusion criteria. She did receive the treatment following the HSIRB requirement that children who scored above 12 on the screening CDI and who were still interested in participating in the study, would be allowed to do so even if their baseline CDI was lower than 11. However, her data were not included in the analyses. Her CDI and CDRS-R scores remained low at mid-treatment (2 and 26, respectively), and post-treatment (3 and 19, respectively).

In addition, three children that met inclusion criteria when the school counselor administered the CDI were excluded. The first child, a 12-year-old female, presented with prominent family difficulties that required different services. Following a comprehensive pre-treatment assessment and a baseline CDI of 6, it was concluded that she reported depressive symptoms when her father, who is divorced from her mother, is not involved in her life, something that happened sporadically. During the pre-treatment assessment the father became again involved in her life, which resulted in her presenting no

depressive symptoms. Based on the mother's report, the father had told her that he planned to make an effort to take a more active role in raising his daughter, something that based on the mother's report had not happened before. Following this information and a consultation with the mother and the school counselor, who had a long history working with the family, it was decided to wait and have the counselor keep assessing the father's involvement in the girl's life and its influence on her. The second child, an 11-year-old male, presented with severe anxiety that required different services. The third child, an 11-year-old male, refused to participate in the study. The therapist investigator worked along with the school professionals and the caregivers to find another referral source for services if this was desired by the family. The first child was monitored by the counselor, the second child received services outside the school, and the third child refused to receive any services.

Sample Characteristics

As can be seen in Table 1, 26.7% ($n = 4$) of the participants were in 3rd grade, 26.7% ($n = 4$) in 4th grade, 13.3% ($n = 2$) in 5th grade, 13.3% ($n = 2$) in 7th grade, and 20% ($n = 3$) in 8th grade. The vast majority, 86.7% ($n = 13$), of the participants were Caucasian and 13.3% ($n = 2$) multiracial. Large percentage of the participants, 80% ($n = 12$), had a history of previous psychotherapy and 46.7% ($n = 7$) had a history of use of psychiatric medications. Of these, four used stimulants, two used non-stimulant, two used SSRIs, one used a selective norepinephrine and dopamine reuptake inhibitor, one used a mood stabilizer, and one used an antipsychotic medication. During the treatment, 26.7% ($n = 4$)

were using stimulant medications and met the requirement of using the same medication and dose for 2 months prior to enrollment and throughout their participation. As can be seen, 13.3% ($n = 2$) of the participants, both females, had a history of sexual abuse, and 20% ($n = 3$) of the children had a past involvement with Child Protective Services. Involvement in self cutting before treatment started was reported by 13.3% ($n = 2$) of the participants.

As can be seen in Table 2, 73.3% ($n = 11$) of the participants lived in two caregiver home with 46.7% ($n = 7$) living with both biological parents, 20% ($n = 3$) living with two adoptive caregivers, and 6.7% ($n = 1$) living with one biological parent and one step-parent. The remaining 26.7% ($n = 4$) of the participants lived in a single caregiver home, with 20% ($n = 3$) living with their biological mothers and 6.7% ($n = 1$) living with biological fathers. For 46.7% ($n = 7$) of the families the annual income was higher than 75,000, for 20% ($n = 3$) it was in the range of 50,000 to 75,000, for 13.3% ($n = 2$) it was in the range of 25,000 to 50,000, and for 20% ($n = 3$) it was in the range of 0 to 25,000. Considering all the caregivers of the participants, 25% ($n = 7$) either graduated from high school or had a GED, 10.7% ($n = 3$) attended college, 17.9% ($n = 5$) graduated from Trade School or had a 2-year degree, 14.3% ($n = 4$) had a Bachelor's degree, and 32.1% ($n = 9$) had a post Bachelor's degree. Of the caregivers that participated in the treatment, 31.6% ($n = 6$) either graduated from high school or had a GED, 5.3% ($n = 1$) attended college, 10.5% ($n = 2$) graduated from Trade School or had a 2-year degree, 15.8% ($n = 3$) had a Bachelor's degree, and 36.8% ($n = 7$) had a post Bachelor's degree.

Table 2

Demographic Characteristics of Caregivers and Families

Variable	%	<i>n</i>
Two participating caregivers in the treatment		
Total	26.7%	(4)
Both biological caregivers	20%	(3)
Both adoptive caregiver	6.7%	(1)
One caregiver participating in the treatment		
Total	73.3%	(11)
Maternal caregiver	66.7%	(10)
Biological maternal caregiver	53.3%	(8)
Adopting maternal caregiver	13.3%	(2)
Paternal caregiver (biological)	6.7%	(1)
Two caregiver home		
Total	73.3%	(11)
Live with both biological caregivers	46.7%	(7)
Live with adoptive caregivers	20%	(3)
Live with one biological caregiver and a stepparent	6.7%	(1)
Single-parent home		
Total	26.7%	(4)
Live with biological maternal caregiver and has visitations with biological paternal caregiver	20%	(3)
Live with biological paternal caregiver and has visitations with biological maternal caregiver	6.7%	(1)
Annual family income		
\$0-\$25,000	20%	(3)
\$25,000-\$50,000	13.3%	(2)
\$50,000-\$75,000	20%	(3)
>\$75,000	46.7%	(7)
Education of caregivers		
Total		(28)
High School graduates / GED	25%	(7)
Some college	10.7%	(3)
Trade School / 2 year college	17.9%	(5)
Bachelor degree / 4 year college	14.3%	(4)
Post Bachelors degree	32.1%	(9)
Education of caregivers participating in the treatment		
Total		(19)
High School graduates / GED	31.6%	(6)
Some college	5.3%	(1)
Trade School / 2 year college	10.5%	(2)
Bachelor degree / 4 year college	15.8%	(3)
Post Bachelors degree	36.8%	(7)

Procedure

When school counselors from Vicksburg Community Schools had concerns that a student was struggling with depressive symptoms, consistent with their existing routine practice, they administered the CDI (with caregiver's permission) to assess symptom severity. If the child scored 12 or above on the CDI, the school counselor contacted the child's caregiver via phone and explained that his/her child appeared to be experiencing depressive symptoms. They also presented the study protocol as one treatment option, while indicating that there are other treatment possibilities, including the possibility to be seen by one of the school professionals. If the caregiver expressed interest in receiving more information about the treatment study, a general explanation was provided (using a script; see Appendix C). If the caregiver remained interested, s/he was invited for a meeting that included the school counselor, the therapist investigator, the caregiver, and, for a portion of the meeting, the child, to learn more about participating.

Interested caregivers and their children were invited to meet with the therapist investigator and the school counselor. During the meeting, the study was described in greater detail (using the consent form; see Appendix D) and a consent form to participate in the assessment and intervention sessions was reviewed. If the caregiver consented (and the child assented) to participation, the caregiver and child were asked to sign the consent document.

Pre-treatment Assessment

Assessment session 1: Caregiver and child consent and assessment session (60 minutes). The caregiver, the school counselor, and the therapist investigator were present at the beginning of the meeting to review and explain the study. This explanation was guided by the consent document (see Appendix D), which was reviewed paragraph by paragraph with the therapist investigator describing the study details and answering any question the caregiver had. If the caregiver agreed to participate after reviewing and discussing the consent form and having his/her questions answered, the caregiver was asked to initial understanding of the various components of the study and then provide a signature. Also, the therapist investigator asked for caregiver's permission to give his/her child small rewards (such as crayons, stickers, pens/pencils) after each assessment session and during the individual sessions, to which all caregivers verbally consented. In addition, the therapist asked the caregiver to sign consent for the therapist investigator to talk with the child's teacher and to release information to school professionals (see Appendix E). The therapist investigator also asked the caregivers to consent for the therapist investigator to talk with the child's physician, if their child was taking psychiatric medication (see Appendix B).

The child was then invited into the room for an explanation of the study. The therapist investigator and the caregiver together presented the study description at a level the child could understand. The child was asked if s/he had any questions and these were answered. After the study description and question/answer period, the child was asked to sign the consent form. After signing the consent form (see Appendix D), the therapist

investigator and the child met in the absence of the caregiver. The therapist investigator summarized the study, emphasizing the collection of assessment information from the child that would serve to both help directing the intervention and as research data (see Appendix F). The therapist investigator answered any questions the child had and then asked the child to assent in writing by providing a signature. The remaining time was used to begin building rapport and to begin the assessment measurements, including the suicidality interview, the antisuicide contract (which was also reviewed later together with the caregiver; see Appendix A), and the CDI. While the child was meeting with the therapist investigator, the caregiver was asked to complete self-report measures individually. Due to the amount of time dedicated to the consent process, the entire assessment with the child was completed in one or two more individual sessions with the child, which typically occurred within the next several days.

With about 10 minutes remaining in the session the therapist investigator met again with the caregiver to review and answer any questions about the assessment measures s/he completed and to provide general impressions. The caregiver was asked to also sign the antisuicide contract (see Appendix A). The therapist investigator reviewed the plan for the next several meetings using a handout, which included the treatment phases and sessions (see Appendix G). The first caregiver session in which the child's assessment results are summarized in detail and psychoeducation provided was either scheduled in this meeting or over the phone. Also, the therapist investigator explained that after every individual session she would call the caregiver to provide information about the individual session.

Assessment sessions 2 and 3. Up to two additional assessment sessions with the child (up to 45 minutes) were scheduled, depending on the amount accomplished in the first assessment meeting. Allowing for these additional meetings ensured that the assessment process was not rushed and that time was also taken to build rapport and let the child move at his/her own pace, and also avoiding having the child miss more than 45 minutes of class.

Teacher assessment session. The therapist investigator met with the child's teacher at pre-treatment (30 minutes), mid-treatment (10-15 minutes), post-treatment (10-15 minutes), and follow-up (10 minutes). These meetings were brief and were conducted in order to discuss the teacher's impressions of the child, including peer relationships and behavioral and emotional problems. During the visit the teacher was administered the Strengths and Difficulties Questionnaire – Teacher and the Academic Functioning Record Form (detailed explanation about these measures is provided in the measures section), which together took no longer than 10 minutes to complete. The aim of the meetings was also to identify resources available to the child at school. All teachers agreed to participate in the assessment process and signed a consent form (see Appendix H for consent form and explanation script). If the one-month follow-up assessment was conducted during the summer vacation, the teacher did not complete this assessment.

Treatment

The individual treatment was based on the Primary and Secondary Control Enhancement Training (PACSET) manual (Weisz et al., 1999) with several alterations.

First, the segmenting and structuring of the sessions had to be altered to fit the treatment manual to the school format and use in 45-minute sessions. Second, one session (focusing on development of talents and skills) was removed but the skill was briefly reviewed in the two sessions focusing on increasing enjoyable activities, and another (focusing on increasing positive self thoughts) was added. The treatment included 16 individual sessions, each lasting 45 minutes, as specified in Appendix G. The caregiver sessions included those routinely used in the PASCET manual plus four additional sessions created to augment the PASCET manual and are included in the Caregiver-Child Relationship Enhancement Training (C-CRET; Eckshtain & Gaynor, 2003) manual. The treatment included seven caregiver sessions, each lasting 60 minutes, delivered over a period of eight weeks, as specified in Appendix G.

PASCET. The PASCET program is a structured intervention, for children aged 8 to 15. The treatment program is based on a two-process model of control, the primary and secondary control model of change. According to this model, primary control involves enhancing reward or reducing punishment by making, to the extent possible, objective conditions conform to the individual child. Secondary control involves enhancing receipt of rewards or reducing punishment by adjusting oneself to fit objective conditions so as to influence their subjective impact without altering the events themselves. Primary control is applied to distressing conditions that are modifiable whereas secondary control is applied to those conditions that are not (Weisz et al., 1999; Weisz et al., 2003; Weisz et al., 1997).

The treatment, according to this model, focuses on behavioral and cognitive features of depression and is based on a social learning conceptualization of depression called the skills and thoughts (SAT) theory (Weisz et al., 1999). According to SAT theory, skills deficits (e.g., poor activity selection) and cognitive habits (e.g., negative depressogenic cognitions) can decrease the child's mood and increase the likelihood that the child would respond to negative, stressful, or ambiguous life events, in a way that contributes to the development of depressive symptoms. In addition, the child's tendency to respond to adverse life events negatively, and in a way that promotes depressive symptoms, can create events that are stressful and negative as a result of the response style, which then further exacerbates the child's depression, creating a depressogenic cycle from which it is hard to escape. As such, PASCET attempts to teach children coping skills that promote primary and secondary control.

Combination of PASCET and C-CRET. At least one (and both if possible) caregiver was incorporated into the treatment (see Table 2 for information of caregivers that participated in the study) through individual caregiver meetings and caregiver-youth conferences. In addition to addressing specific skills, the caregiver meetings served the general functions of keeping the caregivers informed about the treatment, allowing for feedback regarding how the child was doing outside the treatment setting, and building and maintaining rapport with the caregivers.

Treatment started with a caregiver orientation session providing psychoeducation regarding childhood depression and the treatment. Four additional sessions were added to what is typically offered in the PASCET. These caregiver sessions served the specific

function of more fully engaging the caregiver in the change process by teaching strategies for use in the home. These additional sessions were conducted with the caregiver and/or with the caregiver and the child and focused on increasing the amount of positive time spent together between the caregivers and the child, increasing reinforcement of positive mood and positive behaviors, enhancing positive communication and empathic listening and support, familial communication, and problem solving.

In addition, caregiver conferences, similar to those prescribed in the PASCET manual, took place after each individual child meeting. After each individual session the therapist investigator called the caregiver for a 5-minute therapist-caregiver phone conference. In the conference the main points of the individual sessions were discussed, the child's practice assignments were described, and the caregiver was encouraged to assist the child with the practice assignment. During the conference the therapist investigator asked the caregiver to follow the caregiver handout while receiving the summary. The handouts, which kept the caregiver apprised of the coping strategies being taught, the child's practice assignments, and ways the caregiver could help, were given to the caregiver in the first caregiver session. There were two main objectives for these conferences. The first objective was to give the caregiver continuous reminders of the key coping skills being taught to the child, and thus to give the caregiver the knowledge base needed to support the child's efforts outside the therapy office. The second objective was to keep the caregiver apprised of and engaged in the treatment process, and thus motivated to help.

Treatment-phase I (see Appendix G). This phase of treatment consisted of seven individual sessions with the child covering the AC of the ACT & THINK chart. Each individual session had specific goals and objectives and included home practice assignments to promote generalization and independent use of strategies. After the skill was taught, the therapist investigator and the child engaged in a fun activity. The treatment also included a practice book for the child, which included in-session activities and home practice assignments.

The main objectives of the first session were to continue building the therapeutic alliance, to discuss the purpose and process of the sessions, to introduce the main ideas of the program, and to explain the ACT & THINK chart. The main objective of the second session was to teach problem solving skills. The main objectives of the third and fourth sessions were to convey the link between activities and feelings, and to discuss different kinds of activities that can help the child to feel better. The main objective of the fifth session was to present strategies for staying calm and relaxed. The main objective of the sixth and seventh sessions was to discuss presentation of positive self in interactions with others. After each individual session there was a 5-minute therapist-caregiver phone conference.

Phase I also consisted of three sessions with the caregivers. These sessions were based on the combination of the C-CRET manual and the PASCET manual. The first session, based on the PASCET manual, took place at the beginning of the treatment before the first individual session with the child. This session addressed issues related to caregiver involvement, confidentiality, and psychoeducation regarding the treatment

program and childhood depression. During the session, the caregiver also received the handouts regarding the child treatment sessions, which the therapist investigator asked him/her to look at during the therapist-caregiver phone conferences. The second session, based on the C-CRET manual, took place after the first individual child session. The first part of this session was conducted with the caregiver and the child and focused on creating a scheduled special time between the caregiver and child in the home. The second part of the session involved only the caregiver and focused on non-contingent positive attention (praise). The third part of the session was conducted with the caregiver and the child and focused on positive communication. The third caregiver session, based on the C-CRET manual, took place after the third individual child session. This session focused on positive behavior management procedures; that is, on reinforcing positive mood and positive behaviors.

Mid-treatment assessment. After Phase I of the treatment, there was a mid-treatment assessment. The caregiver, the child, and the teacher measures were re-administered to assess initial progress of the child. The format was similar to the pre-treatment assessment procedure.

Treatment-phase II (see Appendix G). This part consisted of nine individual meetings with the child covering the T and THINK from the ACT & THINK chart. Each individual meeting, again, had specific goals and objectives and included home practice assignments to promote generalization and independent use of strategies. After the skill was taught, the therapist investigator and the child engaged in a fun activity. Again, the

treatment included a practice book for the child, which included in-session activities and home practice assignments.

The main objectives of the 8th and 9th sessions were to make the connection between thoughts and feelings and to work on identifying and changing negative thinking patterns. The main objectives of the 10th and 11th sessions were to make the connection between thoughts and feelings and to work on identifying and changing negative self-thoughts into positive self-thoughts. The main objectives of the 12th session were to demonstrate and practice things that can be done to feel better when bad things happen that cannot be changed, including identifying the silver lining, sharing things with a trusted person, and reviewing ways to distract from negative thoughts. Sessions 13 to 16 combined all the previous skills taught (the primary and secondary control) and matched them to the specific needs of each child. The main objectives of the 13th session were to practice backup plans in case a coping attempt fails and to stress importance of persevering in coping attempts. The main objectives of the 14th and 15th sessions were to work on personalizing the ACT & THINK chart and to identify the “best fit” coping skills for the individual child. In addition, the therapist investigator discussed and shared the current case formulation with the child while preparing for these sessions. These sessions also focused on assisting the child in being more fluent in using the ACT & THINK skills. These sessions tried to focus on the particular skill deficits or habits of thought that appeared most relevant for the specific child being treated, and that the therapist investigator and/or the child saw as not fully practiced and/or fluent after the first 12 sessions. That is, the sessions focused on practicing applying the most personally relevant

PACSET coping skills to the actual life situation of the child and were aimed at helping the child to select the primary and secondary coping skills and strategies that seemed most relevant personally and most likely to be helpful. The appropriate PASCET skills for these sessions were identified by the therapist investigator and the child through the analysis of the child's responses to the various exercises and practice assignments throughout the previous and current sessions. The final individual 16th session was past and future oriented. The therapist investigator and the child reviewed the main lessons of the PASCET program, including the specific skills that fit the child best. The therapist investigator anticipated, together with the child, the potential depressogenic situations and life events that are most likely to arise in the future for the child, and developed specific plans for what the child can do to cope when these situations arise. Again, after each individual session there was a 5-minute therapist-caregiver phone conference.

Phase II also consisted of four structured manualized meetings with the caregiver. These sessions were based on the combination of the C-CRET manual and the PASCET manual. The 4th session, based on the PASCET manual, was conducted after the mid-treatment assessment and before the 8th session with the child. The session was conducted with the caregiver and included review of the case formulation and mid-treatment assessment results, progress and current status, assessment of caregiver's perception regarding the child's current emotional state and progress in the program, and review of the PASCET concepts that had been covered up to this point in the treatment. The 5th caregiver session, based on the C-CRET manual, took place after the 9th individual child session. The session involved only the caregiver and focused on

communication training. The 6th caregiver session, based on the C-CRET manual, took place after the 11th individual child session. The session involved both the caregiver and the child and focused on teaching family problem solving. The 7th caregiver session, based on the PASCET manual, included review of the case, progress and current status; review of the final case formulation of the child; review of the main lessons of the treatment program; and recommendations for future, based on the treatment, including plans for specific situations and future therapy. This session was conducted with the caregiver and took place at the end of the treatment, and before the final session with the child.

Measures

Clinician Measures

Children's Depression Rating Scale – Revised (CDRS-R; Poznanski & Mokros, 1996). The CDRS is a semi-structured interview that assesses 17 symptom areas, including depressed mood, difficulty having fun, irritability, suicidal ideation, morbid ideation, excessive weeping, low self-esteem, social withdrawal, sleep disturbance, excessive fatigue, appetite disturbance, physical complaints, excessive guilt, impaired schoolwork, depressed facial affect, listless speech, and hypoactivity. Scores of 29 or lower indicate that depressive disorder is unlikely, scores between 30 and 42 indicate that depressive disorder is possible, and scores of 44 or higher are indicative of depressive disorder. Scores, based on ratings by interviewers, have shown acceptable internal consistency (.85) and test-retest reliability (.80), and evidence of validity (Ponanski &

Mokros, 1996; cf. Weisz et al., 1997). The therapist investigator administered the CDRS-R, which takes 30-45 minutes, to the child at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Due to the fact that the interviewer was not independent, 19% (13 of 67 and 221 individual items) of the CDRS-R interviews (including pre-treatment, mid-treatment, and post-treatment interviews), selected randomly, were observed and scored by a separate coder. The coder was an advanced undergraduate psychology major who worked as a research assistant. The coder was trained in the administration of the CDRS-R by the therapist investigator, who conducted the interviews. After didactic training the therapist investigator and the coder watched the pre-treatment CDRS-R interview with the child whose data were excluded from analysis to ensure initial reliability. In addition, throughout the coding, the coder was instructed to consult with Dr. Gaynor regarding any difficulties in scoring. In assessing agreement related to the specific items on the CDRS-R, kappa ($n = 221$) was .54 ($p < .000$), which is considered a fair agreement (Watkins & Pacheco, 2000). However, the correlation between interview and coder scores was very high ($r = .87, p < .000$), indicating that while the scores for the therapist investigator and the coder did not match exactly, they were very close and usually differed by one point higher or lower. This is further evident in the correlation between total CDRS-R scores, which was $r = .99, p < .000$. These data suggest that the interviewer, who was also the therapist, was not selectively attending to information and possibly inadvertently biasing results when conducting the CDRS-R.

Children's Global Assessment Scale (C-GAS; Shaffer et al., 1983). The C-GAS is a clinician measure of functioning of children and adolescents and provides a global rating on a scale of 0 to 100. The clinician rates the child's most impaired level of general functioning on a hypothetical continuum of health-illness. The therapist investigator rated the child's functioning at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Child Measures: Depression

Children's Depression Inventory (CDI; Kovacs, 1992). The CDI is an adaptation of the Beck Depression Inventory (BDI) and is the most commonly used self-report measure of depression for children 7 to 17 years old (Kaslow, Stark, Printz, Livingston, & Ling-Tsai, 1992). The CDI consists of 27 items assessing the presence and severity of symptoms of depression over the two weeks prior to the assessment. Each CDI item consists of three choices, keyed 0, 1, or 2, with higher scores indicating greater severity. The CDI total score can range from 0 to 54. Scores above 9.5 indicate adjustment disorder with depressed mood and scores above 11.8 indicate major depressive disorder (Kovacs, 1992). However, in a normative study of the CDI with a sample of 1,252 subjects between the ages of 8 and 16, the average score was 9.09 (Smucker, Craighead, Craighead, & Green, 1986). The CDI is reported to have good internal consistency (ranges from .71 to .89; Kovacs, 1992) and a test-retest reliability coefficient of .82 for two week intervals and .66 and .67 for longer intervals of four and six weeks (Finch,

Saylor, Edwards, & McIntosh, 1987). Children completed the CDI at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Child Measures: Coping Skills

Self-Report Coping Scale (SRCS; Causey & Dubow, 1992). The SRCS is a 34-item self-report measure that assesses children's coping strategies when coping with two specific problems ("When I get a bad grade in school, one worse than I normally get, I usually..." and "When I have an argument or a fight with a friend, I usually..."). The SRCS is based on the approach/avoidance conceptualization and assesses five coping sub-domains/scales, two approach scales (seeking social support and problem solving) and three avoidance scales (distancing, internalizing, and externalizing). Responses to items range on a 5-point Likert scale from 1 (*never*) to 5 (*always*) with higher scores on the approach scales indicating positive and adaptive coping skills and lower scores on the avoidance scales indicating positive and adaptive coping skills. Total score ranges from 34-170, with higher scores indicating more productive coping skills. Psychometric analyses have shown internal consistencies of the subscales ranging from .69 to .82 for Coping with a Poor Grade and from .68 to .84 for Coping with a Peer Argument. Two-week test-retest reliabilities for Coping with a Poor Grade are .73 for Seeking Social Support, .60 for Problem Solving, .64 for Distancing, .63 for Internalizing, and .69 for Externalizing; and for Coping with a Peer Argument are .72 for Seeking Social Support, .64 for Problem Solving, .58 for Distancing, .59 for Internalizing, and .78 for

Externalizing. Children completed the SRCS at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Child Measures: Cognitive Habits

Automatic Thoughts Questionnaire – Short Form (ATQ-SF; Hollon & Kendall, 1980). The ATQ is a self-report measure that assesses the frequency of occurrence of automatic negative self-thoughts. Responses to items range on a 5-point Likert scale from 1 (*never*) to 5 (*always*) with higher scores indicating increasing severity. Although the ATQ was originally developed for college students (Hollon & Kendall, 1980), the ATQ also showed high criterion validity with depressed children and acceptable levels of internal consistency with children aged 6 to 13 (Kazdin, 1990). In addition, the ATQ was used with adolescents aged 12 to 17 and was able to discriminate depression among psychiatric and nonpsychiatric populations (Kauth & Zettle, 1990). In the current study we used a short version of the ATQ, which consisted of the 10 items that had the highest item-to-total correlation in the Kazdin (1990) study. On this short version, scores could range from 10 to 50 with higher scores indicating greater negative self-thoughts. Scores above 20 were considered indicative of the abnormal range. Children completed the ATQ-SF at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Cognitive Triad Inventory for Children – Short Form (CTI-C-SF; Kaslow et al., 1992). The CTI-C is a self-report measure consisting of 36 items (to which responses are yes, no, or maybe), from three scales: view of the self, view of the world, and view of the future. The CTI-C has demonstrated acceptable internal-consistency and solid concurrent

validity (Kaslow et al., 1992). The current study used a short version of the CTI-C, which consisted of the 10 world and future items that had the highest item-to-total score correlations in the Kaslow et al. (1992) study. As such, the total score could range from 0 to 20 with higher scores indicating less negative cognitions. Scores of 11 or lower were considered indicative of abnormal range. Children completed the CTI-C-SF at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Child Measures: Activity Level

Self-Report Activation Level (SRAL). The SRAL is a self-report measure consisting of 12 items assessing involvement of the child in different activities and skills targeted in the first part of the treatment both with the child and the caregiver. The SRAL was developed for the current study and uses a 4-point Likert scale from 1 (*not at all during the last week*) to 4 (*many times during the last week*). Scores range from 12 to 48 with higher scores indicating higher level of activation and involvement in skills targeted in the first part of the treatment. The SRAL was administered at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Child Measures: Family Relationships

Parent-Child Relationship Questionnaire – Child Version – Short Form (PCRQ-C-SF; Furman, 2001). The PCRQ is a measurement assessing five areas (scales) of parent-child relations including warmth between the caregiver and the child, closeness, use of positive disciplinary strategies, parental power assertion, and possessiveness. The children were administered a short version of the full measure that included 40 items and

rated their answers on a 5-point Likert scale from 1 (*Hardly at all*) to 5 (*extremely much*). Higher scores on scales 1 to 3 indicate positive parenting and lower scores on the last two scales indicate positive parenting. Total scores range from 40 to 200 with higher scores indicating a better relationship between caregiver and child and more positive parenting skills. Alphas for the factors range from .68 to .88 ($M = .81$; Furman, 2001). The PCRQ also offers a parent version, which was administered to the caregivers in its full 57-item version. The children completed the PCRQ-C-SF at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Caregiver Measures: Demographic Information

Child Clinician's Intake Summary Form. This measurement assesses general demographic information including the child's presenting problem, medical history, social history, academic history, major stressors and coping strategies, and family history. This measurement was completed only at pre-treatment, with the exception of the section on the Child's Coping Strategies Under Stress, which will be explained in detail in the following paragraph. Family income was assessed on a separate recording form.

Caregiver Measures: Child's Coping Skills

Child Coping Skills Under Stress (CCSUS). This measurement is a part of the Child's Clinician's Intake Summary Form. The CCSUS assesses both positive and negative coping skills of the child. Scores range from 0 to 1, with higher scores indicating more positive coping skills. It was administered at pre-treatment (as part of the Child

Clinician's Intake Summary Form), mid-treatment, post-treatment, and one-month follow-up.

Caregiver Measures: Child's Depression, Behavior, and Social Skills

Strengths and Difficulties Questionnaire – Parent Form (SDQ-P; Goodman, 1999). The SDQ-P is 25-item inventory that produces a total score and is also divided between five scales of five items each, assessing conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. The scores fall under one of three categories: Abnormal/High Difficulties, Borderline/Medium Difficulties, and Normal/Low Difficulties (Bourdon, Goodman, Rae, Simpson, & Koretz, 2005). There are three scales calculated for the current study. The first is the total difficulties with abnormal scores (9% of the population) ranging from 16 to 40, borderline scores (9% of the population) ranging from 12 to 15, and normal scores (82% of the population) ranging from 0 to 11 (Bourdon et al., 2005). The second is the impact of the difficulties on the child's life (i.e., impairment) with abnormal scores (8% of the population) ranging from 2 to 10, borderline scores (4% of the population) of 1, and normal scores (88% of the population) of 0 (Bourdon et al., 2005). The third is the estimated likelihood of a child having any diagnosis according to the *DSM* with three possible predictions: "low risk," "medium risk," and "high risk" (<http://sdqscore.net>). Test-retest reliability on the SDQ ranges from .70-.85 and internal consistency from .51-.76 (Goodman, 1999). The caregivers completed the SDQ-P at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Caregiver Measures: Caregiver Stress Level

Parenting Stress Index – Short Form (PSI-SF, Abidin, 1995). The PSI-SF is a direct derivative of the Parenting Stress Index full-length test. The PSI-SF is a 36-item scale that was designed to measure the amount of stress the parent is experiencing. The PSI-SF was developed based on the notion that the total stress a parent experiences is a function of certain characteristics of the child, the parent, and situations related to the role of being a parent. Therefore, the PSI-SF total score is composed of three domains of stress: parent distress, parent-child dysfunctional interaction, and difficult child. The PSI-SF is reported to have acceptable test-retest reliability of .84 for the total score and a range of .68 to .85 for the subscales scores. The PSI-SF is a short version of the long PSI and has a correlation of .94 with it. The PSI-SF was administered at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Caregiver Measures: Family Relationships

Parent-Child Relationship Questionnaire – Parent Version (PCRQ-P; Furman, 2001). The PCRQ is a measurement assessing five areas (scales) of parent-child relations including warmth between the caregiver and the child, closeness, use of positive disciplinary strategies, parental power assertion, and possessiveness. The PCRQ-P includes 57 items with answers rated on a 5-point Likert scale from 1 (*Hardly at all*) to 5 (*extremely much*). Higher scores on scales 1 to 3 indicate positive parenting and lower scores on the last two scales indicate positive parenting. Total scores range from 57 to 285 with higher scores indicating a better relationship between caregiver and child and

more positive parenting skills. Alphas for the factors range from .68 to .88 ($M = .81$; Furman, 2001). The PCRQ also has a child version, which was administered to the children in its short version. The caregivers completed the PCRQ-P at pre-treatment, mid-treatment, post-treatment, and one-month follow-up.

Caregiver Measures: Caregiver Satisfaction

Client Satisfaction Questionnaire (CSQ, Larsen, Attkisson, Hargreaves, & Nguyen, 1979). The CSQ consists of eight items measuring client satisfaction with treatment. The CSQ has been reported to have high internal consistency (Larsen et al., 1979). The caregivers completed the CSQ at post-treatment.

Teacher Measures: Depression, Behavior, and Social Skills

Strengths and Difficulties Questionnaire – Teacher Form (SDQ-T; Goodman, 1999). The SDQ-P is 25-item inventory that produces a total score and is also divided between five scales of five items each, assessing conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. The scores fall under one of three categories: Abnormal/High Difficulties, Borderline/Medium Difficulties, and Normal/Low Difficulties (Bourdon et al., 2005). There are three scales calculated for the current study. The first is the total difficulties with abnormal scores (9% of the population) ranging from 16 to 40, borderline scores (9% of the population) ranging from 12 to 15, and normal scores (82% of the population) ranging from 0 to 11 (Bourdon et al., 2005). The second is the impact of the difficulties on the child's life (i.e., impairment) with abnormal scores (8% of the population) ranging from 2 to 10, borderline scores (4%

of the population) of 1, and normal scores (88% of the population) of 0 (Bourdon et al., 2005). The third is the estimated likelihood of a child having any diagnosis according to the DSM with three possible predictions: “low risk,” “medium risk,” and “high risk” (<http://sdqscore.net>). Test-retest reliability on the SDQ ranges from .70-.85 and internal consistency from .51-.76 (Goodman, 1999). Test-retest reliability ranges from .70-.85 and internal consistency from .51-.76. The child’s primary teacher(s) completed the SDQ at pre-treatment, mid-treatment, post-treatment, and one-month follow-up (when it was conducted during the school year but not when it was conducted during summer vacation).

Teacher Measures: Academic Functioning

Academic Functioning Record Form. The child’s main teacher(s) completed a form assessing the child’s academic functioning to assess change throughout the treatment. The teachers completed the form at pre-treatment, mid-treatment, post-treatment, and one-month follow-up (when it was conducted during the school year but not when it was conducted during summer vacation).

Experimental Design and Analytic Strategy

All participants ($N = 15$) received PASCET plus C-CRET. No concurrent waitlist group was utilized. As such, the study used an open clinical trial design so that all eligible participants received the treatment and there was no control condition and no randomization to alternative treatments. Such designs are useful in what are termed effectiveness studies. Effectiveness studies place a greater emphasis on external validity,

focusing on how well a treatment with empirical support in randomized clinical trials (which have higher internal validity) does when applied under more naturalistic, less controlled, conditions. The present study had endeavored to use inclusion and exclusion criteria that were as open as possible to evaluate the effects of the treatment with the type of population that is likely most in need of intervention (and may not be able to access services otherwise or in more restrictive studies).

Based on the design, including recognition of its limitations, three analytic approaches were taken. First, change at the group level was investigated using the Friedman test. The sample size was relatively small for exploring group changes, which posed a number of potential concerns. The small sample size would limit statistical power, increasing the possibility of making Type II errors; however, the small sample size would also allow for extreme scores to dramatically alter group means such that use of parametric statistics could also lead to Type I errors. Moreover, parametric statistics assume the dependent variables approximate a normal distribution, a questionable assumption with small samples. Therefore, based on these considerations, group-level analyses were conducted using nonparametric Friedman tests. Friedman tests are the nonparametric equivalent of one-way within-subjects repeated measures analysis of variance. This test is recommended with small samples because it does not assume dependent variables are normally distributed and, because it relies on ranks, is less vulnerable to the influence of extreme scores. These considerations in combination with the small sample size make this a generally conservative approach.

In addition, we used the non-parametric alternative to the repeated measures paired-samples *t* test, Wilcoxon signed-ranks test, to assess difference between post-treatment and one-month follow-up. This test also converts scores to ranks and compares them at time 1 and time 2. No statistically significant differences between post-treatment and one-month follow-up would indicate that any statistically significant change detected by the Friedman test during the treatment was maintained.

When assessing changes in teachers' report, six of the 15 participants had more than one teacher reporting on their psychosocial functioning. Therefore, when assessing change at the group-level across the assessment periods and conducting group-level analyses using nonparametric Friedman tests and Wilcoxon tests, we calculated the reports in three different ways. The first was to average the reports of the teachers. However, to be conservative and to make sure that more extreme scores reported by the teachers were represented, we also took the scores of the teachers that reported the best functioning at pre-treatment and the teachers that reported the worst functioning at post-treatment.

Teachers reported the participants' grades for all or most subjects at all assessment points, excluding situations where one-month follow-up assessment was conducted during the summer vacation. Two teachers did not report grades at two of the assessment points and therefore there are 13 cases at pre-, mid- and post-treatment, and nine cases at one-month follow-up. The grades were averaged to create one grade for each assessment point and change at the group level was investigated using the Friedman test.

A Wilcoxon signed-ranks test was also used to assess the difference between post-treatment and one-month follow-up.

The second analytic approach that was used was a benchmarking strategy. To employ this strategy, published clinical trials for depressed children of a similar age range that used the same primary dependent variables (CDI and CDRS-R), similar inclusion criteria, and a roughly similar treatment timeline to the current study, were identified. This yielded four randomized clinical trials, including De Cuyper et al. (2004), Liddle and Spence (1990), Stark et al. (1987), and Weisz et al. (1997), all of which included one or more CBT treatments and one or more control conditions. The treatment outcome data from the CBT (including PASCET, Social Competence Training, and Self Control; see Appendix I) and control (waitlist and attention placebo; see Appendix I) conditions were used to create two composite benchmarks, one indexing the mean effect of the CBT groups across the studies and the other indexing the mean effect of the control groups across studies. As can be seen in Appendix I, for the CBT and the control benchmarks, all studies contributed to the mean CDI benchmark at pre-treatment and post-treatment. However, at follow-up, the mean CDI was divided into three groups and not all studies contributed data to all groupings. The groupings with the contributing studies in parentheses were: 1- to 3-month follow-up (Liddle & Spence, 1990; Stark et al., 1987), 4- to 6-month follow-up (De Cuyper et al., 2004), and 7- to 9-month follow-up (Weisz et al., 1997). As can be seen in Appendix I, for the CBT and the control benchmarks, only Stark et al. (1987) and Weisz et al. (1997) were available to compute a mean CDRS-R benchmark at pre-treatment and post-treatment. At follow-up, the mean CDRS-R was

divided into two benchmarks with Stark et al. (1987) being the 1- to 3-month follow-up and Weisz et al. (1997) being the 7- to 9-month follow-up. Within-group effect sizes on the CDI and CDRS-R were also calculated for the PASCET+C-CRET, benchmarked CBT, and benchmarked control groups.

In addition, we identified two randomized clinical trials comparing fluoxetine (Prozac) and placebo for the treatment of depressed children. Fluoxetine trials were selected because it is the only medication approved by the Food and Drug Administration (FDA) for use to treat depression in children age 7 and older. The studies included were Emslie et al. (1997) and Emslie et al. (2002). The participants were similar in age range, and the studies used the same primary dependent variable (CDRS-R), similar inclusion criteria, and a roughly similar treatment timeline to the current study (see Appendix J). We used the treatment outcome data from the fluoxetine and placebo conditions to create two composite benchmarks, one indexing the mean effect of the fluoxetine groups across the two studies and the other indexing the mean effect of the placebo groups across the two studies. As can be seen in Appendix J, for the fluoxetine and the placebo benchmarks, both studies were available to compute a mean CDRS-R benchmark at pre-treatment and post-treatment.

Finally, moderators and within treatment predictors of change of depressive symptoms (CDI and CDRS-R) were assessed using the age of the participants, gender, income, past use of psychiatric medications, participants' pre-treatment negative thoughts (ATQ-SF and CTI-C-SF), coping skills (CCSUS), psychosocial functioning (SDQ-P of maternal caregiver and SDQ-T), caregiver-child relations (PCRQ-C-SF and PCRQ-P of

maternal caregivers), and maternal caregivers' stress level (PSI-SF) as potential moderators. Two additional moderators that were assessed were child compliance with the treatment and caregiver compliance with the treatment as documented by the therapist investigator on the Therapist Record Forms. Also, analyses were conducted to assess whether change in depressive symptoms (CDI and CDRS-R) in the second part of the treatment could be predicted by change in the first part of the treatment in psychosocial functioning (SDQ-P of maternal caregivers), negative thoughts (ATQ-SF and CTI-C-SF), coping skills (SRCS and CCSUS), activation level (SRAL), caregiver-child relations (PCRQ-C towards both caregivers and PCRQ-P of maternal caregivers), and maternal caregivers' stress level (PSI-SF). We did not assess moderators of change or predictors of change related to the paternal caregivers' measures as their number ($n = 5$) was too small.

Treatment Integrity

All treatment sessions were conducted by the first author (DE), a doctoral student in the clinical psychology program, who has completed graduate courses in psychotherapy, child therapy, family therapy, adult therapy, advanced behavior assessment, personality assessment, intellectual assessment and neuropsychological assessment. She also has experience working with children at the WMU Psychology Clinic, in the Department of Pediatrics at the Kalamazoo Center for Medical Studies, and in the MSU / KCMS Pediatric Hematology-Oncology Children's Multidisciplinary Specialty Clinic conducting both assessments and cognitive-behaviorally focused treatment. In addition, she has administered a very similar treatment as part of her thesis

to six children and their caregivers. Furthermore, she received weekly supervision from the second author (SG), a licensed clinical psychologist with research and clinical experience using CBT with youths.

To assess treatment adherence, after every individual meeting with the child and/or meeting with the caregiver, the therapist investigator completed a session-rating form, accompanying the PASCET and the C-CRET manuals, called the Therapist Record Form (TRF). The PASCET's TRFs were taken directly from the PASCET manual developed by Weisz et al. (1999) (with modifications to fit the changes to the session structure made to accommodate delivery in the school setting), while the C-CRET's TRFs were developed for the current treatment using the same general format as the PASCET TRFs.

As a check, all sessions were videotaped and 17% of them were reviewed by one coder with 3% reviewed by two coders. The coders were three graduate students in a Ph.D. program in clinical psychology. The coders watched the session tapes independently and completed the Therapist Record Form. The sessions were chosen randomly with the restriction that for each participant one session had to come from the first five individual sessions, one from sessions 6-10, one from sessions 10-15, and one caregiver session from the four C-CRET sessions (the selected sessions are listed in Appendix K). To determine therapist adherence with the manuals, the therapist investigator's and the coders' TRFs were compared on the questions relevant to the therapist. Both the amount of agreement between the therapist investigator and the coders and the level of adherence coded were calculated. To determine child and caregiver

adherence, the therapist investigator's and the coders' TRFs were compared on the questions relevant to the child and caregiver, respectively. Again, both the amount of agreement between the therapist investigator and the coders and the level of adherence coded were calculated.

When calculating Kappas, scores were evaluated using ranges defined by Watkins & Pacheco (2000). A Kappa score $\leq .40$ was considered poor agreement, a Kappa score of .40-.59 was considered fair agreement, a Kappa score of .60-.74 was considered good agreement, and a Kappa score of .75-1.0 was considered very good agreement.

As mentioned above, in addition to assessing agreement between the therapist investigator and the coders, level of adherence was also calculated. The TRFs were scored such that higher scores represented better adherence of the therapist investigator, caregiver, or child with the manuals. For calculating treatment adherence the actual total scores rated by the therapist investigator, the actual total scores coded by each of the coders, and the actual total scores rated by all coders (if two coders coded the session the average between their codings was taken) for each sessions coded, were each divided by the total possible score for that session to determine level of adherence. The result ranged from 0 (no adherence) to 1 (perfect adherence) for each rated session for the therapist, child, and caregiver.

Therapist compliance with the individual treatment assessed whether the therapist investigator covered the topic(s) of the sessions and whether the participant understood the topics covered in the sessions and how to implement them, and whether the participant understood the home assignment. Codings for these questions ranged from 0

(not covered in the session or did not understand for the child) to 2 (fully understood).

Codings for the individual sessions also included assessing whether the therapist followed requirements of the PASCET manual including assessing the participant's mood at the beginning of the session, doing a fun activity at the end of the session, and doing the quiz about PASCET in session 14. Codings for each of these three questions were either 0 (did not follow) or 1 (followed). Therapist compliance with the caregiver sessions assessed whether the therapist investigator covered the topic(s) of the sessions and whether the caregiver and the child (whenever the child joined to the caregiver sessions) understood the topics covered in the sessions and how to implement them, and whether the caregiver understood the home assignment. Codings for these questions ranged from 0 (not covered in the session or did not understand) to 2 (fully understood). Also, it assessed whether the caregiver was present in the session, which was coded as either 0 (no one was present) or 1 (one of the caregivers was present).

In assessing agreement, comparison between the therapist investigator and the three coders together produced 86% agreement ($n = 447$), with Kappa = .72 ($p < .000$), suggesting good agreement between the therapist and the coders. Examination of the agreement between the therapist investigator and each of the coders suggests good to very good agreement with all of them. Comparison with coder 1 produced 93% agreement ($n = 88$) with Kappa = .85 ($p < .000$). Comparison with coder 2 produced 82% agreement ($n = 153$) with Kappa = .64 ($p < .000$). Comparison with coder 3 produced 87% agreement ($n = 208$) with Kappa = .73 ($p < .000$).

For therapist adherence, the average therapist investigator's coding ($n = 303$) was .94 ($SD = .12$) and the average coders' coding ($n = 52$) was .91 ($SD = .19$). Coder 1's average coding ($n = 12$) was .95 ($SD = .12$), coder 2's average coding ($n = 20$) was .90 ($SD = .14$), and coder's 3's average coding ($n = 29$) was .89 ($SD = .24$). The therapist appeared to adhere to the treatment manuals.

Child compliance with the treatment assessed whether the participant did the home assignment, with codings ranging from 0 (not at all) to 2 (completely). If the participant did the homework assignment two more ratings were required and assessed how thoroughly and carefully the home assignment was done and whether the participant seemed to understand the concepts.

In assessing child compliance, comparison between the therapist investigator and the three coders together produced 75% agreement ($n = 108$) with Kappa = .44 ($p < .000$), suggesting fair agreement. Examination of the agreement between the therapist investigator and each of the coders suggest fair or poor agreement with all of them. Comparison with coder 1 produced 78% agreement ($n = 27$) with Kappa = .56 ($p < .001$). Comparison with coder 2 produced 64% agreement ($n = 36$) with Kappa = .37 ($p < .004$). Comparison with coder 3 produced 85% agreement ($n = 54$) with Kappa = .57 ($p < .000$).

For child adherence, the average therapist investigator's adherence rating ($n = 208$) was .31 ($SD = .44$) and the average coders' adherence rating ($n = 34$) was .23 ($SD = .35$). Coder 1's average ($n = 9$) was .39 ($SD = .47$), coder 2's average ($n = 12$) was .39 ($SD = .43$), coder 3's average ($n = 18$) was .15 ($SD = .32$). Based on the therapist investigator's and coders' report, it appeared that the participants adhered to the treatment

between 33% and 75% of the sessions and when they did, their homework was done thoroughly and carefully between 11% and 33% of the times.

Caregiver compliance with the treatment assessed whether the caregiver implemented the caregiver skills worked on. Codings ranged from 0 (not implement) to either 1 or 3 (implement the skill: 1 when one skill was targeted and 3 when three skills were targeted). Also, it assessed how invested the caregiver appeared during the treatment session ranging from 0 (not at all) to 4 (very invested).

In assessing caregiver compliance with the treatment, comparison between the therapist investigator and the three coders together ($n = 32$) produced 94% agreement with Kappa = .89 ($p < .000$), suggesting very good agreement. Examination of the agreement between the therapist investigator and each of the coders suggested very good to excellent agreement with all of them. Comparison with coder 1 produced 100% agreement ($n = 4$) with Kappa = 1.00 ($p < .046$). Comparison with coder 2 produced 93% agreement ($n = 14$) with Kappa = .88 ($p < .000$). Comparison with coder 3 produced 93% agreement ($n = 14$) with Kappa = .89 ($p < .000$).

For caregiver adherence, the therapist investigator's average ($n = 64$) was .97 ($SD = .11$) and the coders' average ($n = 12$) was .98 ($SD = .06$). Coder 1's average ($n = 2$) was 1.00 ($SD = .00$), coder 2's average ($n = 5$) was .96 ($SD = .09$), and coder 3's average ($n = 7$) was .97 ($SD = .08$). Thus, at least in terms of their in-session expressions, it appeared that the caregivers were very invested in the treatment and willing to support the child in its implementation.

CHAPTER III

RESULTS

Fourteen participants completed all assessment points and one participant completed only pre-, mid-, and post-treatment assessments. Fourteen maternal caregivers and five paternal caregivers participated in the treatment. Thirteen maternal caregivers completed all assessment measures at all assessment points. One maternal caregiver completed assessment measures at pre-, mid-, and post-treatment except for the PSI and the CSQ at post-treatment. For the PSI, mid-treatment data points were carried forward to post-treatment. For this maternal caregiver, results were also not available at one-month follow-up. All five participating paternal caregivers completed all assessment measures at all assessment points. However, their low number limits the statistical analysis of their data. As such, the statistical analyses of paternal reports are included in the tables but the *p* values are not interpreted in the text.

Group Changes

Depressive Symptoms

Change on measures assessing depression was reported by both the participants and the therapist investigator, with the same pattern of change occurring throughout the treatment. The average pre-treatment score of 17.73 on the CDI was well into the clinical range, decreased to 10.07 at mid-treatment, and continued decreasing to a post-treatment

average score of 6. The Friedman test documents the statistical significance of change on the CDI, $\chi^2(15) = 27.56, p < .000$ (see Table 3). This change was maintained at one-month follow-up with a score of 5.93 (see Figure 1) with no statistically significant change between post-treatment and follow-up (see Table 4). Follow-up comparisons using Wilcoxon signed-ranks test revealed statistically significant change from pre- to mid-treatment, $z(15) = -3.31, p < .001$, and from mid- to post-treatment, $z(15) = -2.76, p < .006$.

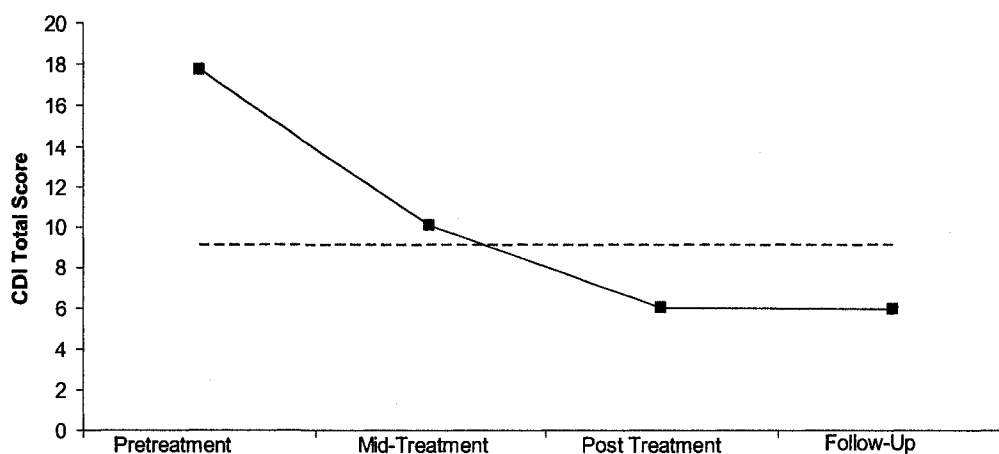


Figure 1. Group change on the Children's Depression Inventory (CDI) from pre-treatment to one-month follow-up.

Similar improvement was also apparent on the CDRS-R, where the pre-treatment average of 47.4, which indicates depressive disorder, decreased to an average of 30.2 at mid-treatment and 25.07 at post-treatment, a score indicating that depressive disorder is unlikely. The Friedman test indicated statistically significant change on the CDRS-R, $\chi^2(15) = 26.53, p < .000$ (see Table 3). The improvement on the CDRS-R was also

Table 3

Pre-, Mid-, and Post-Treatment Scores and Friedman Tests for Participants and Caregivers

Outcome Variable	Pre-treatment		Mid-treatment		Post-treatment		Friedman test	P value
	M	SD	M	SD	M	SD		
Depressive symptoms								
CDI child	17.73	7.09	10.07	6.73	6.00	7.94	27.56	<.000
CDRS-R therapist investigator	47.40	8.04	30.20	9.14	25.07	7.09	26.53	<.000
Global psychological functioning								
CGAS therapist investigator	55.53	7.93	70.20	9.84	78.13	9.44	29.53	<.000
SDQ GENERAL maternal caregiver	17.93	6.03	13.00	4.93	7.86	3.10	22.27	<.000
SDQ GENERAL paternal caregiver	17.80	8.07	13.60	5.77	16.20	7.05	0.78	<.678
SDQ predict any diagnosis - maternal caregiver	2.36	0.74	1.86	0.86	1.07	0.27	17.59	<.000
SDQ predict any diagnosis - paternal caregiver	2.20	0.84	1.80	0.84	2.20	1.10	0.62	<.735
SDQ - Impact maternal caregiver	5.29	2.73	3.50	2.38	1.21	1.81	18.50	<.000
SDQ - Impact paternal caregiver	4.40	4.72	2.00	1.22	2.40	2.61	1.20	<.549
Negative thinking								
ATQ child	20.53	5.37	16.87	6.17	13.07	5.36	16.18	<.000
CTI child	13.67	2.92	16.27	2.71	16.87	2.85	17.37	<.000
Coping Skills								
CCSUS maternal caregiver	0.28	0.21	0.54	0.24	0.74	0.22	18.66	<.000
SRCS child	109.53	17.41	117.13	16.93	118.67	22.63	5.20	<.074
SRCS - Avoidance child	45.67	8.71	41.67	10.89	40.07	14.85	4.67	<.097
SRCS - Internalizing child	18.47	6.76	15.00	4.87	13.47	7.61	5.51	<.064
SRCS - Approach child	47.20	12.31	50.80	14.84	50.67	16.53	1.46	<.482
Activation level								
SRAL Total	37.47	4.22	38.67	5.52	38.93	6.75	2.19	<.334
Caregiver-child relations								
PCRQ child towards mother	146.36	16.71	148.71	19.97	147.14	21.98	1.02	<.601
PCRQ child towards father	138.64	16.91	136.36	19.71	143.86	17.68	4.15	<.126
PCRQ maternal caregiver	208.29	26.58	223.21	19.59	233.00	22.27	21.06	<.000
PCRQ paternal caregiver	196.60	24.00	215.40	8.44	217.40	5.13	2.80	<.247
Caregivers' stress level								
PSI-SF maternal caregiver	82.36	19.66	73.14	17.03	63.29	16.40	23.15	<.000
PSI-SF paternal caregiver	89.20	29.89	76.80	20.40	77.20	10.35	2.00	<.368

Note. CDI = Children's Depression Inventory; CDRS-R = Children Depression Rating Scale-Revised; CGAS = Children's Global Assessment Scale; SDQ = Strengths and Difficulties Questionnaire; SRCS = Self Report Coping Scale; ATQ = Automatic Thoughts Questionnaire; CTI = Cognitive triad inventory; CCSUS = Child Coping Skills Under Stress; SRCS = Self Report Coping Scale; SRAL = Self Report Activation Level; PCRQ = Parent Child Relationship Questionnaire. Total number of participants = 15. Total number of maternal caregivers = 14. Total number of paternal caregivers = 5.

Table 4

Post-Treatment and One-Month Follow-Up Scores and Wilcoxon Signed Rank Tests for Participants and Caregivers

Outcome Variable	Post-treatment		Follow-up		Wilcoxon test	P value
	M	SD	M	SD		
Depressive symptoms						
CDI child	6.00	7.94	5.93	8.78	-0.18	<.856
CDRS-R therapist investigator	25.07	7.09	24.14	7.97	-0.18	<.858
Global psychological functioning						
CGAS therapist investigator	78.13	9.44	81.79	9.75	-2.28	<.023
SDQ GENERAL maternal caregiver	7.86	3.10	7.15	3.36	-0.35	<.725
SDQ GENERAL paternal caregiver	16.20	7.05	7.60	3.21	-1.76	<.078
SDQ predict any diagnosis - maternal caregiver	1.07	0.27	1.08	0.28	0.00	<1.00
SDQ predict any diagnosis - paternal caregiver	2.20	1.10	1.40	0.55	-1.60	<.109
SDQ - Impact maternal caregiver	1.21	1.81	0.46	0.97	-1.98	<.048
SDQ - Impact paternal caregiver	2.40	2.61	0.20	0.45	-1.63	<.102
Negative thinking						
ATQ child	13.07	5.36	14.29	7.70	-0.42	<.673
CTI child	16.87	2.85	16.93	3.36	-0.48	<.631
Coping Skills						
CCSUS maternal caregiver	0.74	0.22	0.76	0.67	-0.85	<.398
SRCUS child	118.67	22.63	121.36	22.11	-0.18	<.861
SRCUS - Avoidance child	40.07	14.85	37.00	10.88	-1.26	<.209
SRCUS - Internalizing child	13.47	7.61	12.43	5.46	-0.39	<.699
SRCUS - Approach child	50.67	16.53	50.36	16.67	-0.75	<.451
Activation level						
SRAL Total	38.93	6.75	39.21	6.59	-0.36	<.720
Caregiver-child relations						
PCRQ child towards mother	147.14	21.98	149.15	21.64	-0.67	<.505
PCRQ child towards father	143.86	17.68	141.86	20.86	-0.44	<.660
PCRQ maternal caregiver	233.00	22.27	235.46	22.60	-0.63	<.530
PCRQ paternal caregiver	217.40	5.13	219.20	12.21	-0.41	<.686
Caregivers' stress level						
PSI-SF maternal caregiver	63.29	16.40	54.62	16.68	-1.97	<.049
PSI-SF paternal caregiver	77.20	10.35	63.60	16.82	-1.75	<.080

Note. CDI = Children's Depression Inventory; CDRS-R = Children Depression Rating Scale-Revised; CGAS = Children's Global Assessment Scale; SDQ = Strengths and Difficulties Questionnaire; SRCUS = Self Report Coping Scale; ATQ = Automatic Thoughts Questionnaire; CTI = Cognitive triad inventory; CCSUS = Child Coping Skills Under Stress; SRCUS = Self Report Coping Scale; SRAL = Self Report Activation Level; PCRQ = Parent Child Relationship Questionnaire. Total number of participants = 15. Total number of maternal caregivers = 14. Total number of paternal caregivers = 5.

maintained at one-month follow-up with an average of 24.14 (see Figure 2), which was not statistically significantly different than the post-treatment average (see Table 4).

Follow-up comparisons using Wilcoxon signed-ranks test revealed statistically significant change from pre- to mid-treatment, $z(15) = -3.41, p < .001$, and from mid- to post-treatment, $z(15) = -2.68, p < .007$.

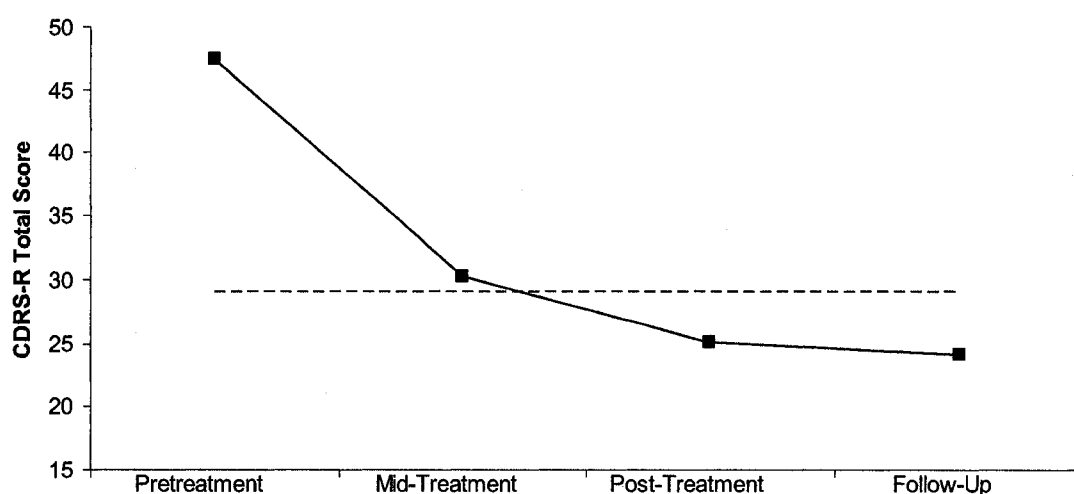


Figure 2. Group change on the Children's Depression Rating Scale – Revised (CDRS-R) from pre-treatment to one-month follow-up.

Global Psychological Functioning

Assessment of the child's psychological functioning according to the C-GAS revealed statistically significant change during the treatment course. The average pre-treatment C-GAS of 55.53, which indicated variable functioning with sporadic difficulties, improved to 70.2 at mid-treatment, which indicated some difficulty in a single area but generally functioning pretty well, and 78.13 at post-treatment, which indicated only a slight impairment in functioning. The change was statistically significant,

$\chi^2(15) = 29.53, p < .000$ (see Table 3). The score at post-treatment continued to improve at one-month follow-up to 81.79, which indicates good functioning, $z(14) = -2.28, p < .023$ (see Table 4).

Improvement was also reported by the caregivers. On the SDQ-P maternal caregivers reported statistically significant improvement from an average of 17.93 at pre-treatment, which was within the abnormal range, to 13 at mid-treatment and 7.86 at post-treatment, which was well into the normal range, $\chi^2(14) = 22.27, p < .000$ (see Table 3). Improvement was maintained at one-month follow-up ($M = 7.15$; see Figure 3) with no statistically significant change (see Table 4). Paternal caregivers' report of their children's psychosocial functioning also moved in the therapeutic direction; however, with a different pattern of change. The means start in the abnormal range ($M = 17.8$) at pre-treatment, move to the borderline range by mid-treatment ($M = 13.6$), but then increase at post-treatment ($M = 16.2$; see Table 3), followed by a decline to the normal range at follow-up ($M = 7.6$; see Table 4 and Figure 3). Looking at the individual reports of the paternal caregivers (see Figure 4), it is evident that the increase from mid- to post-treatment was influenced by reports of two paternal caregivers (8 and 11), who reported deterioration from mid- to post-treatment, while the other three paternal caregivers reported either continual improvement (1 and 7) or maintenance (3) of results from mid- to post-treatment.

Based on maternal SDQ-P reports, the estimated likelihood that the children warranted a diagnosis according to the DSM classification, moved from an average of 2.36 at pre-treatment, which was in the "medium risk" range, to an average of 1.86 at

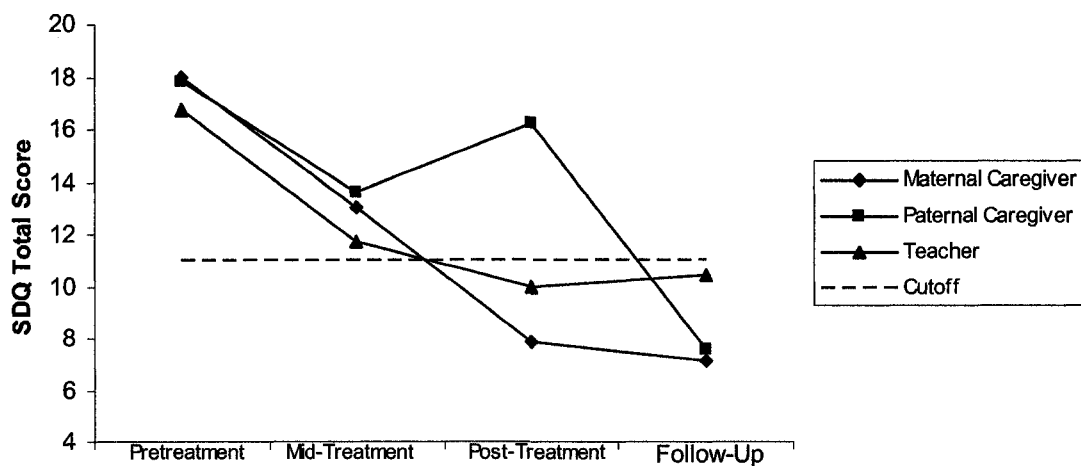


Figure 3. Group change on the Strengths and Difficulties Questionnaire (SDQ) from pre-treatment to one-month follow-up reported by maternal and paternal caregivers (SDQ-P) and by teachers (SDQ-T).

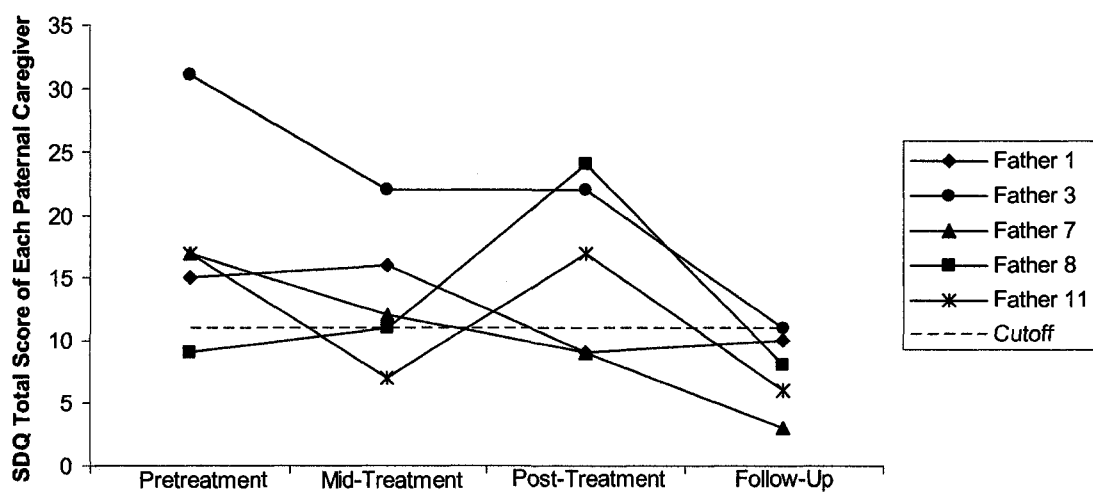


Figure 4. Individual changes on the Strengths and Difficulties Questionnaire (SDQ-P) from pre-treatment to one-month follow-up reported by paternal caregivers.

mid-treatment and to the “low risk” range at post-treatment with a score of 1.07 (see Table 3), which was maintained at one-month follow-up ($M = 1.08$; see Table 4). This change was statistically significant, $\chi^2(14) = 17.59, p < .000$ from pre- to mid- and to post-treatment, but not from post-treatment to follow-up. Paternal caregivers’ report, again, had a different pattern indicating improvement from the “medium risk” range at pre-treatment ($M = 2.2$) to mid-treatment ($M = 1.8$) with worsening at post-treatment ($M = 2.2$; see Table 3) and then showing improvement at one-month follow-up ($M = 1.4$) to the “low risk” range (see Table 4). Again, there were individual differences in the paternal caregivers’ reports with the same two (8 and 11) reporting worsening of their children’s condition from mid- to post-treatment, when the same pattern was not reported by the other three paternal caregivers.

The average report of maternal caregivers on the SDQ-P at pre-treatment indicated that the difficulties their children experienced had a very negative impact on the participants’ lives ($M = 5.29$). This score improved at mid-treatment to 3.5 and continued improving at post-treatment (to the borderline range) with an average of 1.21, $\chi^2(14) = 18.50, p < .000$ (see Table 3). This change continued at one-month follow-up where the average of .46 now fell in the normal range. The change from post-treatment to one-month follow-up was statistically significant, $z(13) = -1.98, p < .048$ (see Table 4). Paternal caregivers’ report of the impact of the difficulties on their children’s life was similar to the paternal caregivers’ report pattern indicated above and evinced change in the therapeutic direction from a score of 4.4 (abnormal range) at pre-treatment to 2.4 at post-treatment, which actually somewhat worsened from the mid-treatment average of 2

(see Table 3), but continued to improve at one-month follow-up to .2, which is within the normal range (see Table 4). However, as was already reported above, there were individual differences in the paternal caregivers' reports, with three of the five paternal caregivers (3, 8 and 11) reporting worsening of their children from mid- to post-treatment and the other two paternal caregivers (1 and 7) reporting improvement from mid- to post-treatment.

The teachers also reported improvement in the participants' functioning. All teachers completed the SDQ-T at pre-, mid-, and post-treatment. However, at one-month follow-up only teachers of nine participants completed the SDQ-T. As can be seen in Table 5, the teachers reported improvement in the participants' functioning from an average pre-treatment in the abnormal range ($M = 16.74$) to mid-treatment ($M = 11.68$) and post-treatment ($M = 10$) scores that are in the normal range, $\chi^2(15) = 8.83, p < .012$ (see Table 5 and Figure 3). Results at post-treatment were not statistically different from the available one-month follow-up data ($M = 10.39$; see data in Table 6). Controlling for problems of averaging the scores when more than one teacher completed the SDQ-T for a child also showed similar results. SDQ-T estimates of the likelihood of warranting any diagnosis according to the DSM classification, moved from an average of 2.44 at pre-treatment, which was in the "medium risk" range to an average of 1.63 at mid-treatment and to an average of 1.29 at post-treatment, which was in the 'low risk' range, $\chi^2(15) = 15.17, p < .001$ (see Table 5). No change occurred from post-treatment to follow-up ($M = 1.39$; see Table 6). Similar results were obtained using the alternative SDQ-T analyses due to having multiple teachers' ratings of some children. Teachers' report on the SDQ-T

Table 5

Pre-, Mid-, and Post-Treatment Scores and Friedman Tests for Teachers

Outcome Variable	Pre-treatment		Mid-treatment		Post-treatment		Friedman test	P value
	M	SD	M	SD	M	SD		
SDQ general								
Average	16.74	8.88	11.68	5.20	10.00	4.93	8.83	<.012
Best score at pre-treatment	16.13	8.70	11.80	5.45	9.80	5.03	7.54	<.023
Worst score at post-treatment	16.73	9.16	11.53	5.13	10.73	5.50	6.04	<.049
SDQ predict any diagnosis								
Average	2.44	0.82	1.63	0.67	1.29	0.49	15.17	<.001
Best score at pre-treatment	2.33	0.90	1.67	0.72	1.40	0.63	9.83	<.007
Worst score at post-treatment	2.33	0.90	1.67	0.72	1.40	0.63	9.83	<.007
SDQ impact								
Average	3.48	2.13	1.98	2.01	1.43	1.68	14.37	<.001
Best score at pre-treatment	3.33	2.13	1.93	1.94	1.53	1.77	9.35	<.009
Worst score at post-treatment	3.47	2.10	1.87	1.92	1.53	1.77	13.82	<.001
School grades								
Academic Functioning Record Form	2.63	0.76	2.97	0.65	2.66	0.85	4.38	<.112

Note. SDQ = Strengths and Difficulties Questionnaire.

Table 6

Post-Treatment and One-Month Follow-Up Scores and Wilcoxon Signed Rank Tests for Teachers

Outcome Variable	Post-treatment		Follow-up		Wilcoxon test	P value
	M	SD	M	SD		
SDQ general						
Average	10.00	4.93	10.39	5.68	-0.51	<.611
Best score at pre-treatment	9.80	5.03	11.89	6.64	-1.36	<.173
Worst score at post-treatment	10.73	5.50	10.44	5.85	-0.53	<.599
SDQ predict any diagnosis						
Average	1.29	0.49	1.39	0.65	-0.18	<.854
Best score at pre-treatment	1.40	0.63	1.56	0.88	-0.38	<.705
Worst score at post-treatment	1.40	0.63	1.56	0.88	-0.38	<.705
SDQ impact						
Average	1.43	1.68	1.06	1.59	0.55	<.581
Best score at pre-treatment	1.53	1.77	0.89	1.54	-0.92	<.357
Worst score at post-treatment	1.53	1.77	1.11	1.54	-0.82	<.414
School grades						
Academic Functioning Record Form	2.66	0.85	2.85	0.67	-0.14	<.889

Note. SDQ = Strengths and Difficulties Questionnaire.

at pre-treatment indicated that the difficulties the participants experienced had a negative impact on the participants' lives ($M = 3.48$). This score improved at mid-treatment to an average of 1.98 and at post-treatment to an average of 1.43, both in the borderline range, $\chi^2(15) = 14.37, p < .001$ (see Table 5). This change continued at one-month follow-up to the normal range with an average of 1.06 (see Table 6). Controlling for problems of averaging the scores when more than one teacher completed the SDQ-T also showed similar results.

Negative Thinking

Both measurements assessing negative thinking showed statistically significant change. Pre-treatment ATQ-SF scores moved from an average of 20.53, which was above the clinical cutoff, to 16.87 at mid-treatment and 13.07 at post-treatment, a score within the normal range and that represents statistically significant change, $\chi^2(15) = 16.18, p < .000$ (see Table 3). The post-treatment score was maintained at one-month follow-up ($M = 14.29$; see Table 4 and Figure 5). Similarly, the CTI-C-SF evinced significant improvement from a pre-treatment average of 13.67 to 16.27 at mid-treatment and 16.87 at post-treatment, $\chi^2(15) = 17.37, p < .000$ (see Table 3). This change was maintained at one-month follow-up with a score of 16.93 (see Table 4 and Figure 6).

Coping Skills

Maternal caregivers reported statistically significant change in their children's coping skills on the CCSUS. The average improved from .28 at pre-treatment to .54 at mid-treatment, .74 at post treatment (see Table 3), and .76 at one-month follow-up (see

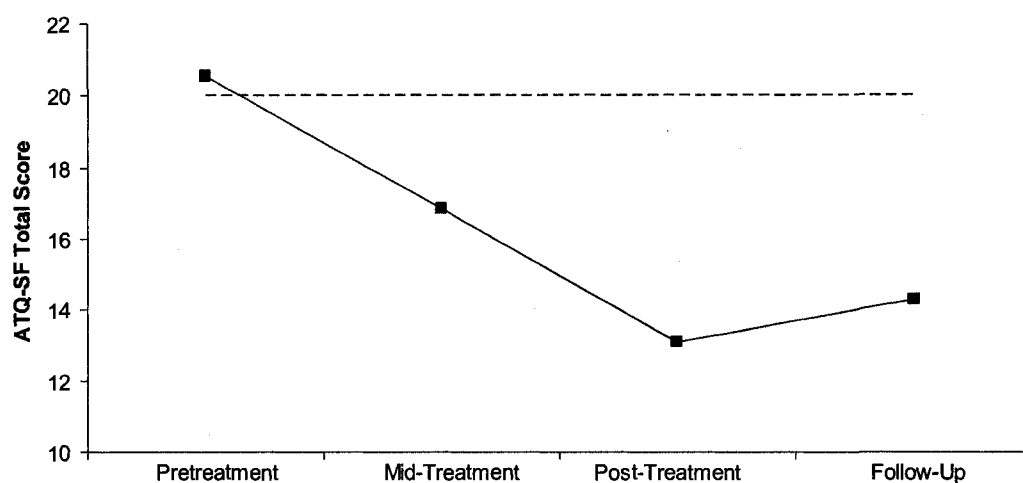


Figure 5. Group change on the Automatic Thoughts Questionnaire – Short Form (ATQ-SF) from pre-treatment to one-month follow-up.

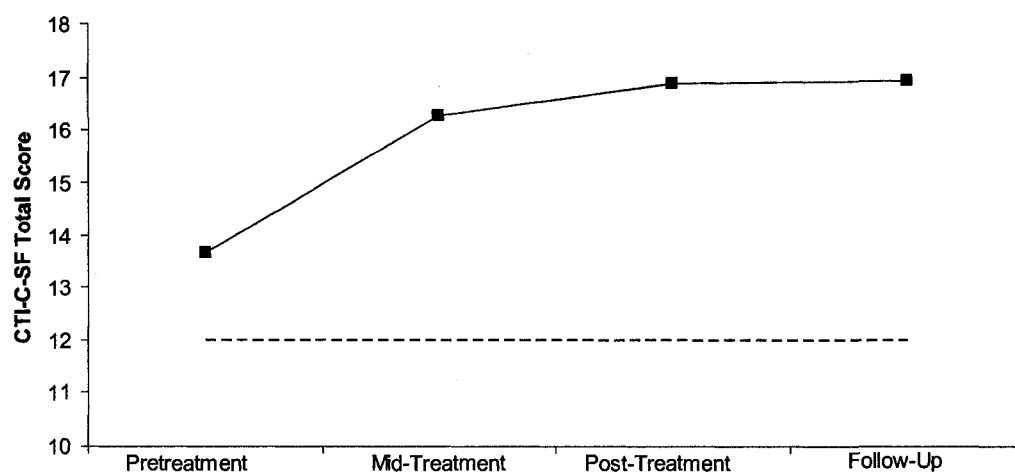


Figure 6. Group change on the Cognitive Triad Inventory – Short Form (CTI-C-SF) from pre-treatment to one-month follow-up.

Table 4), $\chi^2(14) = 18.66, p < .000$. In addition, there was no statistically significant change from post-treatment to follow-up.

Participants' report also indicated changes in the therapeutic direction in their coping skills; however, the changes were not statistically significant (see Tables 3 and 4). On the SRCS, the participants reported improvement from a score of 109.53 at pre-treatment to 117.13 at mid-treatment, 118.67 at post-treatment, $\chi^2(15) = 5.20, p < .074$. The improvement continued to 121.36 at one-month follow-up. On the avoidance scale, which includes "distancing," "internalizing," and "externalizing," they reported improvement from 45.67 at pre-treatment, to 41.67 at mid-treatment, and 40.07 at post-treatment, $\chi^2(15) = 4.67, p < .097$. The improvement continued at one-month follow-up with an average of 37. Looking specifically at the internalizing subscale, the participants reported improvement in the level of internalizing on the SRCS from an average of 18.47 at pre-treatment to 15 at mid-treatment and 13.47 at post-treatment, $\chi^2(15) = 5.51, p < .064$. The improvement continued at one-month follow-up with an average of 12.43. On the approach subscale, which includes "problem solving" and "seeking of social support," improvement was reported from pre-treatment ($M = 47.2$), to mid-treatment ($M = 50.8$), which was maintained at post-treatment ($M = 50.67$), $\chi^2(15) = 1.46, p < .482$. Improvement was maintained at one-month follow-up with an average of 50.36.

Activation Level

Participants reported no change in their activity level from pre-treatment ($M = 37.47$) to post-treatment ($M = 38.93$; see Table 3), $\chi^2(15) = 2.19, p < .334$. This generally high activity level was also apparent at one-month follow-up ($M = 39.21$; see Table 4).

School Grades

Although the teachers reported improvement in the participants' functioning, they did not report improvement in the participants' grades on the Academic Functioning Record Form. The average of the grades went from a pre-treatment mean of 2.63 ($SD = .76$) to a mid-treatment mean of 2.97 ($SD = .65$) and post-treatment mean of 2.66 ($SD = .85$), $\chi^2(13) = 4.38, p < .112$ (see Table 5). Grades slightly increased at one-month follow up to a mean of 2.85 ($SD = .67$), but the change was not statistically significant (see Table 6). However, it is important to notice that there were large differences between the participants.

Caregiver Child Relations

The participants did not report change in their relationships with both their maternal caregivers and paternal caregivers on the PCRQ-C-SF, $\chi^2(15) = 1.02, p < .601$, and $\chi^2(15) = 4.15, p < .126$, respectively (see Table 3). On the other hand, maternal caregivers reported statistically significant change in their relationships with their children. They reported an average of 208.29 at pre-treatment that improved throughout the treatment to 223.21 at mid-treatment, and 233 at post-treatment, $\chi^2(14) = 21.06, p <$

.000 (see Table 3). The change was maintained at follow-up with a score of 235.46 that was not statistically significantly different from that of the post-treatment (see Table 4). Paternal caregivers' report also indicated change in the therapeutic direction in their relationships with their children from a score of 196.6 at pre-treatment, to 215.4 at mid-treatment, 217.4 at post-treatment (see Table 3), and 219.2 at follow-up (see Table 4).

Caregivers' Stress Level

Maternal caregivers reported statistically significant change in their stress level on the PSI-SF, from pre-treatment ($M = 82.36$) to mid-treatment ($M = 73.14$) and post-treatment ($M = 63.29$), $\chi^2(14) = 23.15$, $p < .000$ (see Table 3). The decrease in stress level continued at one-month follow-up ($M = 54.62$; see Table 4 and Figure 7) and was statistically significant, $z(13) = -1.97$, $p < .049$. Paternal caregivers reported significant decrease in their stress level from an average of 89.2 at pre-treatment, to 76.8 at mid-treatment, 77.2 at post-treatment (see Table 3), and 63.6 at one-month follow-up (see Table 4 and Figure 7).

Caregivers' Satisfaction with the Treatment

Caregivers reported strong treatment satisfaction on the CSQ that was administered at post-treatment. The mean was 3.94 ($SD = .11$) for maternal caregiver and 4 for paternal caregiver.

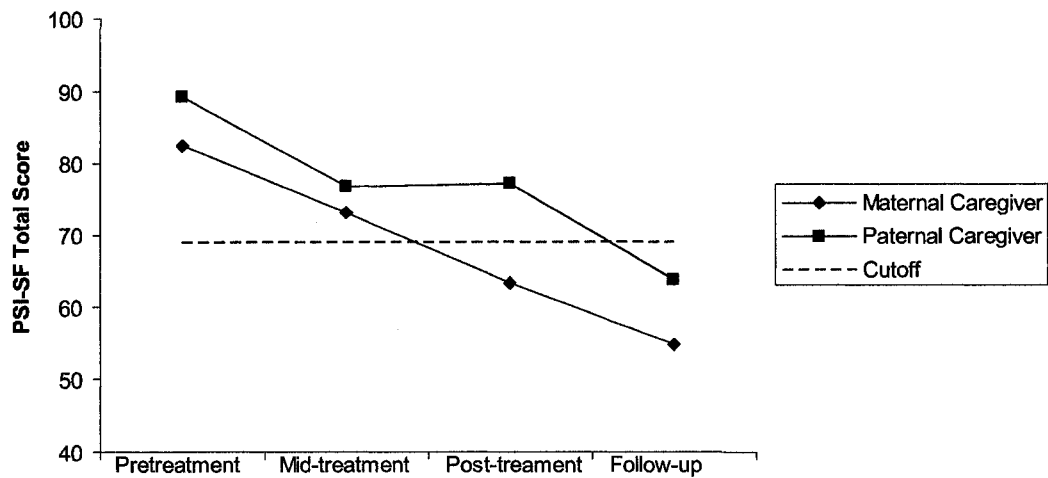


Figure 7. Group change on the Parenting Stress Inventory – Short Form (PSI-SF) from pre-treatment to one-month follow-up for maternal and paternal caregivers.

Benchmarking of Psychotherapy Studies

To benchmark the current findings against existing psychological treatment studies, four randomized clinical trials with similar characteristics were identified (see Appendix I). The average age in these studies was 10.16 for the CBT groups and 9.88 for the control groups (see Table 7). The female percentage was 47 and 46 in the CBT and the control groups, respectively, and the Caucasian percentage was 88 and 78 in the CBT and control groups, respectively (see Table 7). For the CBT groups, the CDI benchmark was 19.26 and 9.74 at pre- and post-treatment, respectively, and for the control groups, the CDI benchmark was 19.2 and 15.67 at pre- and post-treatment, respectively. For the follow-up data, the CDI benchmarks for the CBT and control groups, respectively, were 8.78 and 12.93 at 1- to 3-month, 6.63 and 12.75 at 4- to 6-month, and 5.77 and 10.25 at 7- to 9-month. For the studies used, the CDRS-R benchmark for the CBT groups was 38.66

Table 7

Comparison of PASCET+ C-CRET Group to CBT and Control Benchmark Groups

Outcome Variable	PASCET+C-CRET		Benchmarked CBT groups - mean unweighted		Benchmarked control groups - mean unweighted	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>n</i>	15/14 FU		11		14.14	
Age	10.27	2.02	10.16	0.91	9.88	0.87
% female	67		47		46	
% Caucasian	87		88 ^a		78 ^a	
Pre CDI	17.73	7.09	19.26	5.94	19.20	6.41
Post CDI	6.00	7.94	9.74	6.77	15.67	7.86
FU CDI (1-3 mo.)	5.93	8.78	8.78 ^b	6.64	12.93 ^b	5.26
FU CDI (4-6 mo.)			6.63 ^c	4.93	12.75 ^c	7.05
FU CDI (7-9 mo.)			5.77 ^d	5.15	10.25 ^d	8.48
Pre CDRS-R	47.40	8.04	38.66 ^e	11.55	34.36 ^e	8.72
Post CDRS-R	25.07	7.09	26.75 ^e	7.08	31.55 ^e	8.57
FU CDRS-R (1-3)	24.14	7.97	22.49 ^f	4.07	22.60 ^f	5.03
FU CDRS-R (7-9)			28.08 ^g	7.15	28.59 ^g	8.75

Note. PASCET = Primary and Secondary Control Enhancement Training; C-CRET = Caregiver-Child Relationship Enhancement Training; Pre = Pre Treatment; Post = Post Treatment; FU = Follow Up; CDI = children's Depression Inventory; CDRS-R = Children's Depression Rating Scale - Revised; ^aData is from De Cuyper et al. (2004) and Weisz et al. (1997) ^bLiddle & Spence (1990) and Stark et al. (1991); ^cDe Cuyper et al. (2004); ^dWeisz et al. (1997); ^eStark et al. (1991) and Weisz et al. (1997); ^fStark et al. (1991); ^gWeisz et al. (1997).

and 26.75 at pre- and post-treatment, respectively, and for the control groups, the CDRS-R benchmark was 34.36 and 31.55 at pre- and post-treatment, respectively. For the follow-up data, the CDRS-R benchmarks for the CBT and control groups, respectively, were 22.49 and 22.6 at 1- to 3-month, and 28.08 and 28.59 at 7- to 9-month.

Looking at the pre-treatment CDI data, the PASCET+C-CRET group started at similar average scores ($M = 17.73$) to the CBT ($M = 19.26$) and control ($M = 19.2$) benchmark groups (see Table 7 and Figure 8). In addition, all groups were well above the CDI normative average of 9.09 (Smucker et al., 1986). At post-treatment the PASCET+C-CRET group was well below the CDI normative average ($M = 6$), while the CBT groups were just reaching the average ($M = 9.74$) and the control groups were still in the abnormal range ($M = 15.67$). At 1- to 3-month follow-up the PASCET+C-CRET group maintained the results from post-treatment ($M = 5.93$) while the CBT benchmark group (Liddle & Spence, 1990; Stark et al., 1987) improved to just below the average ($M = 8.78$) and the control group (Liddle & Spence, 1990; Stark et al., 1987), while improved, was still elevated ($M = 12.93$). At 4- to 6-month follow-up the CDI benchmark (from De Cuyper et al., 2004) for the CBT group ($M = 6.63$) was close to the PACET+C-CRET group's average CDI at 1- to 3-month follow-up. However, De Cuyper et al.'s sample (2004) began treatment with a much lower CDI average compared to our group (see Appendix I). At 7- to 9-month follow-up the CDI benchmark (taken exclusively from Weisz et al., 1997) for the CBT group ($M = 5.77$) was similar to the 1- to 3-month follow-up CDI in the PASCET + C-CRET group. In addition, by this time, the control group showed improvement that approached the normative CDI average ($M = 10.25$).

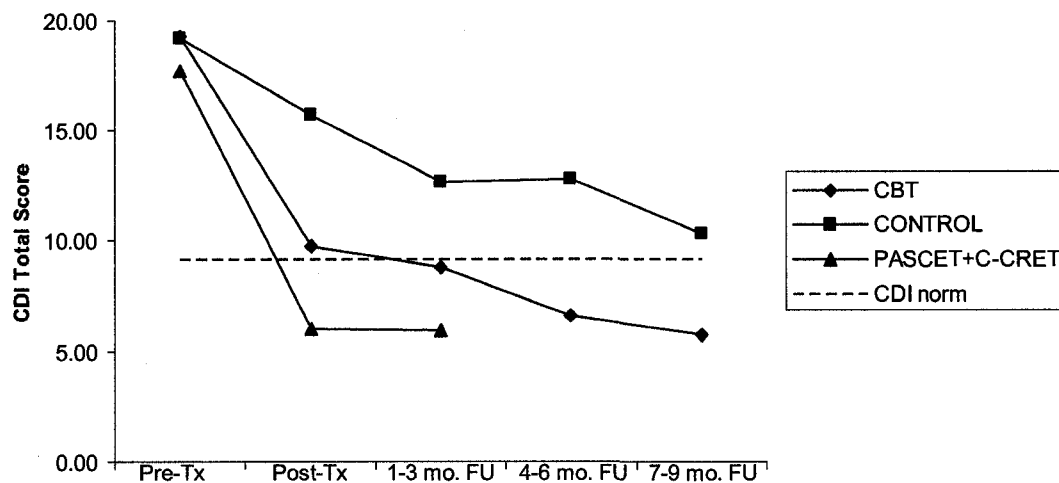


Figure 8. Comparison of PASCET + C-CRET group's Children's Depression Inventory (CDI) mean to CBT and control groups' CDI benchmark at pre-treatment (Pre-Tx), post-treatment (Post-Tx), 1-3 month follow-up (1-3 mo. FU), 4-6 month follow-up (4-6 mo. FU), and 7-9 month follow-up (7-9 mo. FU).

Within-group effect sizes on the CDI suggest that for the PASCET+C-CRET group changes were large ($g = 1.56$), and at least as good as the effect size for the CBT benchmark group ($g = 1.49$), and clearly exceeding the effect size in the control benchmark group ($g = .49$). In summary, the PASCET+C-CRET group compares very favorably with benchmarks from the literature.

The trends observed in the CDRS-R data are generally consistent with the CDI data (see Table 7 and Figure 9). The pre-treatment CDRS-R average was higher for the PASCET+C-CRET group ($M = 47.4$) compared to the CDRS-R benchmark for CBT groups ($M = 38.66$) and the control group ($M = 34.36$). Both the PASCET+C-CRET group ($M = 25.07$) and the CBT groups ($M = 26.75$) declined to the non-depressed range at post-treatment. The total amount of CDRS-R change was almost twice as large for the

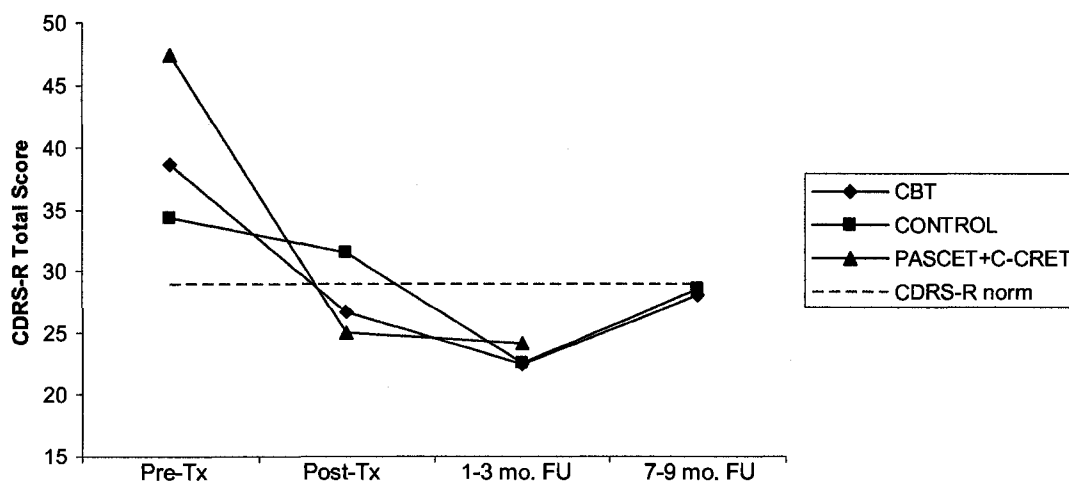


Figure 9. Comparison of PASCET + C-CRET group's Children's Depression Rating Scale-Revised (CDRS-R) mean to CBT and control groups' CDRS-R benchmark at pre-treatment (Pre-Tx), post-treatment (Post-Tx), 1-3 month follow-up (1-3 mo. FU), and 7-9 month follow-up (7-9 mo. FU).

PASCET+C-CRET group (difference score = 22.33) compared to the CBT benchmark (difference score = 11.91) and almost eight times larger than control benchmark (difference score = 2.81). At 1- to 3-month follow-up the results were maintained for both the PASCET+C-CRET group ($M = 24.14$) and the CBT benchmark (taken exclusively from the Stark et al., 1987; $M = 22.49$). The control group also had a significant improvement ($M = 22.6$) to a point that equaled the PASCET+C-CRET group and the CBT benchmark. At 7- to 9-month follow-up, both benchmarked CDRS-R averages (taken from Weisz et al., 1997) were also similar (CBT, $M = 28.08$ and control group, $M = 28.59$).

Within group effect size on the CDRS-R suggests that for the PASCET+C-CRET group changes were large ($g = 2.95$), and clearly exceeded the effect sizes for both the CBT benchmark group ($g = 1.24$) and the control benchmark group ($g = .33$). In total, the

benchmarking data suggest that PASCET+C-CRET moderately outperformed CBT treatments in other studies and appeared markedly superior to control conditions.

Benchmarking of Medication Studies

In addition to benchmarking the current results against relevant psychosocial treatments, the findings were also compared to two pharmacology studies (which were critical to the FDA's approval of fluoxetine for youth depression; Emslie et al., 2002; Emslie et al., 1997; see Appendix J). Both of these randomized clinical trials had several similar characteristics to the PASCET+C-CRET group. The average age in the fluoxetine and the placebo benchmarks was 12.45 and 12.6, respectively (see Table 8), which is slightly higher but still comparable to the current sample. The percentage of the sample that was Caucasian (81% in both fluoxetine and placebo groups) was similar. However, there appears to be a greater percentage of females in the PASCET+C-CRET group (67%) than the fluoxetine (48%) and placebo (48%) groups. In addition, the medication trials had significantly larger samples (78.5 in both groups) than in the PASCET+C-CRET group.

For the fluoxetine groups, the CDRS-R benchmark was 57.8 and 36.75 at pre- and post- treatment, respectively, and for the placebo groups, the CDRS-R benchmark was 56.35 and 43.65 at pre- and post-treatment, respectively. Looking at the CDRS-S benchmarks, the PASCET+C-CRET group started at somewhat lower pre-treatment average ($M = 47.4$) than the fluoxetine and the placebo groups (see Table 8 and Figure 10). However, the overall amount of change was comparable. As described in the

Table 8

Comparison of PASCET+ C-CRET Group to Fluoxetine and Placebo Benchmark Groups

Outcome Variable	PASCET+C-CRET		Benchmarked fluoxetine groups - mean unweighted		Benchmarked placebo groups - mean unweighted	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>n</i>	15/14 FU		78.50		78.50	
Age	10.27	2.02	12.45	0.35	12.60	0.13
% female	67		48		48	
% Caucasian	87		81		81	
Pre CDRS-R	47.40	8.04	57.80	10.20	56.35	11.10
Post CDRS-R	25.07	7.09	36.75	14.15	43.65	15.25

Note. PASCET = Primary and secondary Control Enhancement Training; C-CRET = Caregiver-Child relationship Enhancement training, Pre = Pre Treatment; Post = Post Treatment; CDRS-R = Child Depression Rating Scale – Revised.

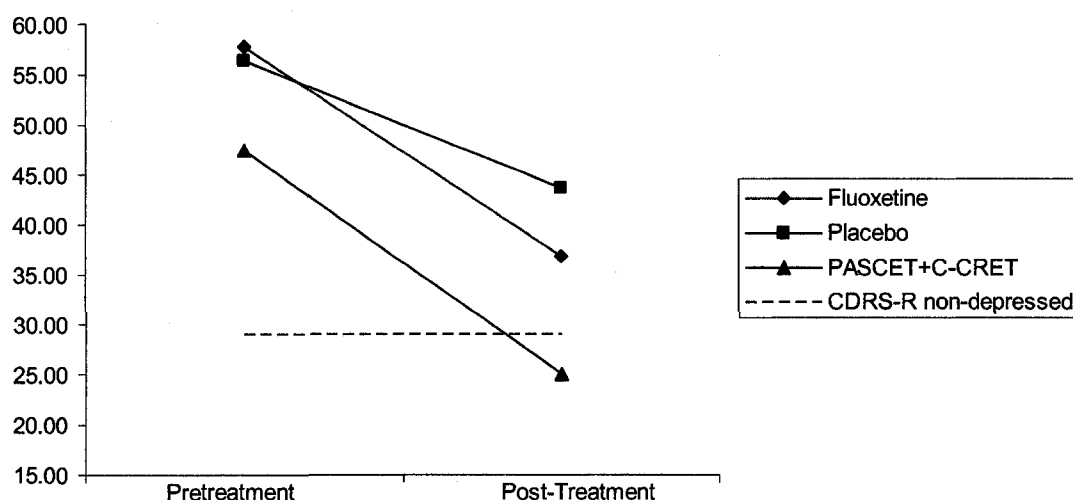


Figure 10. Comparison of PASCET + C-CRET group's Children's Depression Rating Scale-Revised (CDRS-R) mean to fluoxetine and placebo groups' CDRS-R benchmarks at pre-treatment and post-treatment.

preceding section, the CDRS-R change in PASCET+C-CRET was 22.33, which was similar to that in the fluoxetine group (difference score = 21.05). In addition, while the pill placebo group also improved from pre- to post-treatment (difference score = 12.7), the PASCET+C-CRET group improvement was substantially larger. Thus, based on the existing benchmarks, PASCET+C-CRET appeared to compare favorably to pharmacotherapy and to outperform a pill placebo.

Moderators of Change

Moderator analyses attempt to address the question of what works for whom. That is, they attempt to determine what, if any, pre-treatment variables predict response to treatment. In the current analyses the following potential moderators were examined: age

of the participants, gender, income, past use of psychiatric medications, participants' pre-treatment negative thoughts, coping skills, psychosocial functioning, caregiver-child relations, maternal caregivers' stress level, child compliance with the treatment, and caregiver compliance with the treatment. To examine their influence, pre- to post-treatment residualized change scores were calculated for the CDI and the CDRS-R. Next, correlations between the potential moderators and assessment of depression change were calculated. These analyses found that age was a moderator of change in depressive symptoms on the CDI ($r = .69, p < .004$) but not the CDRS-R ($r = .37, p < .18$). This correlation suggests that the older the participants, the more change they self-reported in their depressive symptoms. None of the other demographic variables assessed was found as a moderator of change of depressive symptoms with correlations ranging from $r = -.08$ to $r = -.31$ ($p = .774-.258$).

Pre-treatment negative thoughts about the world and the future (CTI-C-SF) was a moderator of change on the CDRS-R, $r = -.55, p < .034$. This correlation suggests that the more negative thoughts about the world and the future the participants reported at pre-treatment, the more change they reported in depressive symptoms. This result, however, was not replicated on the CDI ($r = -.19, p < .493$). No other measures were found as moderators of change in depressive symptoms with correlations ranging from $-.01$ to $.39$ ($p = .975$ to $.159$).

Within Treatment Predictors of Change

To examine within treatment predictors of change, analyses were conducted to assess whether changes in the first part of the treatment predicted change in depressive

symptoms in the second part of the treatment on the CDI and CDRS-R. To do so, pre- to mid-treatment residualized change scores on the SDQ-P of maternal caregivers, ATQ-SF, CTI-C-SF, SRCS, CCSUS, SRAL, PCRQ-C towards both caregivers, PCRQ-P of maternal caregivers, and PSI-SF, were calculated. These were then correlated with mid- to post-treatment residualized change scores on the CDI and CDRS-R. The only trend that was observed was between negative self-thoughts (ATQ-SF) and depressive symptoms on the CDRS-R, $r = .49, p < .066$, indicating that improvement in the first part of the treatment in negative self-thoughts predicted better improvement in depressive symptoms in the second part of the treatment. This result was not replicated on the CDI, $r = .28, p < .321$. The calculations on the remaining variables ranged from .00 to .35 ($p = .991$ to .197).

CHAPTER IV

DISCUSSION

The study provides evidence supporting the efficacy of a combined treatment for youth depression, which includes individual CBT using the PASCET manual with accompanying caregiver-child sessions focusing on the use of positive parenting practices.

The group in the current study demonstrated significant changes both in depressive symptoms and also in associated symptoms, including negative thinking and psychosocial functioning. Changes were noted by all reporters—the participants, the caregivers, the teachers, and the therapist investigator. In addition, the caregivers reported a significant decrease in their stress level and significant improvement in their relationship with their children. The exception was caregiver-child relationships from the perspective of the child, which showed no change. The consumer satisfaction data indicate that the caregivers were highly satisfied with the treatment they received.

The study adds to existing data from previous studies documenting the efficacy of CBT for reducing depressive symptoms in children. Most of the previous studies with this population were conducted in a group format. The format of the current treatment was individual. As such, the current results provide promising data about the (expected) generalizability of effects when CBT is offered in this modality. Comparison of the combined treatment with a benchmark derived from existing psychotherapy studies

established the current treatment as at least as good as the other CBT treatments and appeared markedly superior to control conditions. Assessment of the combined treatment with a benchmark from the pharmacotherapy studies, which were influential in fluoxetine achieving FDA approval for use with depressed youth, revealed that it also compares favorably to pharmacotherapy and appears to outperform a pill placebo.

The combined protocol used in this study reflects an attempt to incorporate recommendations made in and following from previous intervention studies. The current study integrated recommendations made by Weisz et al. (2006), including increasing the treatment dose and adding the caregiver component to create more multi-component packages with the use of new methods. Addition of the caregivers also follows from knowledge of the psychopathology literature and its relationship to the existing intervention outcome literature for depressed youth. These two literatures are currently somewhat disconnected in the sense that despite a large number of studies linking family context and relations to child depression (e.g., Hammen, 1991), and the consistent recommendation to more fully incorporate caregivers into the treatment of depressed children (e.g., Lovejoy et al., 2000; Stark et al., 2001; Stark et al., 2000), only a very small number studies incorporated caregivers to work on child-caregiver relations. For instance, none of the psychosocial treatment studies used to establish our benchmark included the caregivers for caregiver sessions and only two included them for assessment (De Cuyper et al., 2004 and Stark et al., 1987). Thus, the current study provides promising data regarding including the caregivers for caregiver training sessions not only to increase their involvement and improve the outcome for the child, but also to reduce

familial stress, improve the caregiver-child connection and relationships, and improve parenting and family functioning (Sexson et al., 2001).

The current study demonstrates an attempt at increasing the ease of access to effective professional clinical services for children by conducting the intervention at their school. In all the benchmarked studies, the intervention was conducted in the child's school but none included the caregivers in the intervention. A school setting may make it more challenging to include caregivers than when caregivers are bringing the child to a research clinic. However, this potential increased difficulty should not be seen as an impossibility, as the school is often in relatively close proximity to the family residence and families are often accustomed to coming to the school for meetings. Also, when caregivers are not working, conducting the treatment at the schools provides an opportunity to conduct the caregiver sessions during the school day when the children are at school and there is no need for childcare services.

Fluoxetine (Prozac) is the only medication approved by the FDA for use to treat depression in children age seven and older. This designation was earned in response to studies demonstrating that fluoxetine was more effective than placebo for the treatment of depressed youth (Emslie et al., 2002; Emslie et al., 1997). However, the FDA issued a Black Box Warning in September 2004 for antidepressant drugs, indicating that they may increase suicidality in a subset of pediatric cases (<http://www.fda.gov>). This warning appears to have led to a significant decrease in the number of youth prescribed with antidepressants (Nemeroff et al., 2007). Therefore, it is important to continue developing treatments for depressed youth that are empirically-based and easily accessed.

Many intervention studies for depressed youth fail to assess child functioning from the perspective of primary caregivers and other adults who are routinely in contact with the child. In addition, there are often discrepancies between caregiver, teacher, and child reports regarding identified problem areas and the nature and extent of reported improvement (Cantwell, Lewinsohn, Rohde, & Seeley, 1997; Kazdin, 1989; Yeh & Weisz, 2001; Youngstrom, Loeber, & Stouthamer-Loeber, 2000). Given this backdrop, it is significant that the teachers and both maternal and paternal caregivers reported significant improvement in child psychological functioning. It may be that the involvement of the caregivers in the treatment and the continual psychoeducation of the caregivers about their child's treatment improved their awareness of their child's psychological functioning and improvements in psychological function. The same process may be applicable to teachers. By involving teachers in the assessment process and applying learned skills to difficulties in the classroom when relevant, the therapy process may have increased teachers' awareness of improvements and/or participants' efforts to use skills acquired in the treatment. Additionally, given the design of the study, it is also not possible to rule out the effects of repeated measurement in the context of an ongoing treatment in which caregiver informants were also participants. The fact that caregivers were both informants and participants may have produced a positive response bias. Teacher reported changes also could be due to repeated measurement and awareness of treatment participation, but this seems less likely for teachers than caregivers.

Despite the aforementioned possibilities, the most parsimonious explanation appears to be that functioning improved during the treatment course. Clinician-

administered, self-report, caregiver-report, and teacher-report data all generally suggested significant improvement, which seems most likely to indicate that the treatment package produced a real effect on child functioning. Unfortunately, given the uncontrolled design of the study, reported changes cannot be conclusively attributed to the treatment.

It is also interesting to note that there were some areas where positive change was not noted. Unfortunately, there were no significant changes in the participants' grades throughout the treatment, which showed large individual differences between the participants. In addition, perfect agreement was not obtained. While the caregivers reported significant improvement in their relationships with their children, unfortunately, the children did not report improvement in their relationships with their caregivers. There may be a number of reasons for this difference. First, there may have been no changes in the relationship, despite the caregivers report. That acknowledged, it may also be that the children did not identify actual changes in their parents' behavior and/or their relationships with them. Relatedly, it may be that it takes children longer to recognize change in their parents' behavior, if such change exists. For instance, maybe children and adolescents need discrimination training to learn to notice changes in their primary caregivers' behavior. In addition, it was found in previous studies that there is poor agreement between caregivers and children on family experiences. One of the reasons suggested was that children are likely to focus on themselves while parents usually compare the child with his/her siblings in the context of the home (Rutter & Sroufe, 2000). Only two of the seven caregiver sessions actually included the child so maybe the child did not notice their caregivers' efforts. More sessions that include both the

caregivers and the children could provide the children with opportunities to notice their caregivers' efforts and the changes in the caregivers' behavior.

Negative thinking is a theoretically targeted area for change in CBT protocols. However, the necessity of the cognitive change techniques in producing cognitive change has been a subject of debate (Ilardi & Craighead, 1994; Tang & DeRubeis, 1999). In the present study both measures of depressotypic thinking showed significant improvement. Even though depressotypic thinking was targeted in the second part of the treatment, improvement was also reported in the first part of the treatment. That is, 81% of the CTI improvement (negative thoughts about the world and future) and 49% of the ATQ improvement (negative thoughts about the self) occurred from pre- to mid-treatment. It seems plausible that by increasing positive activities and time spent in activities between the caregiver and the child, negative thoughts decreased. Ongoing change in negative self-thoughts in the second half of treatment may have been further encouraged by the interventions targeting negative self-thought. However, the change in the second part of the treatment may have simply been a continuation of that which started during the first half owing nothing to the skills taught during the second half. Support for this latter suggestion is inferred from the significant trend wherein ATQ improvement from pre- to mid-treatment predicted depression change from mid- to post-treatment on the CDI. With that, it was found that the more negative thoughts about the world and future the participants reported at pre-treatment, the more change in depressive symptoms they reported on the CDRS-R. This is supportive of an intervention targeting negative thoughts making it especially efficacious for those high in that target behavior. Thus,

much work remains to be done to determine the contribution of cognitive techniques and cognitive change in the treatment process.

A potential alternative to cognitive therapy is behavioral activation. The first portion of the current treatment involved activation (primary control) strategies and the majority of depression symptom change was observed in the first part of treatment. This supports the possibility that activating the child and changing the reaction to the external environment was the active ingredient. However, only small improvement was reported regarding involvement in enjoyable and non-solitary activities. It is possible that the 4-point Likert scale used in a measure that was developed specifically for the current study was too crude and did not correctly represent the actual involvement of the participants in the activities.

The current study found that the children's age was a moderator of change in depressive symptoms on the CDI, with older participants reporting more improvement in depressive symptoms. The PASCET manual is intended to target depressive symptoms in children as young as eight. It may be that some of the skills may not be as effective with younger children possibly because they are more difficult to learn and comprehend. These data serve as a reminder of the importance of assessing the understanding level of young children and their ability to implement components of CBT protocols. This finding also suggests the potential importance of even further increasing involvement of the caregivers in the treatment. The limited cognitive abilities of younger children may prevent them from being able to fully generalize skills from the setting where they were acquired to other environments. Therefore, caregivers' role may be critical in assisting them in

generalizing these skills to the home. Also, it may suggest that there is a need to develop treatments, especially for younger children, that more specifically target caregiver-child relations and/or family functioning. However, in interpreting the moderating effect of age, it is important to remember that all children improved during the intervention.

Limitations

The major limitation of the current study is the open clinical trial design, which weakens the internal validity. That is, it cannot be concluded with complete confidence that the changes observed were the product of the intervention. Moreover, because all the children received the treatment, with no control group, it is hard to interpret whether the current treatment is more effective than other treatments, placebo controls, or no-treatment. Using the benchmarking strategy to compare our group to treatment and control conditions in previous psychotherapy and medication trials with similar age ranges, primary dependent variables, inclusion criteria, and treatment timelines, provides some anchor points for evaluating outcome, but it is not a full substitute for a concurrent control group. The open clinical trial design with benchmarking can be useful in what are termed effectiveness studies, which place a greater emphasis on external validity and determining how the intervention implemented in a new setting compares to results from randomized clinical trials. The current study has features of research therapy (as defined by Weisz & Weiss, 1989) including therapy that focuses primarily on a certain problem and involves exclusive reliance on specific therapy techniques with a therapist that is trained in these specific therapy techniques. However, the study also has some

characteristics of effectiveness studies (as defined by Weisz & Weiss, 1989) including most participants being referred to the treatment by the school counselors with most of them displaying other problems in addition to depressive symptoms, like ADHD and learning problems.

An additional limitation is the absence of blind assessment, especially of the clinician-rated measure of depression (CDRS-R). To overcome this limitation, 19% of the interviews were coded to ensure their reliability and found a very high correlation between the interviewer (therapist investigator) and the coder. This is not a complete remedy for lack of blind assessment because the mere presence of the therapist investigator could have altered responding. However, the results from the coder suggest that the therapist investigator was accurately rating what was reported by the participants.

Other limitations in the present study include repeated testing which may have increased the probability that the participants learned the “correct” answers, presence of independent events that happened during the treatment and may have influenced the results, maturation and development of the participants during the treatment that may have influenced the results, and statistical regression to the mean.

Future Direction

The current study provides preliminary data about the efficacy of a combined treatment of individual CBT plus caregiver training sessions. Future studies should include a larger number of participants, which can increase diversity and allow more generalizability of the results. It is also important to include more stringent control

conditions. This could be done by incorporating a control group or an additional treatment comparison group in a randomized clinical trial format to assess whether the current treatment is better than other treatments and/or no treatment. Another approach would be to use more rigorous single-participant designs. A multiple baseline design could further protect internal validity and an ABC versus ACB design could explore the relationship between early change and the treatment techniques used.

It is not clear whether the caregiver sessions had a direct positive influence on the depression level or the caregiver-child relationships. It is possible that by improving the depressive symptoms of the children, the caregiver-child relationships indirectly improved. Future studies could include comparisons between two groups, one receiving only individual CBT and one receiving CBT plus caregiver sessions or one receiving CBT plus caregiver sessions and one receiving only caregiver sessions. Also, a comparison between two groups in which each received different caregiver sessions targeting different skills could be conducted to assess the influence of specific caregiver skills on depressive symptoms.

Future studies could also assess multi-systemic approaches and target many components that the empirical literature suggests contribute to the development and maintenance of depressive symptoms in children. These treatments could focus on decreasing family conflict and improving the interactions with greater inclusion of siblings in family therapy. They could include several modules that would target caregiver skills based on the specific needs of each family (as was done in the TADS study; see Wells & Albano, 2005). In addition, such interventions could target family

adversity (unemployment, poor housing) with the help of a social worker and might include treatment for caregivers to address psychiatric disorders or psychosocial functioning (via individual treatment, pharmacotherapy, and/or marital therapy) depending of the specific needs of the caregivers. An additional layer for children might also involve targeting learning problems through academic tutoring. Such a completely systemic package might need to be reserved for the most severe cases and awaits an experimental evaluation and economic assessment as has been done with multi-systemic approaches in other areas (e.g., Saldana & Henggeler, 2006 for conduct disorder)

The benchmarked psychosocial treatments demonstrated improvement for the control groups throughout the treatment and at follow-ups, which may follow the natural course of depression. This trend further supports the importance of long follow-ups to determine long-term effects of treatments compared to control groups. Also, looking at the small number of participants in the psychosocial treatments and the large number of participants in the pharmacotherapy studies, it is important to conduct larger scale psychosocial studies.

In conclusion, the described study provided evidence supporting the efficacy of a combined individual CBT with caregiver sessions for childhood depression. The study adds to previous studies suggesting that CBT reduces depressive symptoms in children. It also provides promising data about the potency of including caregiver/caregiver-child sessions focusing on the use of positive parenting practices to increase the caregivers' involvement and to potentially improve the caregiver-child relationships and the family functioning. Comparison with existing studies establishes the treatment as at least as good

as other cognitive behavioral and fluoxetine treatments, and as superior to control and pill placebo conditions. Finally, the current results suggest that implementing the treatment in school settings is feasible, therefore increasing access to services to children and caregivers. While the intervention in this study was provided at the school, the protocol could be used in clinical practice as well.

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Appendix A
An Antisucide Contract

An Antisucide Contract

Project title: Combined cognitive behavioral treatment plus caregiver sessions for childhood depression

Principal Investigator: Scott T. Gaynor, Ph.D.

Co-Investigator: Dikla Eckshtain

As part of my participation, I, _____, agree to the following:

1. I agree that one of my major goals is to live a long life with more pleasure and less unhappiness than I have now.
2. I understand that wishing to die when I am very sad or upset stands in the way of achieving this goal, and I therefore would like to overcome this tendency. I agree to use the treatment to learn better ways to reduce sad feelings.
3. Since I understand that this will take time, I agree in the meantime to refuse to act on urges to injure myself between this day and until the treatment is over.
4. If at any time I should feel unable to resist a wish to hurt or kill myself, I agree to inform my father/mother (or guardian) or the therapist, _____.
5. The therapist, _____, agrees to work with me during treatment to help me learn constructive ways to cope with depression. In addition, she will attempt to help me as much as is reasonable during hard times. However, she will not always be available, in which case I need to inform my mother/father.
6. I agree to abide by this contract until the conclusion of the treatment or until it is openly renegotiated with the therapist, _____. In other words, if during the course of the treatment I begin to feel like hurting or killing myself, I will discuss this with the therapist _____.

Child's Signature Date

Guardian's Signature Date

Therapist's signature Date

Appendix B

Consent for Release of Information

Western Michigan University, Department of Psychology**Consent for Release of Information**

Project Title: Combined cognitive behavioral treatment plus caregiver sessions for childhood Depression.

Principal investigator: Scott. T. Gaynor, Ph.D Co-Investigator: Dikla Eckshtain, M.A.

I _____ (parent/legally authorized guardian) hereby authorize _____
(name of physician) to speak with Ms. Eckshtain regarding my child's medication management for social,
behavioral, emotional, and academic problems in order to coordinate care during his/her participation in
this project.

The use of the information is ONLY for the purpose of the current treatment.

Utilization of this form to release information is effective for the following period:

From _____ to _____ unless revoked by me in writing prior to the termination date.

My signature means that I have read this form and/or have had it read to me and explained in language that I
understand. I know what information is being disclosed.

Parent/Guardian signature: _____ Date: _____

Witness: _____ Date: _____

Appendix C

Explanation Script for the Caregiver Given by the School Professional Via Phone

Explanation Script for the Caregiver Given by the School Professional Via Phone

Introduction of self and review of his/her concerns derived from contact with the child. If appropriate in the context of the discussion, then this study and the possibility of attending a meeting to get more information and consider participation will be introduced.

“There is a project ongoing in the school right now that is being done by researchers in the Psychology Department at Western Michigan University. The project is aimed at helping children who are having a difficult time with: moodiness, sadness, irritability, lack of motivation, not finding things as fun and rewarding as in the past, sleep problems, fatigue or loss of energy, problems concentrating, making decisions, or solving problems, appetite changes, and feelings of low self-esteem. These are symptoms of depression, but they can occur for a variety of reasons. Your child does not have to be clinically depressed to participate in this project or to present with all of the symptoms I just mentioned, but he/she does seem to demonstrate some significant symptoms that appear to warrant further evaluation and intervention, either in this study or by another mental health professional, including the school professionals.

The intervention is cognitive behavioral therapy, which involves helping to teach your child coping skills to use in times of distress and to help alter his/her behavior or thinking and improve his/her mood. The treatment is based on the most up-to-date information available on childhood depression. The individual treatment includes 16 individual sessions between the therapist and your child that focus on teaching coping skills. There are also 7 treatment meetings with the caregiver to help encourage progress in the home environment and to actively involve the caregiver in the intervention.

It is important to keep in mind that while CBT has a promising track record of use with children and families, other types of treatment are available. Psychological practitioners in the community often use family therapy where all members of the household participate. In addition, some therapists use primarily supportive therapy or implement CBT (or other) skills in a less structured fashion than would occur in a treatment study. In addition, some children with depressive symptoms are taken to see a child psychiatrist to determine if antidepressant medication may be helpful for them. If an alternative approach is more appealing to you, we can help refer you to these types of services. In addition, it is also important to keep in mind that your child can receive services from one of the school professionals, including the school counselor, school psychologist or social worker. Whatever decision you make will be respected and we will do whatever we can to facilitate your receiving your choice of treatment.

Is this something that you would be interested in setting up a meeting to learn more about and see if you would like to participate?”

If the caregiver expresses interest, he/she will be invited for a meeting that will include the school professional, the therapist investigator, the caregiver, and, for a portion of the meeting, the child. The caregiver will be informed that this meeting will take about 60 minutes.

Appendix D
Consent for Participation

**Western Michigan University, Department of Psychology
Consent for Participation**

Project Title: Combined cognitive behavioral treatment plus caregiver sessions for childhood depression

Principal investigator: Scott. T. Gaynor, Ph.D Co-Investigator: Dikla Eckshtain, M.A.

Overview

You and your child have been invited to attend an assessment session today in order to consider whether to participate in a treatment/research study entitled "Combined cognitive behavioral treatment plus caregiver sessions for childhood depression." This project is conducted by Ms. Dikla Eckshtain, an advanced graduate student pursuing her Ph.D. in Clinical Psychology at WMU, and is supervised by Dr. Scott T. Gaynor, a licensed psychologist and faculty member in the WMU Psychology Department.

In the following paragraphs the treatment/research study will be described in detail. If after reading and hearing about the study you are interested in participating you will begin the assessment process today. The assessment process allows for collection of detailed information to determine if the treatment being offered is a good fit for your child's needs. If after these assessment meetings you remain interested and your child seems to be a good candidate for participation you will be enrolled in the treatment portion of the study.

Assessment

The study treatment is aimed at helping children who are having a difficult time with sadness, irritability, diminished interest or pleasure, sleeping problems, restlessness, fatigue, loss of energy, diminished ability to think or concentrate, eating problems, and/or feelings of worthlessness. These are considered to be symptoms of depression, but they can occur for a variety of reasons. Your child does not have to be clinically depressed to participate, but does have to demonstrate some of the symptoms listed above. This is because the treatment we are offering specifically targets these problems. Because the treatment specifically targets these problems, if your child is not having many of these problems, or is having substantial difficulties in other areas, or for other reasons, this treatment may not be best for him/her. Therefore, the purpose of the assessment sessions is to more fully evaluate his/her functioning to determine suitability for this study and its appropriateness for your child's needs.

The results of these detailed assessment meetings will ultimately determine whether this treatment is a potential option for you and your child. If any of the assessment information indicates that this program is not an option for your child, you will be informed as soon as this is known. In order to be included both your child and you must speak and understand the English language sufficiently to complete the study interviews and questionnaires. Because the intervention is verbal and will be conducted in English, it is unlikely you will benefit if you cannot communicate in English. Additional reasons that might prevent your child and you from participating would be if your child does not report struggling to a significant degree with depressive symptoms, or if your child has psychological problems that require an alternative or immediate treatment. Problems that would require an alternative or immediate treatment include engaging in behaviors involving severe aggressive and unlawful actions, responses suggestive of bizarre perceptual (hallucinatory) experiences or loss of contact with reality, or disabilities indicative of a severe pervasive developmental disorder (such as autism or severe mental retardation). In addition, if your child is determined to be currently at high risk for suicide, he/she will be excluded because of a need for immediate intervention to maintain safety. If your child cannot participate in the study, you will be assisted in securing the most appropriate care for your child. This assistance may range from provision of immediate crisis management strategies and development of a safety plan to facilitating a referral to appropriate (crisis or non-crisis) service providers. To further coordinate care, a summary of the information from the assessment can be given to a mental health professional at your child's Vicksburg Community School (i.e., his/her school counselor, psychologist, or social worker) if you consent to it and can be made available to other subsequent care providers at your request. If after these assessment meetings this program appears to be a good option for your child and you, you will be enrolled in the intervention (described below).

Description of the Intervention

The intervention that will be offered is a treatment/research study. This treatment is called cognitive behavioral therapy (CBT) and involves teaching you and your child new skills for changing behavior, thinking, and interaction patterns in order to help improve his/her mood. CBT is the most studied and evaluated talk therapy for children who present with depressive symptoms. In treatment studies such as this one, CBT is delivered in a structured systematic fashion involving a set number of sessions and a specific sequence of skills. While CBT has a promising track record of use with children and families, other types of treatment are available. Psychological practitioners in the community often use family therapy where all members of the household participate. In addition, some therapists use primarily supportive therapy or implement CBT (or other) skills in a less structured fashion than we will do here. In addition, some children with depressive symptoms are taken to see a child psychiatrist to determine if antidepressant medication may be helpful for them. If an alternative approach is more appealing to you, we can help refer you to these types of services.

The treatment is relatively brief (lasting about 2 months), but intensive. There will be 16 twice-weekly individual meetings (each lasting 45 minutes) between the therapist investigator and you child and seven (60 minute) meetings with you and the therapist regarding your child (Portions of these meeting will involve you, your child, and the therapist). While the treatment focuses on your child, as a caregiver you will be actively involved in all the phases of the intervention - offering information, completing assessment inventories, receiving summaries of the skills taught, helping your child use the skills learned at home, and possibly making some changes in your behavior and relationship with your child. Thus, you recognize that given your active role in the intervention, you too are a participant in this study.

The intervention is eight weeks long and is divided into two parts. The first part lasts four weeks and is followed by a mid-treatment evaluation, after which the therapist investigator and you will discuss your child's progress. The second part lasts four additional weeks and is followed by a post-treatment evaluation, after which the therapist investigator and you will discuss your child's progress. In addition, you will be contacted approximately 1 month after your termination date to complete a follow-up assessment. If available, you may receive some modest financial compensation for attending the post-treatment and follow-up sessions. In addition, the therapist investigator will briefly meet with your child's teacher at pretreatment, mid-treatment, post-treatment, and 1-month follow-up. The meeting will be conducted in order to discuss and collect data on the teacher's impressions of the child's depressive symptoms, peer relationships and behavior. There is no charge for any of the assessments or intervention sessions offered as a part of this project. Throughout the treatment study you will always be informed about the general functioning of your child and about the general ideas covered in the sessions. However, therapy may be more effective if a child does not fear that everything he/she discloses will be revealed to his/her caregiver and therefore it is recommended that the specific details of what your child says during the assessment or treatment sessions retain a level of confidentiality. However, you reserve the right to know everything that is said during therapy and assessment sessions. Your child will not be informed of the details of the information gathered from you. After each individual meeting the therapist will contact you via phone for a 5 minute therapist-caregiver conference to let you know what strategies were worked on in the individual meeting. In addition, after the mid-treatment and post-treatment assessment meetings, the therapist investigator will review your child's progress with you. Confidentiality is waived in cases of suicidality, homicidality, child abuse or neglect, or urgent need for medical care, in which case the investigator will take appropriate action, including informing you and contacting relevant authorities (i.e., Child and Family Services) or emergency services as deemed necessary.

The intervention will begin as soon as possible following completion of the pretreatment assessment. Depending on the number of children and families participating, it is possible that there may be a delay until the therapist investigator is able to begin providing the intervention. The therapist investigator's current availability can be discussed with you now to determine if this is likely to occur in your case. Should there be a delay, your child will be monitored and receive services from one of the school professionals (school counselor, school psychologist or social worker) in the interim.

Benefits and Risks

The primary direct benefit of your participation in the study is receiving a free assessment and treatment. The assessment involves commonly used, standardized measures and the treatment, based on the

most up-to-date information available on childhood depressive symptoms, is one that in prior studies appears helpful and well received by children and families. The coping strategies that are the focus of the treatment are ones that almost everyone could benefit from using. An indirect benefit from the participation of you and your child is contributing to the scientific literature data relevant to determining how best to treat children who present with depressive symptoms, which might improve the treatments offered to other children.

Although no harmful consequences are anticipated for any participant (and it is our hope that all participants will experience improvement) there are some potential risks requiring consideration. One risk to you and your child of participating in this treatment is that you might experience some emotional discomfort in filling out the questionnaires or answering questions during the clinical interviews. This risk is common to any psychotherapy setting where disclosure of personal information to the therapist is required. The information being gathered and the methods for gathering it have been used in clinical and research settings and are not expected to generate undue stress, but do address sensitive issues. Also, sometimes, even during treatment, depressive symptoms might worsen. The therapist investigator, because she will be seeing your child twice weekly, will be able to detect any worsening symptoms and attempt to address them as part of the treatment. However, should your child experience a dramatic worsening of symptoms during treatment that necessitate another level of care, the therapist investigator will help you access such services. As with any intervention, there is no way to be sure and we cannot guarantee improvement. It is possible that the treatment will work well, but it is also possible that it will only help somewhat and possibly not at all - what works well for some may not work for all people. If this treatment is not as helpful as you would like, Ms. Eckshtain will discuss additional treatment options available at the conclusion of the intervention, or if such additional treatment should be deemed necessary during the course of this intervention.

In addition, as in all research, there may be unforeseen risks. If any accidental injury occurs, appropriate emergency measures will be taken; however no compensation or additional treatment will be made available to you except as otherwise stated in this consent form. Finally, you are free to withdraw your consent to participate at any time without penalty or prejudice and your decision to participate, or to withdraw from participation at any time, has no bearing on any future relations with WMU or your ability to receive other services from Vicksburg Community Schools. Should you discontinue your participation prior to completion of the study you may be contacted and your child and you may be invited to participate in the post-treatment and follow-up assessment sessions. There is no obligation to attend but, if available, you may receive some modest financial compensation for so doing.

The information obtained from your child and you during the study becomes the sole property of WMU. As part of your participation, Ms. Eckshtain requests your permission to audio or video record part or all of the assessment and treatment meetings. The audio or video tapes will be directly viewed only by Dr. Gaynor or designated graduate students in the Ph.D. program in clinical psychology at WMU. The purpose of the audio or video taping is to review and code Ms. Eckshtain's implementation of the assessment and intervention sessions. After the review and coding of Ms. Eckshtain's implementation of the sessions has occurred the audio/video tapes will be destroyed. To ensure confidentiality, the audio/video tapes and the questionnaire or interview forms will be labeled only with a participant number. Your full name and your child's full name will not appear on any of the questionnaires, interview forms, or audio/video tape labels. The questionnaires, interview forms, or audio/video tapes will be stored in a locked file cabinet, while the signed consent document and a master sheet containing the names of you and your child and matching participant number will be stored in a separate locked file cabinet, both in the laboratory of Dr. Gaynor at WMU. Only Ms. Eckshtain and Dr. Gaynor will have access to both the master sheet and the data. The data sheets, containing only the participant number, will be viewed only by staff working on this project and will be maintained for a period of at least five years after which they will be destroyed.

This research project and consent document have been approved for use for one year by the WMU Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. You should not participate in the study if the stamped date is older than one year. Questions regarding the project and your rights can be answered by calling Dikla Eckshtain at 269-387-4497, or by calling Dr. Gaynor at 269-387-4482. You may also contact the chair, Human Subjects Institutional Review Board (269-387-8293) or the Vice President for Research (269-387-8298) if questions or problems arise during the course of the study.

Summary

Below is a summary of the material described above. To ensure that all matters have been fully explained to you to your satisfaction and that your questions have been answered, you are being asked to read each of the sentences below describing to what you are agreeing by signing this document. If and when you feel these matters have been fully explained and your questions have been answered you should place your initials and the date in the corresponding blank.

Your initials and signature below indicates that you have read the purpose and requirements of this study entitled "Combined cognitive behavioral treatment plus caregiver sessions for childhood depression" and agree to participate with your child, which involves:

Pre-treatment

1. 2 pre-treatment assessment sessions. _____
2. Allowing the investigators to exchange information with Vicksburg Community Schools. _____

Treatment

3. Your child attending 16 individual treatment sessions. _____
4. You attending 7 caregiver sessions. _____
5. You and your child attending a mid-treatment assessment. _____

Post-treatment

6. Your child and you attending a post-treatment and 1 month follow-up assessment. _____
7. Allowing the investigators to contact you and invite you to attend the post-treatment and follow-up assessment sessions even if your child and you discontinue the treatment prior to its conclusion. _____
8. You are free to withdraw from participation at any time without penalty or prejudice. _____

Caregiver Authorizing His/Her Participation (printed name & signature) Date

Legally Authorized Representative Authorizing Child's Participation Date
(printed name & signature)

Child Participant Date

Witness Date

Appendix E

Consent for Release of Information to School Professionals

Western Michigan University, Department of Psychology**Consent for Release of Information to School Professionals**

Project Title: Combined cognitive behavioral treatment plus caregiver sessions for childhood depression.

Principal investigator: Scott. T. Gaynor, Ph.D Co-Investigator: Dikla Eckshtain, M.A.

I _____ (parent/legally authorized guardian) hereby authorize: Ms. Eckshtain, the therapist investigator, to provide Vicksburg Community Schools with a summary of the assessment and/or treatment information regarding my child _____.

Utilization of this form to release information is effective for the following period:

From _____ to _____ unless revoked by me in writing prior to the termination date.

My signature means that I have read this form and/or have had it read to me and explained in language that I understand. I know what information is being disclosed.

Parent/Guardian signature: _____ Date: _____

Witness: _____ Date: _____

Appendix F

Script/Assent to Allow Data to be Used for Research

Western Michigan University, Department of Psychology
Script/Assent to Allow Data to be Used for Research

Project Title: Combined cognitive behavioral treatment plus caregiver sessions for childhood depression

Principal investigator: Scott. T. Gaynor, Ph.D Co-Investigator: Dikla Eckshtain, M.A.

As we just discussed with your (indicate parent/caregiver), we are doing a research study to try and figure out the best ways to work with children. To do this we need to get information about how you are doing so we can tell if what we work on with you helps. This information is called data. We would like to get data from you by asking you to answer questions out loud and fill out some forms. Answering questions and filling out forms as accurately and honestly as possible will help us figure out how you are doing and if this treatment helps. Do you have any questions about this? [When questions have been answered] If you are willing to participate in this way please write your name on the line below.

Child Participant (printed name & signature)

Date

Witness

Date

Appendix G
Treatment Phases

TREATMENT PHASES

Week	Session	Session Type & #	Emphasis/Skill
PRETREATMENT ASSESSMENT			
1-2	1	Caregiver& child	Consent form and caregiver assessment session
	2	Child	Assessment session
INDIVIDUAL SESSIONS			
1	1	Child	Continue building rapport and introduction to treatment
	2	Child	Problem solving
2	3	Child	Activity selection
	4	Child	
3	5	Child	Learning to relax
	6	Child	Presenting a positive self
4	7	Child	
	A	Child	Mid-treatment assessment
5	8	Child	Think positive. No negative thinking allowed
	9	Child	
6	10	Child	Think positive about myself
	11	Child	
7	12	Child	Some good things to do when bad things happen: Help from a friend, Identify the Silver lining, No replaying bad thoughts
	13	Child	Combining primary and secondary control skills
8	14	Child	Using the ACT & THINK in my everyday life, sharing the formulation and making the child more fluent in using the ACT & THINK chart and skills
	15	Child	
9	A	Child	Post-treatment assessment
	16	Child	Termination
CAREGIVER SESSIONS			
Pre-tx	1	Caregiver	Psychoeducation (after all assessment sessions and before 1 st individual child session)
1	2	Caregiver& child	Special time, praise, and positive communication (after 1 st individual child session)
2	3	Caregiver	Positive reinforcement of positive mood, positive mood behaviors, and positive behaviors (after 3 rd individual child session)
4	A	Caregiver	Mid-treatment assessment
	4	Caregiver	Review of mid-treatment assessment
5	5	Caregiver	Communication training (after 9 th individual child session)
7	6	Caregiver& child	Family problem solving (after 11 th individual child session)
9	A	Caregiver	Post-treatment assessment
	7	Caregiver	Termination

A – Assessment

Appendix H

Explanation Script/Consent for the Teachers Regarding the Treatment Study

Western Michigan University, Department of Psychology

Explanation Script/Consent for the Teachers Regarding the Treatment Study

Project Title: Combined cognitive behavioral treatment plus caregiver sessions for childhood depression

My name is Dikla Eckshtain and I am an advanced graduate student pursuing my Ph.D. in Clinical Psychology at Western Michigan University. _____ has enrolled in a treatment study entitled "Combined cognitive behavioral treatment plus caregiver sessions for childhood depression" that I am conducting with the support of Vicksburg Community Schools and under the supervision of Dr. Scott T. Gaynor, a licensed psychologist and faculty member in the WMU Psychology Department.

The goal is to evaluate the effectiveness of cognitive behavioral therapy (CBT) provided in the school setting. CBT involves teaching the caregiver and the child new skills for changing behavior, thinking, and interaction patterns in order to help improve the child's mood and functioning. In treatment studies such as this one, CBT is delivered in a structured systematic fashion involving a set number of sessions and a specific sequence of skills. The treatment will last about 2 months and involves 16 twice-weekly 45-minute individual meetings between me and the child and seven 60-minute meetings with the caregiver and the child.

If possible, it would be helpful for us to receive information from the child's teacher about his/her social, academic, behavioral and emotional abilities and difficulties. If you are willing to consider assisting in this way, I would like to invite you to discuss your impressions of _____ and complete two brief questionnaires regarding _____ that will take about 10 minutes to complete. I will ask you to meet with me 4 times over the course of _____'s participation. These meeting will be brief and if you are willing will occur prior to treatment (30 minutes), mid-treatment (10-15 minutes), post-treatment (10-15 minutes), and 1-month follow-up (10 minutes). Do you have any questions?

Please sign below if you agree to meet with Ms. Dikla Eckshtain and provide the requested information.

Teacher printed name & signature

Date

Witness

Date

Appendix I

Eckshtain & Gaynor and Psychotherapy Studies Used for Benchmark

Eckstain & Gaynor and Psychotherapy Studies Used for Benchmark

Eckstain & Gaynor				Weisz et al. (1997)			Liddle & Spence (1990)			De Cuyper et al. (2004)			Stark et al. (1987)		
variable	PASCET+ C-CRET	PASCET	WLC	SCT	Attn	WLC	CBT	WLC	Self-Con	Beh PS	WLC				
Total n	15	16	32	11	10	10	9	11	9	10	9				
Age	10.30	9.40	9.70	9.20	9.20	9.20	10.00	10.00	11.20	11.01	11.32				
% female	67	44	47	32	32	32	75	75	44	40	44				
% Cauca.	87	75	56	-	-	-	100	100	-	-	-				
Pre CDI															
M	17.73	18.63	17.61	21.00	22.30	20.70	12.67	15.27	21.60	22.40	20.11				
SD	7.09	5.32	10.05	4.45	4.24	3.34	6.00	4.54	5.48	8.47	9.88				
Post CDI															
M	6.00	7.06	11.81	14.45	19.30	16.90	10.11	11.73	8.04	9.04	18.60				
SD	7.94	6.12	10.00	6.74	6.93	6.79	6.03	5.66	6.65	8.32	9.91				
FU CDI															
M	1 mo.	9 mo.	9 mo.	2 mo.	2 mo.	2 mo.	4 mo.	4 mo.	2 mo.	2 mo.	2 mo.				
SD	5.93	5.77	10.25	13.64	16.50	14.90	6.63	12.75	5.36	7.34	7.40				
SD	8.78	5.15	8.48	7.65	6.10	4.01	4.93	7.05	5.04	7.23	5.68				
Pre															
CDRS-R															
M	47.40	45.25	38.38	-	-	-	-	-	37.22	33.50	30.33				
SD	8.04	16.01	11.15	-	-	-	-	-	8.36	10.27	6.28				
Post															
CDRS-R															
M	25.07	33.19	34.94	-	-	-	-	-	22.91	24.16	28.15				
SD	7.09	10.86	10.93	-	-	-	-	-	4.36	6.01	6.21				
FU															
1 mo.		9 mo.	9 mo.						2 mo.	2 mo.	2 mo.				
CDRS-R															
M	24.14	28.08	28.59	-	-	-	-	-	20.69	24.28	22.60				
SD	7.97	7.15	8.75	-	-	-	-	-	3.45	4.68	5.03				

Note. PASCET = Primary and Secondary Control Enhancement Training; C-CRET = Caregiver-Child Relationship Enhancement Training; WLC = Waitlist Control; SCT = Social Competence Training; Attn = Attention Placebo Control; CBT = Cognitive Behavioral Treatment; Self-Con = Self Control; Beh PS = Behavioral Problem Solving; Cauca = Caucasian; Pre = Pre Treatment; Post = Post Treatment; FU = Follow Up; CDI = Children's Depression Inventory; CDRS-R = Children's Depression Rating Scale - Revised.

Appendix J

Eckshtain & Gaynor and Medication Studies Used for Benchmark

<i>Eckshain & Gaynor and Medication Studies Used for Benchmark</i>						
variable	Eckshain & Gaynor		Emslie et al. (1997)		Emslie et al. (2002)	
	PASCET+C-CRET	Fluoxetine	Placebo	Fluoxetine	Placebo	
Total n	15	48	48	109	109	
Age	10.30	12.20	12.50	12.70	12.69	
% female	67	46	46	49.5	49.1	
% Caucasian	87	73	85	88.1	76.4	
Pre CDRS-R	47.40	58.50	57.60	57.10	55.10	
<i>M</i>						
<i>SD</i>	8.04	10.50	10.40	9.90	11.80	
Post CDRS-R	25.07	38.40	47.10	35.10	40.20	
<i>M</i>						
<i>SD</i>	7.09	14.80	17.00	13.50	13.50	
PASCET = Primary and secondary Control Enhancement Training; C-CRET = Caregiver-Child relationship Enhancement training; Pre = Pre Treatment; Post = Post Treatment; CDRS-R = Child Depression Rating Scale - Revised.						

Appendix K

Sessions Compared for Treatment Integrity

Sessions Compared for Treatment Integrity

Participant	Child			Parent
	1 st session coded (1-5)	2 nd session coded (6-10)	3 rd sessions coded (11-15)	Session coded (2,3,5,6)
Participant 1	5 ^a		13	
Participant 2	3	10	^a 12	5
Participant 3	3	6		
Participant 4	3	8	14	2
Participant 5	1	8 ^a	11	6
Participant 6	2 ^a	10	14	2
Participant 7	4 ^a	6 ^a	11 ^a	5 ^a
Participant 8	1	6	13	5
Participant 9	1	6	15	3
Participant 10				
Participant 11				
Participant 12	6 ^b	9	13	3
Participant 13	2	8	14	6
Participant 14	1	10	13	3
Participant 15 ^c	3	6	13	5
Additional participant	1	6	13	5 ^a

Note. Additional participant refers to the participant whom data was taken out of statistical analyses.

^asessions coded by two coders. ^bSession 5 was chosen to be coded but was randomly changed to session 6 as it was not recorded. ^cParticipant that received treatment but data were not included in the analyses.

Appendix L

Human Subjects Institutional Review Board
Letter of Approval

WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: October 7, 2005

To: Scott Gaynor, Principal Investigator
Dikla Eckshtain, Student Investigator for dissertation

From: Mary Lagerwey, Ph.D., Chair

A handwritten signature in cursive script that reads "Mary Lagerwey".

Ré: HSIRB Project Number: 05-07-07

This letter will serve as confirmation that your research project entitled "Combined Cognitive Behavior Treatment Plus Caregiver Sessions for Childhood Depression" has been **approved** under the **full** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: July 20, 2006